> Proposals for a Roadmap towards a Sustainable Financial System in Switzerland

A collaboration of experts of the financial sector, academia, non-governmental organizations and federal authorities

An invitation to discussion and action

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> Foreword FOEN

Back in 2014, the Federal Office for the Environment (FOEN) started a dialogue with the financial sector, academic institutions, non-governmental organisations and public authorities on the topic of sustainability in finance. This dialogue was initiated to contribute to the Inquiry into the Design of a Sustainable Financial System of the United Nations Environment Programme (UNEP). The Inquiry aimed to define the financial sector's role in meeting the needs of the real economy in its transition to a green and inclusive economy. Switzerland, with its contribution to the global report entitled "The Financial System We Need" (2015), played an important and much appreciated role at the international level.

At the national level, FOEN's initiative and commitment together with its partner departments, especially the State Secretariat for International Financial Matters (SIF) and State Secretariat for Economic Affairs (SECO), has also been very well received by the financial sector. With sustainability gaining in importance, FOEN has started to be a valuable facilitator of the discussion on how to integrate environmental factors in the businesses of banking, asset and wealth management, and insurance. The importance of including the concept of environmental sustainability in financial market policy was signalled by the Swiss government in February 2016.

At the global level, the world community has reached key achievements: the 2030 Agenda, with, at its core, the international consensus on the Sustainable Development Goals (SDG); the Addis Ababa Action Agenda to finance the pathway towards sustainability and the historic, universal Paris Agreement, where the international community has agreed, among other commitments, to make financial flows consistent with a low-carbon and climate-resilient pathway. And now, the potential impact of climate change and environmental aspects on the stability of the financial system are being discussed in international bodies such as the G20. Environmental sustainability has reached – for the first time in history – the top of the international finance agenda. These strong and historic international signals pave the way for the world community to act now. Action is much needed as future economic growth depends on natural capital and well-functioning ecosystem services.

This report is a tangible result of the common effort by experts from the financial sector, science, non-governmental organisations and federal autorities. Its purpose is to propose highly significant measures for rendering the Swiss financial system more sustainable – that is, a Swiss financial system that supports the transition to a green and inclusive economy.

However, while discussing promising measures is necessary, it is not enough to seize the important window of opportunity we are witnessing at this moment. Action is needed now. With its strong environmental track record on sustainability and its strong financial sector of global relevance, Switzerland has an important role to play. And a huge chance to grasp the many business opportunities that lie in the transition to a resource-efficient and inclusive economy.

My sincere thanks go to the Swiss Team members who made this publication possible. May it inspire further collaboration and – of capital importance – action!

Karine Siegwart
Vice Director of the Federal Office for the Environment

> Foreword Swiss Sustainable Finance

Swiss Sustainable Finance was launched in July 2014 with the vision of making Switzerland a leading centre in sustainable finance. Shortly after that, the Federal Office for the Environment stirred a national dialogue on sustainable finance by grouping relevant stakeholders in the Swiss Team for Input to the UNEP Inquiry project. The Swiss Team Answer presented in May 2015 at the Symposium "Swiss Finance in a changing world" came up with recommendations in three areas:

> Public actions and framework conditions
> Private action, self-regulation and incentives
> Valuing true costs

Now, one year later, the Swiss Team presents its tangible Proposals for a Roadmap towards a Sustainable Financial System in Switzerland. Swiss Sustainable Finance is proud to unite members who are at the forefront of creating innovative financial solutions for a sustainable world. Its recent report "Swiss Investments for a Better World" illustrates prominent examples of such products helping to finance the international Sustainable Development Goals while offering market returns. Yet, to better anchor sustainability principles in the mainstream of the Swiss financial centre, further action is required.

Meanwhile, globally a wide array of different initiatives in sustainable finance have been pursued lately: Besides the UNEP Inquiry project, an impressive amount of initiatives addressing challenges in the global financial system have been launched. The Financial Stability Board has created an industry-led task force developing voluntary, consistent climate-related financial disclosures. China has established a Green Finance Study Group during its G20 presidency. And many countries (such as France or Brazil) have adapted national frameworks to better anchor sustainability principles in their financial systems.

In Switzerland, the dialogue within the Swiss Team, a majority of which are members of Swiss Sustainable Finance, has resulted in a broad array of suggested action points directed at different players in the Swiss financial centre. Some of the suggested measures, such as the increased transparency on the sustainability level of portfolios, are already practice at some innovative Swiss firms. A broader adoption of such approaches by mainstream players could increase the effect of guiding capital into more sustainable companies. Others, such as systematic training on sustainable finance both in vocational and professional training, ask for cooperation of different players such as industry associations, private sector players and national or cantonal education facilities. Swiss Sustainable Finance will use its broad network to foster the implementation of the different measures.

With its important role as a global centre for wealth management, Switzerland has the opportunity to contribute its share to making financial systems around the world more sustainable. We are convinced that implementing the action points outlined in this report not only contributes to a more sustainable world but also offers financial benefits, be it through reduced risk, new investment opportunities or the development of new business prospects. It is time for the different players to seize them.

Jean-Daniel Gerber
President Swiss Sustainable Finance

> Executive Summary

Proposals to spark the discussion on a sustainable financial system

In this report, a group of experts from the financial sector, NGOs, academia and government authorities in Switzerland identifies the most important concrete measures for creating a (more) sustainable financial system in Switzerland. The experts believe that now is the perfect time to debate the measures and to take action and move beyond business as usual.

Planet under pressure – the need to act now

Currently, societies' production and consumption patterns by far exceed planetary boundaries. To lay the basis for a balanced growth, the real economy needs to transform into a green and inclusive economy, and the financial sector needs to enable and accelerate this transition. Maintaining business as usual will increase the challenges and costs of inaction for our society.

Financing the future – a historical challenge

Financing a sustainable economy requires the financial system to finance the transition towards sustainability and refrain from financing harmful activities. Clean energy, resource-efficient infrastructure and nature conservation are just some examples of investment fields for a sustainable economy. Trillions of dollars of investments are needed – just financing the Sustainable Development Goals will require 5–7 trillion USD per year over the next 15 years. It is obvious that public money will not be enough and private financial flows will have to contribute substantially to financing the future we need (UNCTAD 2014).

Worldwide momentum towards more sustainable financial systems

The urge to act and the resulting opportunities have created a strong momentum in financial systems worldwide and also in Switzerland (UNEP 2015). Initiatives like the Paris Agreement of 2015 (UNFCCC 2015) set important framework conditions and send signals to the real economy and financial systems.

A sustainable financial system in Switzerland – a business opportunity of our time

A financial system is considered sustainable if it financially enables and accelerates the transition of the economy and society towards sustainability. Many financial systems worldwide take advantage of business opportunities associated with the current momentum towards sustainability, and benefit from collaborative initiatives and state support. The financial system in Switzerland with its pioneers and technical expertise in the field of sustainable finance can play a prominent role to exploit these opportunities.

Achieving sustainability through ESG Integration

To become more sustainable and exploit associated business opportunities, financial actors need to systematically integrate sustainability factors into financing and investment decisions. Examples of relevant sustainability factors, so-called ESG (environmental, social and governance) factors, are climate change, water usage, child labour, the effectiveness of management structures to ensure good corporate governance, etc.

Aiming for a positive impact

ESG integration can be used to implement different sustainability strategies. ESG opportunities can be seized and ESG risks can be managed as a means to increase shareholder value. This results in only a basic improvement of sustainability impact. ESG integration can also be used to manage the triple bottom line, i.e. to create environmental and social value, alongside shareholder value. Here sustainability impact improvement is higher. Nevertheless, a significant impact improvement can be achieved by going further: using ESG integration as a means to generate a true positive impact for a green and inclusive economy. Here, the burning issues of our time are translated into business opportunities that make business sense.

Let's get real – the crucial levers to seize the challenge

The measures identified in this report are aimed at giving the financial system in Switzerland a more sustainable focus based on seven levers. Some of them aim to strengthen and ripen the markets for sustainable investments and finance to allow for the mainstreaming of ESG integration: research and development, education and awareness, standards, assessments, and transparency. Other levers build on existing market capacities and directly focus on integrating ESG factors into investment and financing decisions, and on serving ESG-related client preferences.

ESG research & development
ESG research and development measures improve the tools to get going

ESG education & awareness
ESG education and awareness measures strengthen the capacity for supply and demand

ESG standards
ESG standard measures build up trust and facilitate the first steps

ESG assessments
ESG assessment measures shed light on financing and investment decisions

ESG transparency
ESG transparency measures set incentives towards improving sustainability impact and allow discussion about it

ESG integration
ESG integration measures proactively create win-win solutions

ESG preferences
ESG preference measures make it possible to know and serve customers better

20 measures to move forward

The measures targeting these levers are concretised for five core areas: four main areas of the financial system – asset and wealth management, institutional investors, credit business and capital markets – as well as research and education. These areas are highly significant for the transformation of the financial system, due to the volume of financial flows managed or influenced, and/or due to their impact in terms of scopes of action and positive spill-overs on the entire financial and economic system. The following table provides an overview of the proposed measures, specified according to the stakeholders affected and the targeted levers.

Proposed measures	Stakeholder	Affected levers
Asset and Wealth Management		
Educate and raise awareness among portfolio managers and relationship managers.	Universities, professional schools, in-house education, consulting and sustainability rating providers, supported e.g. by industry associations and the state; target audience: portfolio managers and client relationship managers	
Provide transparency on the ESG impacts, risks and opportunities of financial products for investors.	Asset and wealth management as well as invested companies, supported e.g. by industry associations such as Swiss Sustainable Finance (SSF); target audience: clients and other stakeholders	
Complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs); define assessment standards; investigate on potential regulatory barriers.	Universities, other research institutions, supported e.g. by industry associations and asset and wealth management; target audience: portfolio and client relationship managers	
Systematically assess and integrate ESG factors into investment processes.	Asset and wealth managers, supported by sell-side ESG research providers, and industry associations	

Proposed measures	Stakeholder	Affected levers
Institutional Investors		
Develop and set standards for key sustainability issues in sustainable investments, complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs).	Universities, other research institutions, rating and consulting organisations, together with institutional investors, supported by industry associations; target audience: institutional investors	ESG research & development, ESG standards
Educate and raise awareness among institutional investors and beneficiaries.	In-house training departments, universities, specialised schools, consulting and sustainability rating providers, supported by industry associations and possibly the state; target audience: institutional investors (especially foundation/ management board and investment committee members, asset managers, client advisors) and beneficiaries	ESG education & awareness, ESG preferences
Provide transparency on ESG-related investment policies, goals, and portfolio impacts; set standards concerning the ESG transparency of portfolio impacts.	Policies and goals: board members, supported by in-house ESG experts, product managers, external consultants; assessments: asset managers, in-house financial and ESG analysts, auditing agencies, possibly supported by external service providers (consulting or sustainability rating providers), NGOs, client organisations; target audience: beneficiaries and other stakeholders	ESG transparency, ESG assessment, ESG standards
Integrate ESG impacts into policies and related asset management goals, systematically evaluate and meet the ESG preferences of beneficiaries.	Policies and goals: board members (especially foundation boards), supported by in-house ESG experts, product managers, external consultants; ESG integration: asset managers; target audience: client advisors, supported by in-house ESG experts, possibly external service providers	ESG integration, ESG preferences
Credit Business		
Raise awareness among banks about blended finance instruments.	Financial industry associations and/or governmental bodies	ESG education & awareness
Systematically assess ESG factors and integrate them into banks' risk management processes.	ESG risk responsible specialists and risk managers at credit institutions	ESG assessment, ESG integration
Systematically assess ESG factors and integrate them into the credit ratings of banks and rating agencies.	Credit rating agencies and banks, especially developers of bank-internal rating models; possibly supported by specialised sustainability rating agencies	ESG assessment, ESG integration
Engage in research on the integration of ESG factors into credit ratings.	Universities, other research institutions, rating and consulting organisations, together with credit institutions; target audience: credit institutions	ESG research & development
Capital Markets		
Further develop ESG assessment methods, systematically assess ESG factors and integrate them into securities ratings.	Rating agencies, banks and other financial actors, possibly supported by specialised sustainability rating agencies	ESG research & development, ESG assessment, ESG integration
Provide transparency by integrating ESG and financial reporting into reporting standards.	Standard-setting bodies, industry associations, companies (in general, exchanging experiences with their sector peers); target audience: investment managers, supported by industry initiatives, possibly Fintech companies	ESG transparency, ESG standards
Systematically assess ESG factors in investment analyses, systematically integrate ESG factors into issued investment recommendations.	Brokers, research houses, investment banks that provide buy, sell or hold ratings, supported by rating agencies	ESG assessment, ESG integration

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

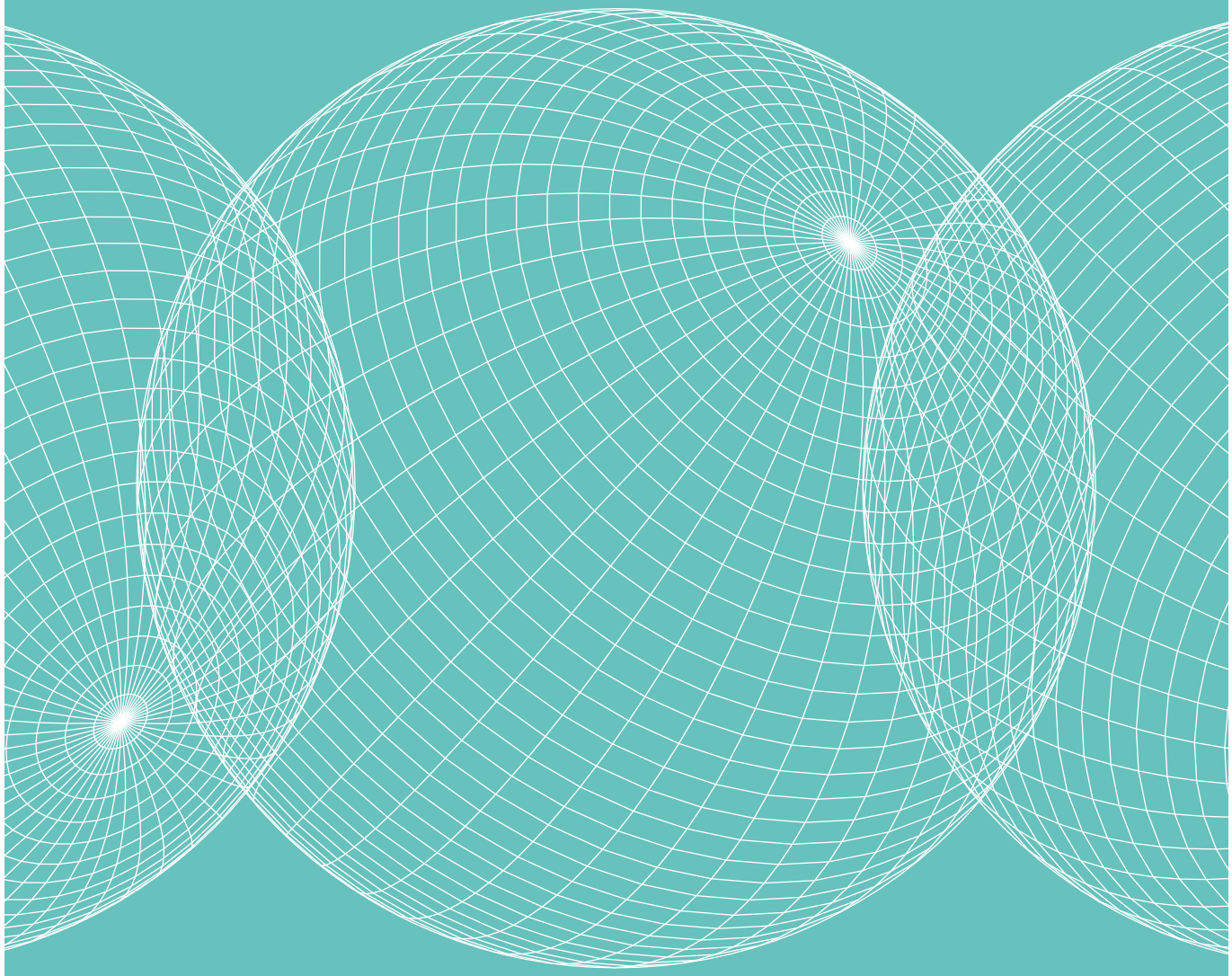
Proposed measures	Stakeholder	Affected levers
Research and Education		
Strengthen academic research on sustainable finance by improving the funding situation for PhD students in this field.	Universities, possibly funded by financial institutions and the state; target audience: PhD students	
Strengthen academic research on sustainable finance by increasing the visibility and awarding research in this field.	Universities, supported by the government and financial institutions; target audience: researchers	
Strengthen academic education on sustainable finance by creating new joint/ interdisciplinary master study programs with a "sustainability" dimension.	Universities, supported by the state, especially cantons; Target audience: students specialising on sustainable finance	
Strengthen academic education on sustainable finance by implementing sustainable ECTS credits in academic programs.	Universities; target audience: students studying economics, management and finance	
Strengthen professional education on sustainable finance by integrating sustainability into professional school training programs for commercial employees.	Schools offering formation for (future) commercial employees, the Swiss Conference of Cantonal Ministers of Education, the confederation and professional associations; target audience: (future) commercial employees	

Let's walk the talk

The identified measures reflect expert opinions, many of which are based on existing best practice. They address financial, scientific and other stakeholders from the real economy, civil society, the general public, and the state. This report aims to stir a discussion with these groups on how to best address and implement the measures, and to encourage their implementation. The discourse should be on the future of the financial system in Switzerland and how it can become more sustainable. The identified measures serve as a basis that is to be challenged, further concretised and complemented by further approaches yet to be developed.

Switzerland, with its advanced financial sector, its pioneers and technical expertise in the field of sustainable finance, is in a unique position to accelerate the transition to a more sustainable financial system. The path forward leads to far-reaching opportunities as well as considerable challenges that must be addressed. The discussion on this path has at least been started within the Swiss Team as part of the process of developing these proposals into a roadmap. This process has to be continued but, more importantly, now needs to result in transformative action. Collaborative approaches are required and all relevant stakeholders need be involved in order to spread the ideas across the entire financial system in Switzerland. This will strengthen its competitiveness and benefit society at large.

Part I: Where and Why It All Started



1. Introduction

1.1 Need for action

Currently, our society by far exceeds its planetary boundaries. The overuse of resources not only affects the environment, but also the economy and society as a whole. To lay the basis for strong and balanced growth, the real economy needs to transform into a less polluting and less resource-intensive, sustainable economy. Maintaining business as usual will increase the challenges and costs of inaction.

The financial system has a crucial role to play here. Clean energy, resource-efficient infrastructure and nature conservation are just some examples of investment fields for a sustainable economy. Trillions of dollars of investments are needed – just to finance the Sustainable Development Goals will require 5–7 trillion USD per year over the next 15 years. It is obvious that public money will not be sufficient and private financial flows will have to contribute substantially to financing the future we need (UNCTAD 2014).

In Switzerland, sustainable investments have grown dynamically in the last ten years. However, they are still a small market niche. By the end of 2015, approximately 2% of assets managed in Switzerland were invested sustainably[1], and mainstream financial markets are still hesitant to systematically integrate sustainability factors into financing and investment decisions.

1.2 The Aim: Measures For a More Sustainable and Competitive Financial System

The aim of this report is to spark the discussion and learning process on how the financial system in Switzerland can become more sustainable. A financial system is considered sustainable if it financially enables and accelerates the transition of the economy and society towards sustainable development. This implies that the financial system serves the needs of the real economy and society as a whole.

The urge to act and become more sustainable has created a strong momentum in financial systems worldwide and also in Switzerland (UNEP 2015). Many financial systems take advantage of business opportunities associated with sustainability, and benefit from collaborative initiatives and current state support. The financial system in Switzerland with its pioneers and technical expertise in the field of sustainable finance can play a prominent role to exploit these opportunities by:

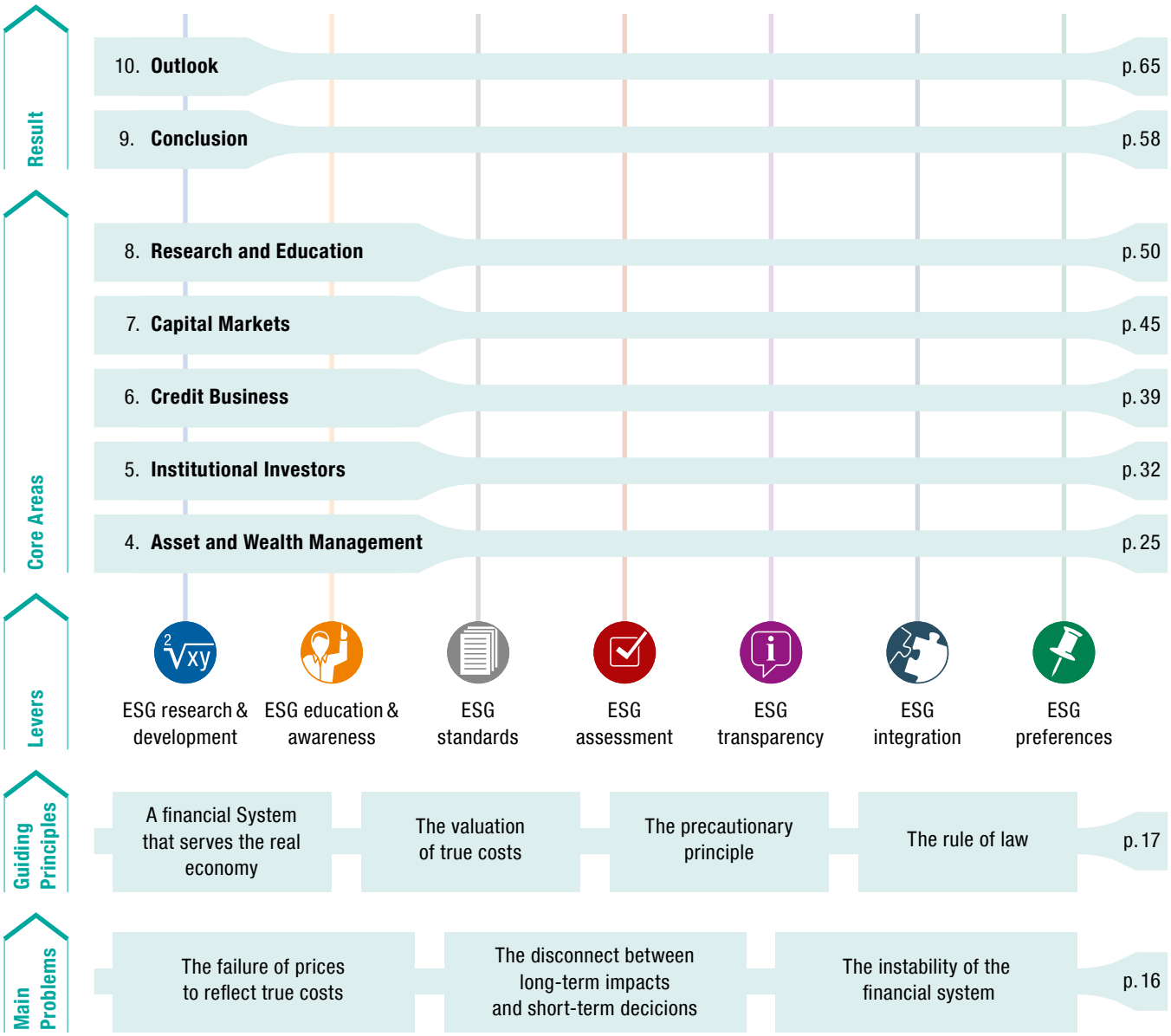
> *Seizing opportunities to invest* in sustainable development, i.e. investments in infrastructure, innovative technologies, smart concepts like the circular economy and nature conservation, etc.;
> *Knowing and managing sustainability-related investment risks better*, in the face of tightening sustainability-related regulations and reputational and financial risks resulting from the sustainability impact associated with investments;
> *Knowing and serving clients better* according to their sustainability-related preferences, and thus exploiting market potentials and increasing client loyalty, in the face of rising national and international competitive pressure;
> *Regaining trust* of clients and society, in the face of a confidence crisis that has not been overcome yet;
> *Increasing productivity* by benefiting from emerging pre-competitive, collaborative approaches in the financial industry and the Swiss state acting as facilitator.

This report proposes measures that can help make major progress in moving the financial system in Switzerland towards sustainability. The measures are designed to build up trust, and to increase the productivity of the financial sector. They also strengthen the financial sector's ability to assess and manage opportunities and risks that are related to sustainability factors and to better serve sustainability-related client needs. Sustainability factors, so-called ESG (environmental, social and governance) factors, are climate change, water usage, child labour, the effectiveness of management structures to ensure good corporate governance, etc.

The proposed measures point to easily applicable measures, i.e. low-hanging fruits, as well as rather far-reaching measures that might involve longer discussion and development processes and, if necessary, the rethinking of current business models. As such, these measures might also affect further societal systems and actors.

The proposals were developed by the "Swiss Team for the UNEP Inquiry" (in short "Swiss Team"), a group of experts from the financial sector, NGOs, academia and government authorities. The Swiss Team directs its proposals at a broader group of stakeholders, namely the private sector (financial services providers and their clients, i.e. asset owners as well as the real economy), the public sector (government policy-makers and regulators), academia and civil society, especially NGOs.

Structure of Report



Its intention is to raise awareness and to stimulate a discussion process in order to challenge, adjust, further develop and concretise the measures.

1.3 Structure of the Report

In part one of the report, chapter 2 of the report generally explains how the financial system can become more sustainable and how associated challenges can be overcome. This chapter serves as a thematic introduction by developing the general framework for the concrete measures proposed later on. In chapter 3, the report describes the context in which the Swiss Team engagement started and this report was initiated.

Part two of this report focuses on the five core areas that the Swiss Team identified as highly significant for the transformation of the financial system into a more sustainable financial system: asset and wealth management, institutional investors, credit business and capital markets as well as research and education (chapters 4 to 8). For each of the core areas, measures are proposed that are considered most effective and/or low-hanging fruits in terms of transforming the financial system in Switzerland into a sustainable financial system.

In part three, chapter 9 provides a conclusion and proposes an overall roadmap towards a sustainable financial system in Switzerland. In chapter 10, the report concludes with an outlook, stating how the transformation towards a sustainable financial system could proceed and what opportunities would be involved for the financial system in Switzerland.

1.4 How to Read this Report

Apart from reading the entire report from beginning to end, the report structure also allows for selective readings for different target groups. For the swift reader who aims to get an overview and grasp the main messages, we recommend chapter 2 for the general introduction and overview as well as chapter 9 for the main results, possibly accompanied by chapter 10 to understand what should follow next.

For readers who are merely interested in a specific core area, we recommend reading chapter 2 (introduction and overview) and the specific core area chapter (chapters 4 to 8), possibly accompanied by chapters 9 (main results) and 10 (outlook).

2. Achieving a Sustainable Financial System and Overcoming Associated Challenges

2.1 Achieving Sustainability Through ESG Integration

To render the financial system more sustainable and to exploit associated business opportunities, financial actors need to systematically integrate sustainability factors into financing and investment decisions (ESG integration). These decisions also include upstream and downstream decisions, such as actively influencing the behaviour of those actors that investors are invested in (active ownership), advising clients on investments, calculating prices for financial products (e.g. interest rates, insurance premiums), etc.

Integrating sustainability factors – i.e. the issue of sustainable finance – comprises the following three steps:

> Step 1: Systematically assessing the sustainability impact associated with financing and investment decisions.
> Step 2: Translating the material sustainability impact into related financial opportunities and risks.
> Step 3: Improving the sustainability impact associated with financing and investment decisions.

Step 1: Assessing the sustainability impact

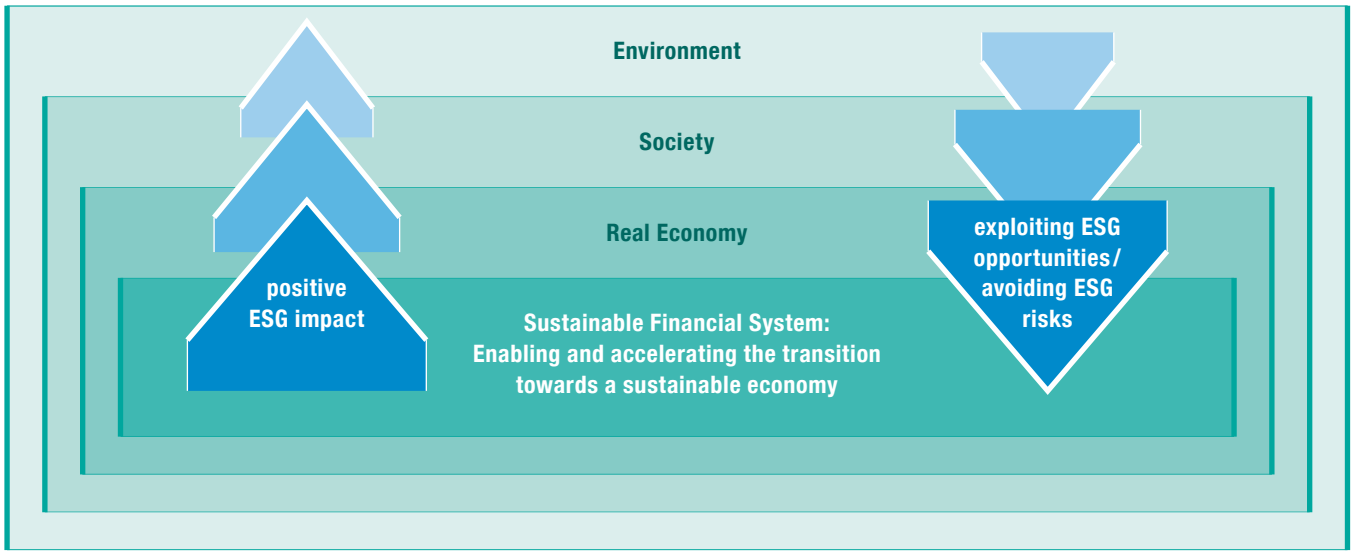
The first step of ESG integration is to systematically assess the positive and adverse sustainability impact associated with financing and investment decisions. The relevant sustainability factors that should be examined are the so-called ESG factors.

Financing clean energy infrastructure, for example, contributes to a positive impact. So-called "impact investing" products (see text box) are specifically designed to create a positive impact, e.g. through microfinance or microinsurance products. Financing coal-fired electricity or cluster munition production, on the other hand, contributes to an adverse impact. Further examples of negative impacts are financing and investment decisions increasing systemic instabilities, as therewith they jeopardise the financial system's ability to serve the needs of the economy and society as a whole.

Step 2: Translating ESG impacts into related opportunities and risks

In a second step of ESG integration, ESG impacts should be systematically translated into related financial opportunities and risks. Based on this translation, ESG-related opportunities

ESG Integration



can be systematically exploited and ESG-related risks systematically managed and avoided.

Renewable energy, for example, provides investment opportunities. Wind power has been competitive for some years, and PV module prices have continually fallen since the 1970s and are about to become competitive in the coming years[2]. "Impact investing" products also pose business opportunities: Targeted investors are willing to reduce their risk-return expectations in favour of sustainability aims, and banks serving these preferences can exploit associated market potentials and increase client loyalty.

ESG impacts due to negative external effects can, for example, pose reputational risks. If negative external effects become internalised in the future, ESG impacts can also pose regulatory risks or material financial and business risks (stranded assets). In this way, external effects can become financially relevant. Thus, identifying and then integrating material ESG factors can increase the risk-return of investments, improve resilience against shocks, and open further market potentials.

Step 3: Improving sustainability impact

The aim of ESG integration is to improve the sustainability impact associated with financing and investment decisions. Depending on the sustainability strategy of financial actors, the impact improvement will be more or less significant[3]:

> ESG integration as a means to create shareholder value: This sustainability strategy merely seizes ESG opportunities and manages ESG risks that directly relate to shareholder value. The sustainability impact improvement is only minimal.
> ESG integration as a means to manage the triple bottom line: This sustainability strategy focuses on creating environmental and social value, alongside shareholder value. The sustainability impact improvement is higher.
> ESG integration as a means to create significantly positive sustainability impact and to consequently avoid harm in terms of the precautionary principle: This sustainability strategy primarily focuses on creating positive sustainability impact for a resource-efficient and inclusive economy. The burning issues of our time are translated into business opportunities that make business sense[4]. This strategy truly paves the way towards sustainability.

To make the financial system more sustainable, financial actors must truly aim to improve the sustainability impact, particularly by applying long-term rather than short-term decision horizons and the precautionary principle of "doing no harm"[5]. This proactive approach to ESG integration is different than merely managing the ESG risks that materialise in the short term.

"Impact Investing"

"Impact investing" and "community investing" are special sustainable investment strategies. They involve making investments into companies, organisations and funds with the intention to generate positive social and environmental impact alongside a financial return. "Impact investing" can be made in both emerging and developed markets, and target a range of returns from below market to market rate, depending upon the circumstances (Eurosif 2014).

"Impact investing" is only one possible strategy among others to improve the sustainability impact associated with investments. Other strategies are, for example, best-in-class or exclusion strategies.

2.2 Challenges and Principles

In its first report (FOEN 2015), the Swiss Team identified three basic and rather generic challenges that inhibit the financial system from being more sustainable:

> the failure of prices to reflect true costs,
> the disconnect between long-term impact and short-term financing and investment decisions, and
> the instability of the financial system.

The *failure of prices to reflect true costs* is mainly caused by external effects in the economic system, and in turn causes analogous failures in the financial system. Due to these externalities, risk premiums, prices, ratings and assessments in the financial system do not fully account for ecological and social costs caused by economic activity, and as a result, financing and investment decisions are often made based on incomplete and insufficient information on the associated impact and trade-offs[6]. The financial system has some (limited) room to internalise these kinds of ESG factors, e.g. on a voluntary basis to increase the risk-return of investments, or if investors explicitly hold ESG-related preferences.

However, when ESG factors are not integrated into financing and investment decisions, it is not always caused by failures in the economic system, but by the financial system itself. Another challenge, the *disconnect between long-term impact and short-term decisions*, is also prevalent in the economy, but appears more distinctively in the financial system. Financing and investment decisions are often based on short-term thinking, which is opposed to certain environmental and social risks that materialise rather in the long-term. Investors can be sensitised to long-term ESG opportunities and risks, by translating them into concepts and approaches that are relevant for investments, such as the "stranded asset/carbon bubble" discussion, which is a good starting point.[7]

Another important challenge located in the *financial system* is its *instability*. Financial regulators and supervisory

Process of UNEP Inquiry

Analytical frameworks — June 2014, Invitations

Mapping practice — 2014–2015, Inquiry Reports

Thematic analysis — 2014–2015, Country Engagements

Options for design — October 2015, Options for Design

Design of a Sustainable Financial System

bodies on a worldwide scale have initiated reforms to increase the resilience of the financial system[8]. Measures to increase resilience to environmental and social threats could also support progress towards sustainable development. However, financial regulators have so far not featured them prominently. This is partly due to the above-mentioned disconnect between long-term impact and short-term decisions, the "Tragedy of the Horizon"[9]. Some of the notable exemptions are the Bank of England, which recently started to examine climate risks within the British insurance system[10], and the SEC Guidance on disclosure on climate changes risks in the United States[11].

Generally, the financial system has more room to integrate ESG factors if challenges are essentially located in the financial system itself. In these cases, the translation from ESG impacts to related opportunities and risks is more immediate and easier, as integrating ESG factors directly helps the financial system to better fulfil its function for the economy. This ultimately strengthens both the productivity and quality of financial services at the company level and the resilience of the entire financial system. Based on these challenges and the capacity of the financial system to overcome them, the Swiss Team further postulated in its first report (FOEN 2015) that the following guiding principles should govern the transition of the Swiss financial system towards a sustainable system:

> establishment of a financial system that serves the needs of the real economy;
> valuation of true costs, i.e. valuating unobserved values, risks and external environmental costs that are not adequately reflected in asset prices;
> application of the precautionary principle of "doing no harm" when transacting on financial markets, i.e. incorporating responsibility, accountability and liability by supporting a positive ESG impact and preventing an adverse impact, and thereby supporting authorities' efforts to ensure compliance with international norms;
> adoption of a rule of law involving simple yet effective regulation.

These guiding principles are necessary for an effective transformation of the financial system in Switzerland to a more sustainable financial system.

2.3 Market Solutions and Political Measures

The transformation into a more sustainable financial system can be advanced by the financial system and its actors and/or by the political system, and it can be implemented in different ways. In theory, the following market solutions represent different methods of voluntary implementation within and by the financial system:

> individual actions by financial actors (financial institutions, investors, clients),
> voluntary standards applied by parts of the financial industry and
> self-regulation applied by most or all of the financial industry.

The various methods of implementation in the political system include:

> information and awareness-raising measures by public authorities or institutions,
> the state acting as a a role model in investing and managing assets,
> state regulation and incentives, such as steering taxes, loan guarantees and regulation.

Generally, in order to achieve most of the measures proposed in this report, some sort of collaboration makes sense. This considerably widens the scope for translating ESG impacts into related opportunities and risks. Collaboration can decrease transaction costs, speed up implementation and ensure equal level playing fields. Collaboration can take place on a pre-competitive level within the financial industry and/or with other actors such as governmental bodies, NGOs, companies from the real economy, etc.

At the national level, appropriate platforms for collaboration are, for example, financial industry associations such as Swiss Sustainable Finance (SSF), the Swiss Insurance Association (SIA), the Swiss Pension Fund Association (ASIP), and Swiss Bankers Association (SBA). At the international level, organisations and initiatives such as the UN Principles for Responsible Investments (PRI), the UNEP Inquiry, the Montreal Carbon Pledge, or the International Investors Group on Climate Change (IIGCC) also offer valuable platforms for collaboration.

The financial system in Switzerland is currently at an early stage of its transformation into a more sustainable financial system. In the sphere of sustainable investments[12], pioneers are mostly acting in niches, the state is primarily engaged in information and awareness-raising measures, and public pension funds have just started considering ESG factors in their investments (see Friedli 2015). So far, there are only a few voluntary standards for sustainable investments (such as the Green Bond Principles, see chapter 4.1).

At the political level, the Federal Council recently specified the role of the state by determining principles for the integration of the environmental dimension of sustainability into financial market policy. The primacy is placed on private action and market solutions, with a focus on enhancing transparency and a long-term outlook. The state can act as facilitator for the sector's efforts to open up the business segment of sustainable investments (SIF/FOEN 2016).

2.4 Fundamental Levers and Core Areas

In order to advance the financial system in Switzerland towards sustainability and to enable it to take the associated business opportunities, any measures worth taking should focus on the following seven levers, which are of utmost importance:

ESG research and development measures improve the tools to get going
Complete empirical research to provide more comprehensive, reliable and comparable data on the financial relevance of ESG factors. Develop methodologies for ESG-related assessments and reporting to provide tools for identifying and communicating ESG impacts, opportunities and risks. Develop ESG-related definitions and standards to define minimum qualities for sustainable investments and finance, and for ESG-related transparency.

ESG education and awareness measures strengthen the capacity for supply and demand
Provide the necessary competencies and awareness to financial services providers to build the capacity for supplying sustainable financing products and services. Increase competencies and awareness of clients and enable them to better meet their ESG-related preferences and to demand the corresponding financial products and services.

ESG standard measures build up trust and facilitate the first steps
Establish ESG-related standards in the financial industry to increase clients' trust in sustainable investments and finance and help exploit related market potentials in this way. ESG standards also help financial actors to get acquainted with sustainable investments and finance and to know what steps need to be taken to offer them.

ESG assessment measures shed light into financing and investment decisions
Assess the ESG-related impact associated with financial and investment decisions and translate them into related opportunities and risks. Assessments are performed for financial assets and products (e.g. credits, or investment products) and at the financial company level (i.e. total assets, total credits granted, etc.). Even though the current basis for assessments (information sources, assessment methods) is incomplete, pragmatic ESG assessments are possible and valuable.

ESG transparency measures set incentives to do good and allow discussion about it
ESG-related transparency is provided at the level of financial assets and products and at the financial company level. It reveals whether financial companies commit to sustainability, and whether their products and services actually adhere to this commitment. ESG transparency is also provided by companies in the real economy. It reveals the contribution of ESG impact investors or the creditors of these companies.

ESG integration measures proactively create win-win solutions

Systematic integration of ESG factors into financing and investment decisions is at the heart of sustainable finance. It enables financial actors to both serve society and the environment and create business opportunities. Even though the basis for ESG integration (information sources, assessment methods) is currently incomplete, ESG integration can already be successfully achieved today.

ESG preference measures make it possible to know and serve customers better

Systematically evaluate and meet ESG-related client preferences through appropriate products and services. Sensitise customers on ESG issues and thus strengthen their related preferences. Exploit market potentials and increase customer loyalty in doing so.

These levers will be explained more concretely and in greater detail in part two of this report in connection with the proposed measures. These measures are designed to help the financial system to contribute to overcoming the challenges – the failure of prices to reflect true costs (primarily in the real economy, and subsequently in the financial system), the disconnect between long-term impact and short-term financing and investment decisions, and the potential instability of the financial system in applying the following principles (as introduced in chapter 1.2):

The measures proposed in part two concern five core areas, including four main areas of the financial system – 1) asset and wealth management, 2) institutional investors, 3) credit business and 4) capital markets – as well as 5) research and education. These areas were identified as highly significant for the transformation of the financial system, due to the volume of financial flows managed or influenced and/or the impact in terms of scopes of action and positive spill-overs on the entire financial and economic system. For each core area, measures are proposed that were collected and prioritised at a joint workshop by the Swiss Team. Other topics and areas of the financial system such as investment banking and the liability business of non-life insurance products are also considered relevant, but could not be discussed within the scope of this report. The asset management in insurance products, however, is covered under the key topic of institutional investors.

3. Context

This chapter describes the context of the "Proposals for a Roadmap towards a Sustainable Financial System in Switzerland" report. The international (chapter 3.1) and national contexts (chapter 3.2) provided an important background for preparing this report.

3.1 International Context

International private engagement

Several private actors, mostly pioneers, are committed to making financial transactions more sustainable. The Eurosif "European SRI Study" (Eurosif 2014) reveals that in Europe[13] sustainable investments continued to grow fast until 2013, and that their growth outpaced that of the broad European asset management market.

The most widespread sustainable investment strategy was exclusion screenings,[14] and they managed to enter the mainstream: Exclusions strategies covered about 41% (€7 trillion) of European total professionally managed assets by the end of 2013. Most exclusion screenings, however, are focussed on very few ESG issues. Exclusion screenings solely relating to cluster munitions and anti-personnel landmines, for example, made up 70% of exclusion screenings. The second widespread responsible investment strategy is "ESG integration". However, more than 60% of "ESG integration", as defined by Eurosif (2014), merely meant that an ESG analysis was made available to mainstream analysts and fund managers, without formalised procedures for integrating these factors into financing and investment decisions (Eurosif 2014). Thus, the conclusion is twofold: Sustainable investment strategies still grow very fast in Europe, and some strategies have even entered the mainstream market. However, the most prominent strategies have only limited effects when it comes to actually minimising the negative ESG impacts associated with investments.

When asked about potential drivers of the future growth of sustainable investment strategies in the next three years, respondents to the Eurosif survey in 2014 mentioned the demand from institutional investors as most important, followed by legislative drivers. Materiality as a potential driver had grown the fastest since 2012 and was mentioned as the third most important driver, closely followed by the notion of fiduciary duty (Eurosif 2014). Thus, it seems that ESG factors are more and more considered to be material for financing and investment decisions, and that investors increasingly feel that investing sustainably is part of their fiduciary duties.

International political and international organisations' engagement

The need for a sustainable financial system has been voiced in many national and international commitments, initiatives, and treaties. They have fuelled private engagement, thereby energising private action and providing a relevant context for Switzerland's engagement.

However, important milestones at the international level have been launched or were brought up just recently, indicating the strong momentum of the international agenda to advance sustainable finance. The legally binding Paris Agreement of 2015 aims to strengthen the global response to the threat of climate change and make financial flows consistent with climate goals.[15] The Agenda 2030 for Sustainable Development refers to financial needs,[16] and the Sendai Framework for Disaster Risk Reduction adopted in 2015 requires impact assessments for investments.[17]

Further examples that explicitly address sustainable finance include UNEP's Inquiry into the Design of a Sustainable Financial System, the OECD Proactive Agenda Project on Responsible Business Conduct in the financial sector[18], the Addis Ababa Action Agenda[19], as well as private initiatives.[20] Potential risks for the financial system associated with environmental factors have also reached the G20 in 2016 in form of the Green Finance Study Group, which was set up by the G20 finance ministers and central bank governors in 2016.

The UNEP Inquiry into the Design of a Sustainable Financial System

In early 2014, the UNEP launched the "Inquiry into the Design of a Sustainable Financial System". Throughout its two-year life span, the Inquiry explored how to align the financial system with sustainable development, with a focus on environmental aspects. Switzerland, with its advanced financial sector and commitment to sustainability, was also involved in the Inquiry process. In 2014, the FOEN established the "Swiss Team" of experts from the federal authorities, the financial sector, academia and non-governmental organisations.

The Swiss Team presented its first report entitled "Design of a Sustainable Financial System – Swiss Team Input into the UNEP Inquiry" (FOEN 2015) in May 2015 at a symposium and submitted the results for discussion with experts. The report identified main challenges and principles for a sustainable financial system in Switzerland, pointed to best practices in Switzerland and developed overarching recommendations for further action. Some of the report's main findings were summarised above in chapter 2.1. The report serves as a basis for this paper, "Proposals for a Roadmap towards a Sustainable Financial System in Switzerland".

Switzerland is actively participating in the work of the G20 Green Finance Study Group. Moreover, the Financial Stability Board (FSB) has launched an industry-led Task Force on Climate-related Financial Disclosures to develop voluntary financial risk disclosures by companies. Both governments[21] and voluntary initiatives, such as the Group of Friends of Paragraph 47, currently address non-financial reporting in order to increase transparency[22].

All these treaties and initiatives provide requirements or guidance on sustainable finance and/or set the framework conditions for making financial transactions more sustainable. They also show that countries are increasingly committing to sustainable development, which has created high demand for investments into a sustainable economy both at the national and international levels. To reach the UN Sustainable Development Goals (SDGs) adopted in 2015, for example, an estimated 5–7 trillion USD is needed per year to finance infrastructure, clean energy, water and sanitation, etc.[23] It is evident that this will involve private funding to a large extent[24]. Therefore, more and more countries have set corresponding incentives and regulatory frameworks, which, together with the rapid technological progress, create considerable investment opportunities for the private sector.

Through its active involvement, Switzerland can play an important role in these international organisations and initiatives. Moreover, many international organisations and transnational actors that are involved in advancing sustainable development, including civil society organisations and private sector entities, are located in Geneva and are therefore part of the international centre of expertise established in Switzerland.

3.2 National Context

National private engagement

In Switzerland, sustainable investments have grown dynamically in the last ten years, but still remain a small market niche. By the end of 2014, approximately 1% of assets managed in Switzerland were invested sustainably[25], and mainstream financial markets are still hesitant to systematically integrate sustainability factors into financing and investment decisions. In 2013, around 220 companies and organisations were engaged in sustainable finance in Switzerland[26] and have provided and pioneered innovative sustainable finance products and services[27]. Since then, the market has developed further and this number has most likely increased considerably.
In 2014, private engagement, with the support of the State Secretariat for Economic Affairs (SECO), led to the establishment of the Swiss Sustainable Finance (SSF) platform. This overarching association pursues the goal of further promoting sustainability in the Swiss financial market, and strengthening Switzerland's position as a leading worldwide centre for sustainable finance[28]. In addition, Swiss NGOs are important actors in raising awareness among financial companies and the general public about the need to reduce the ESG impacts associated with their investments.[29]

Swiss Sustainable Finance

Swiss Sustainable Finance (SSF) strengthens the position of Switzerland in the global marketplace for sustainable finance by informing, educating and catalysing growth. Swiss Sustainable Finance (SSF)'s vision is to make Switzerland a leading centre in sustainable finance offering growth opportunities for the Swiss economy while benefitting society at large.

It works towards this goal by generally communicating the different ways of integrating sustainability into financing and investment decisions through publications, events and media work. Swiss Sustainable Finance (SSF) is also involved in regular market research, offering insights into the development of this segment. Through cooperation with its members in different workgroups, Swiss Sustainable Finance (SSF) provides solutions for further integrating sustainability into private wealth management, institutional asset management and investments for development. Furthermore, Swiss Sustainable Finance (SSF) prepares training modules on sustainable finance and works with universities and business schools on more comprehensive coverage of this topic in finance education.

The association, founded in 2014, has offices in Zurich, Geneva and Lugano. Currently, Swiss Sustainable Finance (SSF) unites around 90 members and network partners that include financial service providers, investors, universities and business schools, public sector entities and other interested parties.

National political engagement

Simultaneously, at the political level, Switzerland is one of few countries worldwide that have committed to a sustainable development in their constitution[30]. The national Sustainable Development Strategy 2016–2019 sets the goal of strengthening the financial industry's competitiveness, transparency and long-term focus. Furthermore, in 2016, the Federal Council recognised the potential effect of environmental risks on financial system stability and established the principles of the primacy of market solutions and the subsidiarity of state action, with the state providing support as a facilitator for the sector's efforts to open up the business segment of sustainable investments (SIF/FOEN 2016).

An important strategic instrument at the national level is the currently debated climate and energy incentive system (KELS), which refers to the second package of the Energy Strategy 2050. KELS could be a big step toward further internalising external effects in the real economy, with significant risk-return signals toward the financial system. The effective-

ness and efficiency of KELS in internalising external effects, however, fundamentally depend on the political aims to be achieved with the instrument and on its concrete design and implementation, such as the height and base of the levies, the design of exemptions, etc.[31]

The Swiss state has also become active on an operative level. In its report on CO_2 risks for the financial centre in Switzerland, the Federal Office for the Environment (FOEN) presented a calculation for the greenhouse gas (GHG) emission intensity of the most important equity funds licensed for distribution in Switzerland (see CSSP / South Pole Group 2015). Furthermore, the FOEN is working with the 2° Investing Initiative, a multi-stakeholder think tank, on aligning the financial sector with 2°C climate goals. The SECO provides support to the industry-led Natural Capital Declaration in order to quantify Natural Capital (or Resource) risk management in the financial sector.

Switzerland does not set any ESG-related reporting requirements for companies, investors or investments like the EU[32] and France[33] do, for example. However, its federal offices have been active in increasing the transparency and accountability of sustainability-related reporting[34] on a voluntary basis. The FOEN, for instance, is engaged in the Group of Friends of Paragraph 47, an initiative aimed at strengthening sustainability-related reporting. The SECO supports the Proactive Agenda Project on Due Diligence in the Financial Sector, which aims to specify the OECD Guidelines for Multinational Enterprises (OECD 2011) in the financial sector[35].

Part II: Proposed Measures for Core Areas

4. Asset and Wealth Management

4.1 Sustainability Goal and Challenges

Asset and wealth management play a crucial role in the Swiss financial centre and therefore represent an important core area in terms of rendering the Swiss financial system more sustainable. More than 50% of the net income of Swiss banks[36] stems from asset and wealth management. Furthermore, 26% of global cross-border wealth management is based in Switzerland, which makes it the number one country in this field[37].

According to the Forum Nachhaltige Geldanlagen (FNG) market study on sustainable investments[38] in Switzerland, 136.72 billion CHF (comprising investment funds, mandates and structured products) were invested sustainably – i.e. according to environmental, social and ethical evaluation criteria – by the end of 2015 (see FNG 2016). This corresponds to approximately 2% of the 6.6 trillion CHF assets managed in Switzerland (see Swiss Bankers Association Facts and Figures[39]). Thus, sustainable investments remain a niche, despite double digit growth rates over the past years.

Studies indicate that sustainable investment processes which are based on interaction with invested companies (i.e. best-in-class research, engagement) incentivise companies to prioritise ESG factors. This leads to a more solid integration of ESG objectives into a company's strategy and finally to a better sustainability impact[41]. It shows that further integrating ESG factors into asset and wealth management can help improve the sustainable impact in the long run.

Sustainability goal for asset and wealth management

The sustainability goal for asset and wealth management is to systematically integrate ESG factors into investment decisions and thus improve the sustainability impact.

This requires positive and adverse ESG impacts associated with investment decisions to be systematically assessed, and material ESG impacts to be translated into ESG-related opportunities and risks. On this basis, sustainable investment strategies are set, processes are restructured, and products and services are offered that are associated with an improved sustainability impact.

By applying ESG integration, asset and wealth management can improve the risk-return profile of investments, serve client needs better, and contribute to financing the transformation towards sustainable development.

Despite the relatively low penetration of sustainable investments in retail and private banking[42] and the relatively long way ahead, there are factors that help reach the ambitious sustainability goal. As regards private wealth management, studies show that more than 60% of wealthy individuals are interested in investments that combine a market return with a positive impact on the environment and society[43]. Also, the Swiss financial sector is in a good position to reach the goal, both by playing an important role in building a bridge between investors and companies with respective solutions, and by offering investment services that take these needs into

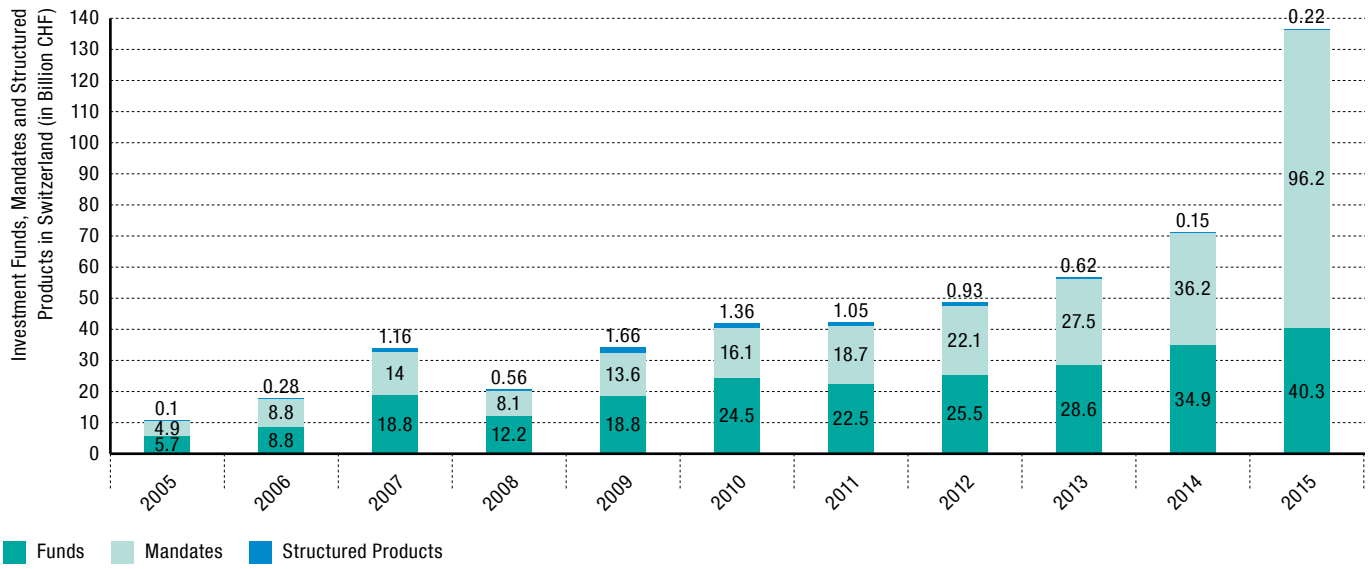


Fig. 1 *Sustainable investments in Switzerland in 2005 – 2015, with double digit growth rates. Source: FNG 2016* [40].

account. Such investment services rely on complex processes and require a lot of know-how. Switzerland, historically known for high-quality services and a high innovation capacity, can build on these strengths and develop high-quality investment products that justify the relatively high cost in Swiss wealth management.

The Swiss financial industry is quite well positioned when it comes to investments contributing to economic development in poor countries (investments for development). One-third of global microfinance investments focussed on social inclusion are currently managed in Switzerland, which puts Swiss asset and wealth management at the forefront of this segment[44]. The investments for development market is not solely limited to microfinance, but also builds on private equity investments and blended finance, where public private partnerships lead to better risk-return profiles, thereby making such investments more attractive for private investors. Swiss players have managed to win international tenders to manage investments for development and make use of their broad market knowledge in target markets[45]. Yet, other countries are even more active in fostering rapid growth in this field, especially when it comes to blended finance. For example Canada, in cooperation with the World Economic Forum (WEF), launched the platform "Convergence" in July 2015. This platform matches private, public and philanthropic investors with emerging and frontier market investments that creating a positive social impact (https://www.convergence.finance).

As for investments into specific environmental issues such as renewable energy or water, 17 billion CHF worth of assets were managed in Switzerland by the end of 2014[46]. Thus, Switzerland manages a fair share of this segment, but there is still room for growth. Nevertheless, Switzerland is home to specialised investment boutiques in thematic investments, both in listed and private equity, which have a long track record in managing thematic funds and have funds competing in the top quartile with their peers. Furthermore, in Switzerland, two sustainable real estate funds using corresponding sustainable real estate rating approaches were established some years ago[47]. However, in the fast growing international market of green bonds, which invest in environmental projects, Switzerland plays a rather insignificant role. Out of the 41.8 billion USD of green bonds issued in 2015, only one green bond was issued by Swiss players (see chapter 7 for more details). The principles and standards that are evolving (Green Bonds Principles, Climate Bond Initiative[48]) will give more credibility to this growing market, and they will help labelled green bonds to become more attractive for financial institutions in Switzerland as well.

Compared to thematic investments, the Swiss financial system has much room for improvement in non-thematic sustainable investments. Switzerland has a long history of offering sophisticated sustainable investment products and still comes up with innovative solutions[49]. However, it has lost ground in this field in the past few years. Total sustainable investments managed in Switzerland represent a mere 0.3% of the 21.4 trillion USD global sustainable assets (see GSIA 2014)[50]. Still, this small share should be interpreted with care: In other countries, there are high volumes of strategies with rather low levels of ESG integration, mainly driven by institutional investors which have adopted broad exclusion screens across their total asset base. Yet, this reveals an important issue: Swiss institutional asset owners are sort of lagging behind their international peers (see chapter 5). Improvements in this area would considerably accelerate the trend of asset managers starting to integrate ESG factors into their standard asset management processes.

4.2 Barriers to the Integration of ESG Factors

The full integration of ESG factors by asset and wealth managers, the continuous reporting and monitoring of ESG factors, and the provision of detailed sustainability information to investors are inhibited by the following barriers:

Lack of definitions, standards and product transparency

Both clients and representatives of banks and asset managers regularly complain about the variety of different types of sustainable investment products, especially the lack of standards, generally accepted definitions and transparency of the sustainability impact associated with these products. It seems that the confusion about the different approaches hinders a wider adoption of sustainable investment strategies. Both clients and advisors often associate sustainable investments primarily with thematic investing or exclusionary approaches. They expect sustainable funds to solely contain very sustainable stocks. Awareness is still low on the effects of a best-in-class or engagement approach to the sustainability policy of companies.

Attitude concerning performance and risk of sustainable investments

Many clients and client advisors still assume that sustainable investments lead to lower performance or higher risks[53]. A recent study showed that these assumptions make relationship managers hesitate to actively offer sustainable investments to their clients[54]. And as private clients often buy what their counterpart recommends, they buy less sustainable funds than they actually would prefer.

This attitude was often formed by investments in environmental themes which, by nature, have a different risk-return profile than broadly diversified investments. Also, early

Promising approaches

Integration of sustainability preferences into individual investor profile assessments

What is it? The assessment of client preferences and risk abilities is the first step in an investment process. Whenever a client intends to make an investment, a bank is obliged to assess the client's individual investor profile to determine their risk abilities and appetites and match investment recommendations to this profile. Some banks such as the Cantonal Bank of Zurich (ZKB) have integrated questions about sustainability attitudes and personal preferences into their investor profile assessments. In case clients signal greater interest in sustainability topics, client advisors will automatically offer sustainable investment alternatives.

Why is it promising? Similar to a greater transparency on the sustainability level of an investment product, this helps make sustainable investments the focus of clients with a particular interest, reveals their ESG preferences and enables client advisors to offer appropriate financial products. This then helps to exploit market potentials, increase client loyalty, and increases the volume of sustainable investments in private wealth management.

Transparency on the sustainability impact of portfolios

What is it? Investors seeking to assess the ESG characteristics of their investment often face a lack of accessible information. Some asset and wealth managers have developed solutions to overcome this shortcoming.

Some years ago, the Cantonal Bank of Zurich (ZKB) developed a sustainability rating system for all offered funds (ZKB funds and funds of other providers). For each of the funds' underlying investments, a total sustainability rating is calculated (ranging from A to G). This grade is based on three key metrics: CO_2 emissions per sales, a corporate governance rating, and a reputational risk indicator[51]. A simple overview of the rating grade is included on every fund factsheet. This enables clients to easily understand the sustainability level of each fund and choose a fund with a high sustainability grade in case they have a preference for this topic. Furthermore, the fund rating system leads to increased discussion of sustainability topics in client advisory conversations.

Globalance Bank went a step further in developing a dynamic portfolio footprint method to illustrate the sustainability characteristics of all components of a client portfolio. Based on different sustainability research providers and its own analysis, the bank defines how much a company contributes to solving current societal and environmental challenges. The factors are aggregated across all asset classes of a portfolio and viewed. Based on this integrated economic, social and environmental footprint method, Globalance can identify and offer investment options to its clients that are associated with lower footprints, while keeping the risk-return profile stable[52] (see https://footprint.globalance-bank.com).

Why is it promising? These two approaches can raise client awareness, as clients realise that their investments contribute to a certain sustainability impact, which may lead to increased interest in sustainable investment products or reveal the ESG preferences of clients, and helps client advisors offer appropriate financial products. This then helps to exploit market potentials, increase client loyalty, and finally increase the volume of sustainable investments in private wealth management. Furthermore, transparency in the sustainability performance of a portfolio leads to higher accountability of banks and asset managers as regards their ESG integration strategies.

sustainable investment products with a broad set of exclusion criteria and an often relatively strict best-in-class approach did sometimes underperform their benchmark or peer funds. Yet, encompassing meta-studies indicate that investing according to ESG criteria is not systematically associated with minor risk-return profiles (Friede/Busch/Bassen 2015).[55]

Client advisors lack incentives to offer sustainable investments and fear their complexity

Client advisors generally lack appropriate incentives to offer and sell sustainable investment products. Additionally, a study based on interviews with client advisors from different private banks revealed that many of them fear to offer their clients sustainable investment products due to fear of complexity[56]. The advisors do not feel comfortable with sustainability topics and often assume that clients with an affinity to these topics know more than them. Furthermore, some client advisors perceive sustainable investments as incongruent with their own personal value systems or lifestyles, which is another reason why they hesitate to offer such products to their clients.

Lack of internal training on sustainable investments

Thorough and repeated internal training of portfolio managers and client relationship managers on sustainable investments is an important prerequisite to address the perceived high complexity and combat the prejudice on performance and risk associated to sustainable investment. Yet, there is often not enough adequate internal training on this topic, due to limited training time and too many other training topics resulting from the increased regulatory complexity of finance.

Lack of strategic relevance attributed to ESG factors

A key barrier to a systematic integration of ESG factors in asset and wealth management is the lack of strategic relevance that managers attribute to ESG factors in investment decisions. The main causes for this are the lack of adequate pricing of environmental goods, as already discussed in chapter 2.1, and prevalent short-termism. As a result, asset and wealth managers often do not strategically integrate sustainability issues (especially risks and opportunities) in their portfolio management.

4.3 Proposed Measures

Many tools and techniques for making asset and wealth management more sustainable and increasing sustainable investment offerings are already in place. Against the backdrop of changing client expectations (both on the private and institutional sides), many Swiss players have started the process of expanding and shaping their sustainable finance offering. Better inclusion of ESG factors and stronger sustainability offerings by asset and wealth managers would accelerate this trend and have a significant positive effect. Improving ESG-related risk management capabilities and opportunities also has the potential to increase clients' trust in managers' competencies and the competitive edge of Swiss asset and wealth management. In addition, it has the potential to reduce the ESG-related risk exposure of the Swiss financial system (reputational, carbon bubble, etc.). Overall, it would strengthen the reputation of the Swiss financial centre, known for high quality services, reliability and stability, and underline the willingness to "be part of the solution".

Main proposals

Measure 4a: Educate and raise awareness among portfolio managers and relationship managers (Education & awareness, ESG preferences)

Portfolio and relationship managers should be trained to understand and manage ESG risks and opportunities, based on qualitative and quantitative assessment methods developed beforehand (see below). Relationship managers should also receive comprehensive training on transparency tools and the underlying assumptions, as well as on how to evaluate the ESG preferences of clients. This education measure is a crucial prerequisite for effective ESG integration (see measure 4d).

This training could be provided in-house and/or through external institutions such as universities, specialised schools, consulting and sustainability rating providers (see chapter 8). To facilitate and encourage in-house education, a variety of players such as the Swiss Training Centre for Investment Professionals (AZEK) and Chartered Financial Analyst (CFA) Institute should take up ESG issues in their curricula. Industry associations, with the support of federal governmental agencies, could prepare and disseminate teaching materials, providing the basis for effective ESG integration.

Measure 4b: Provide transparency on ESG impacts, risks and opportunities of financial products for investors (ESG transparency, ESG preferences)

Wealth and asset managers should provide transparency on the ESG-related impact, risks and opportunities of financial products, based on assessed KPIs illustrating the sustainability level of products (see measure 4.C). Illustrating the sustainability levels of all financial products offered would bring sustainability factors part of the discussion at client meetings. Providing client relationship managers with illustrative and issue-specific company case studies could also help by showing how these issues improve a company's sustainability performance. In this way, case studies would enhance transparency and make a case for sustainable investment products. Entire sustainability ratings or summaries on the ESG-related strengths and weaknesses of specific investments could also be integrated into advisory tools or investment databases. With these prerequisites, client advisors could systematically assess the ESG preferences of their clients and appropriately match them with offerings of sustainable financial products. This would help to exploit market potentials, increase client loyalty, and finally increase the volume of sustainable investments.

Another important aspect of ESG-related transparency is for invested companies of the real economy to report standardised and comparable information on sustainability factors (e.g. through reporting recommendations or requirements). This will fuel improved research and ESG-related transparency of investments. Current initiatives and standards such as the UN Global Compact, GRI4, OECD Guidelines for Multinational Enterprises or the UN Principles for Responsible investments (PRI) have been steps in the right direction. However, ESG-related company reporting is still fragmental and not always comparable and reliable. Yet, it already allows for rather pragmatic impact assessments right now. Promising approaches to improving company ESG reporting are the framework developed by the International Integrated Reporting Council's (IIRC) sustainability accounting standards and those currently being developed by the Sustainability Accounting Standards Board (SASB; see chapter 7.1).

Industry associations such as Swiss Sustainable Finance (SSF) could contribute to common definitions and alignments of KPI for portfolios through dissemination of best practice and supporting knowledge transfer. In-house sustainability specialists or external sustainability research and consulting providers could deliver appropriate case studies. Generally, when implementing this measure, it would make sense to learn from the experiences of other countries that have set ESG-related transparency standards and regulations (see promising approaches in chapter 5.1).

Measure 4c: Complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs); define assessment standards; investigate on potential regulatory barriers. (ESG research & development, ESG standards)

Further research and development efforts are needed. Firstly, empirical research should be completed to provide more comprehensive, material, reliable and comparable data on

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
4. Asset and Wealth Management							
4a Educate and raise awareness among portfolio managers and relationship managers.	Universities, professional schools, in-house education, consulting and sustainability rating providers, supported e.g. by industry associations and the state; target audience: portfolio managers and client relation-ship managers	ESG education & awareness; ESG preferences	voluntary standards	high	medium	now	long
4b Provide transparency on the ESG impacts, risks and opportunities of financial products for investors.	Asset and wealth management as well as invested companies, supported e.g. by industry associations such as Swiss Sustainable Finance (SSF); target audience: clients and other stakeholders	ESG transparency; ESG preferences	voluntary standards	high	high	now	long
4c Complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs); define assessment standards; investigate on potential regulatory barriers.	Universities, other research institutions, supported e.g. by industry associations and asset and wealth management; target audience: portfolio and client relationship managers	ESG research & development; ESG standards	voluntary standards, state incentives	high	high	now	medium
4d Systematically assess and integrate ESG factors into investment processes.	Asset and wealth managers, supported by sell-side ESG research providers, and industry associations	ESG assessment; ESG integration	voluntary standards	high	high	medium	long

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

the effect of ESG factors on the risk-return profile of investments. Secondly, development efforts should be made to improve qualitative and quantitative ESG assessment methods. Thirdly, investigations should be undertaken to show if there are regulatory barriers decelerating sustainable investments. Specific questions that should be addressed include: What ESG factors are material for investments in different industries? Under what conditions can the risk-return profile of ESG investments be improved? How can ESG risk be valued in the absence of "true" market prices for externalities? What are potential regulatory and legislative barriers for sustainable investments? Additionally, key performance indicators (KPIs) should be developed to illustrate the sustainability level of different products as a possible way of informing clients. Clients with an affinity to sustainability aspects especially want to be informed of varying product sustainability characteristics. The methods and KPIs developed could then be set as voluntary industry standards.

The stakeholders that should make these research and development efforts are mainly universities and other research institutions. They could build on existing work performed, for example, by the industry-led Task Force on Climate-related Financial Disclosures, established by the Financial Stability Board (FSB)[57]. Industry associations could help enhance the knowledge base by developing generally accepted standards and definitions on sustainable finance. Such definitions have to be aligned with international players in order not to add to the confusion. Banks and asset managers should participate in research efforts, e.g. in the form of individual research partnerships (e.g. based on the Swiss Federal Commission for Technology and Innovation – CTI program) or through financing a professorship focused on this topic. The state could provide some funding, e.g. through the "Sustainable Economy" National Research Programme, approved by the Swiss Federal Council in March 2016[58]. Research projects on sustainable finance could be funded.

Measure 4d: Systematically assess and integrate ESG factors into investment processes (ESG assessment, ESG integration)

In order to systematically integrate ESG factors (impact and related opportunities and risks) into investment processes, a strategic ESG position (policy) and concrete and mandatory ESG goals for assessment managers are needed to put sustainability on the agendas of these managers[59]. This would fuel ESG assessment of financial products by managers, based on ESG methods developed beforehand (see above). By integrating material ESG factors into the investment process, asset and wealth managers would be able to systematically manage ESG factors and create benefits for their clients by disclosing the related impact, risks and opportunities[60].

When integrating ESG factors into investment processes, investment managers could rely on the support of sell-side ESG research. Therefore, it would make sense for investment managers to allocate a share of their resources to sell-side ESG knowledge and research and to take ESG capacities into account when assessing these providers. Industry associations such as the Swiss Training Centre for Investment Professionals (AZEK) could play an important role in facilitating dialogue on methods, tools and instruments for effective ESG integration. Additionally, if companies could be encouraged to provide standardised and comparable information on sustainability factors (e.g. through reporting recommendations or requirements), this would lead to improved research. Many asset managers have already started to integrate ESG information in various ways.

With these prerequisites, client advisors could systematically integrate sustainability issues into investor profile assessments, use them to assess the ESG preferences of their clients and appropriately match them with offerings of sustainable financial products. This would help exploit market potentials, increase client loyalty, and finally increase the volume of sustainable investments. Studies show that the so-called "Next Gens" – the next generation of wealthy families – are particularly interested in their investments having an impact beyond a pure financial return. An active promotion of sustainable investments could therefore strengthen the relationship to both retail and wealthy clients.

Other proposals

Apart from the proposed measures that are considered high priority, there are measures which are considered effective for asset and wealth management:

> Industry associations could engage in establishing voluntary industry standards, especially on ESG assessments and ESG-related transparency.

> Industry associations and NGOs could inform the public about different forms of sustainable investments, their advantages and disadvantages, their effects and impact as well as their performance characteristics. This would help reduce perceived complexity and encourage investors to adopt sustainable strategies.

> The public sector could play an active role in encouraging private investment development by providing an environment conducive to encouraging public-private partnerships (standards, voluntary codes, methodologies, guidelines). Providing such an environment could strengthen flows of private funds into projects addressing basic needs in developing countries, e.g. water sanitation, education, health.

> Another role that could be played by the public sector is to provide technical assistance or risk reduction instruments, i.e. public guarantees, in order to leverage private investments. Blended finance should be used to enhance markets, not distort them, and is one of several options. Blended instruments should be designed so that 1) there is a clear and possibly ex-ante measurable public good (i.e. reduction of CO_2 emissions), 2) they only use the minimum blend/subsidy required, 3) they are time-bound and there is a planned exit (no perpetuating structures should be established), 4) they create an imitable demonstration effect for private investors.

5. Institutional Investors

5.1 Sustainability Goal and Challenges

Institutional investors are one of the main investor groups on capital markets. Many of them are rather large entities (major enterprises, the state, etc.) or pool money for individual investors. The asset volume under the responsibility of an institutional investor is generally higher than the invested volume of financial actors in other market segments.

Institutional investors are key clients for asset managers and investment products and generally instruct asset management (in-house or external) to invest in assets such as equites, bonds, real estate or other investment assets or to originate loans. The requirements for some institutional investors are affected by the fact that they often act as fiduciaries and manage assets for their beneficiaries.

Due to the high volume of capital invested, institutional investors contribute considerably to the environmental and social impact. Through active ownership, they may also exert considerable influence on the behaviour of the companies that are part of their invested portfolios. Thus, institutional investors can serve as major drivers towards a more sustainable financial system.

Some institutional investors such as life insurance, pension funds, trusts or endowments have rather long-term investment horizons. This widens the scope for translating ESG impacts into related risks and opportunities, as their financial relevance usually increases in the long run, particularly in connection with broader trends such as climate change, demographic change, etc. Exposure to these trends is generally higher in the case of illiquid assets, such as real estate or infrastructure, water (supply and sanitation) and clean energy production, etc. (UNEP/PSI 2015). In a few cases, institutional investors have missions that explicitly include ESG-related issues, alongside profit, such as for charitable trusts or churches. These are less exposed to competitive pressure and

Sustainability goal for institutional investors

The sustainability goal for institutional investors is to systematically integrate ESG factors into investment decisions, incl. (proxy) voting and engagement activities. In doing so, the aim is to contribute to an improved sustainability impact.

This requires the positive and adverse ESG impacts of investment decisions to be systematically assessed and material ESG impacts to be translated into ESG-related opportunities and risks, according to sustainability-related policies and asset management goals. On this basis, sustainable investment strategies can be set and investment processes restructured. Finally, active ownership activities and the products and services offered should contribute to an improved sustainability impact.

In so doing, institutional investors improve the risk-return profile of investments and serve client needs better. Furthermore, they contribute to financing a sustainable development and to minimizing negative impact of investments on the environment and society.

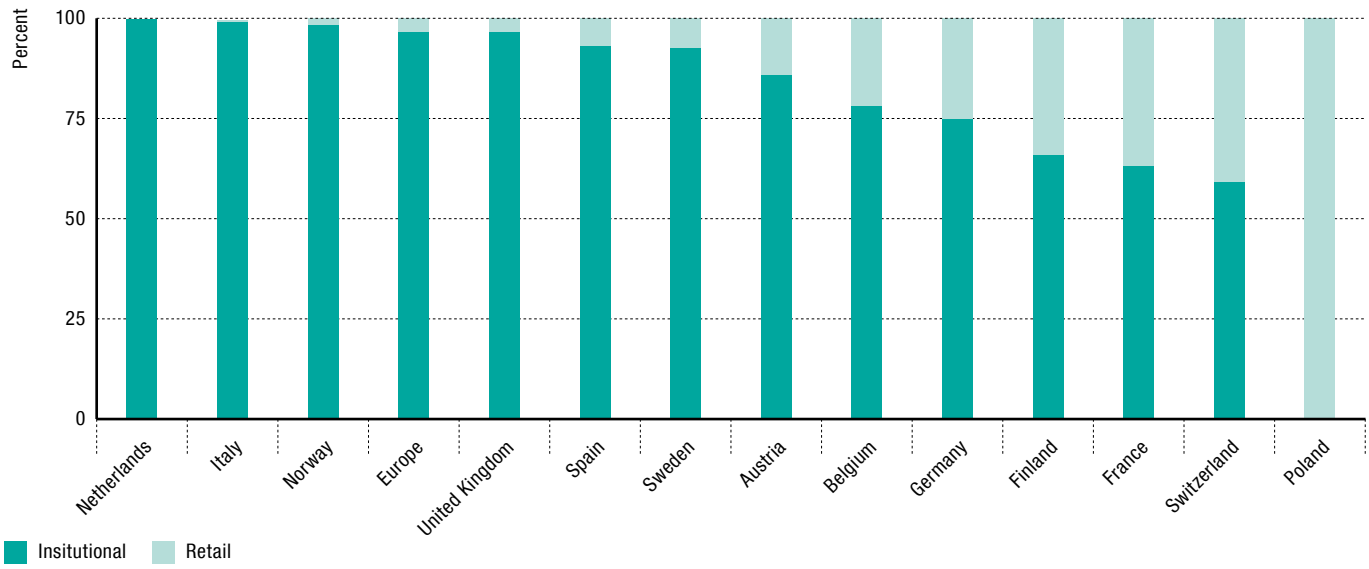


Fig. 2 *Share of institutional vs. retail sustainable investing by country in 2013. Source: Eurosif 2014.*

thus have a wider scope to establish sustainability policies and set sustainability goals for their investments.

Few institutional investors have established explicit sustainability policies and set sustainability investment goals, alongside risk-return goals. The reasons for this are mainly that these institutional investors hold certain ESG-related ethical values (e.g. Nest Sammelstiftung) and/or that their beneficiaries have concrete sustainability-related preferences. The general implementation strategy is to focus on special market segments and/or to introduce sustainable investment strategies such as impact investing, thematic investing or best-in-class approaches.

Overall, in the sustainable investment market in Switzerland (see also chapter 4.1), institutional investors have gained ground over the years compared to retail business: In 2010, only less than half of sustainable investments were made by institutional investors, whereas four years later their share had increased to almost two-thirds. However, compared to the European and global market, the share of institutional investors in Switzerland on the sustainable investment market is lower. In 2013, institutional investors had a market share of 41% in Switzerland and a share of 97% in Europe (Eurosif 2014, see figure above). This indicates that institutional investors in Switzerland have been much more reluctant concerning sustainable investments than in other European countries, and that there is still considerable potential for institutional investors to learn from and catch up with their international peers (Novethic 2015).

The Swiss Association for Responsible Investments

Some state-related institutional investors in Switzerland – namely PUBLICA, Suva and other public (pension) funds – have recently started a process to integrate ESG criteria into their investment decisions: In December 2015, these institutions founded the Swiss Association for Responsible Investments ("Schweizer Verein für verantwortungsbewusste Kapitalanlagen" – SVVK). The association intends to assist its members in integrating norm-based exclusion criteria based on Swiss law and international conventions (e.g. the ILO norm or conventions against so-called "inhumane weapons" such as land mines or cluster munition) into their investments.

Furthermore, PUBLICA has started an internal discussion process on how to deal with its CO_2-intensive investments (see Stern 2015).

5.2 Barriers to the Integration of ESG Factors

The following barriers inhibit the full integration of ESG factors into investment decisions by institutional investors:

Lack of ESG-related standards, empirical data, assessment methods, tools and case studies

First of all, ESG factors that are relevant for investment decisions are not adequately standardised and operationalised. Many institutional investors are still uncertain about what sustainable investment is all about. This can be a barrier for institutional investors to start integrating ESG factors, even though they might be somewhat interested.

Further barriers are the lack of a relatively comprehensive, reliable and comparable empirical data base on how ESG factors affect the risk-return and tracking errors of investments, and case studies that illustrate these effects and help investors to understand them better. Additionally, sound, approved and easy-to-apply methods and tools to assess ESG impacts and risks are also missing. Accordingly, many institutional investors do not fully understand what kinds of effects ESG factors have on their investments, such as the effect of rising CO_2 prices on investments in the cement industry. Also, some institutional investors still perceive that ESG factors generally have a negative impact on financial results, despite meta-studies displaying another picture[61], and despite sustainability-oriented pension funds that operate successfully. Nest Sammelstiftung, for example, successfully manages to integrate ESG according to a high sustainability standard and within the respective regulatory requirements and to generate returns that are normal in the market. Asset managers, in particular, fear that by integrating ESG factors into investment decisions, investment options will be narrowed, and that because of this, the return of their portfolio will systematically deviate from the traditional benchmarks (tracking error).

Lack of transparency on ESG impacts and the risks of financial products and assets

Generally, there is a limited ability to tangibly demonstrate ESG impacts, risks and opportunities along entire value chains of invested companies. This applies to specific portfolios, including those that are managed directly on the beneficiaries' behalf, e.g. by pension funds and life insurance. In most cases, transparency related to financial products is entirely lacking[62], and in those cases where some transparency is provided, information is rarely standardised, does not comprise the entire supply chain and/or does not allow for comparison. This is also caused by the lack of empirical data, assessment methods and tools (see above).

For-profit ESG research institutions, however, contribute to closing this transparency gap, especially since ESG assessments are quite complex to perform and require interdisciplinary know-how. Therefore, financial services providers are not always able to engage in ESG research themselves. However, the current coverage of ESG research (on listed and non-listed stocks and bonds, real estate, etc.) is

Promising approaches

The Portfolio Decarbonization Coalition (PDC)

What is it? The PDC is a voluntary initiative by multiple stakeholders. It aims to commit institutional investors to concrete and quantifiable carbon-footprinting and to portfolio decarbonization targets.

Why is it promising? The PDC mobilises institutional investors to increase the transparency of the climate impact associated with their portfolios, to increase climate-friendly investments and to change investors' risk and opportunity perceptions. As of November 2015, 25 asset owners and asset managers had signed, representing over 3,200 billion USD in assets under management. These investors have allocated capital to low carbon activities, encouraged companies in their portfolios to reduce their greenhouse gas emissions, and withdrawn capital from particular sectors or companies (UNEP FI / CDP 2015). The initiative helps investors that have decided to engage in more climate-friendly investing to increase the visibility of their commitments (see http://unepfi.org/pdc/).

Regulation on ESG reporting

What is it? ESG-related reporting regulations for pension funds and insurance exist in several European countries, e.g. in Belgium (L.P.C. 2003), Austria (art. 25a, 1(6) PKG) and Germany (art. 115, 4 VAG). The French Energy and Ecology Transition Act (TEE) of 2015 goes fairly far by requiring institutional investors to measure and report the carbon footprint of their portfolios by the end of 2016. Other reporting regulations address large companies including investors, such as in Denmark (Danish Financial Statement Act), in France (Grenelle II Act, 2011) and in the EU (EU Directive 2014/95/EU that amends Directive 2013/34/EU).

Why is it promising? ESG-related reporting regulations ensure that such reporting is applied on a wide scale. They also encourage investors to start a learning process on dealing with the climate impacts and risks associated with their investments and, maybe gradually, to start dealing with further ESG factors as well. A far-reaching effect in that regard can be expected from EU Directive 2014/95/EU that is currently being implemented in EU member states.

The regulations in Europe and the lessons that can be learnt from those could help to assess whether similar regulations should be considered in Switzerland.

still not comprehensive enough. Additionally, most research institutions focus on management systems and controversies, and do not provide sufficient information on material ESG impacts.

As a consequence, financial products that have explicitly integrated ESG factors into investment decisions lack in credibility, and the factual sustainability levels can differ considerably. The sustainability standards depend both on the specific sustainable investment strategy applied (e.g. ESG integration, best-in-class or exclusion strategies) and on the quality and rigour of the processes implemented.

Investment strategies and goals often do not reflect beneficiaries' ESG preferences and societal values

According to a Swiss survey, 72% of pension fund beneficiaries agree with applying financially relevant ESG criteria, and 73% believe that ESG factors lead to more prudent investment decisions (gfs-Zürich 2014). These ESG preferences may not be reflected in the investment decisions of institutional investors such as insurance companies or pension funds.

One reason for this might be that many private clients are not aware of the sustainability impact of financial products, such as life insurance and pensions[63]. As a result, clients do not communicate their ESG preferences to institutional investors, e.g. to pension funds via foundation boards. Other reasons might be the lack of transparency concerning the ESG impacts associated with financial products, and the lack of established client information and dialogue on ESG-related investment strategies and goals.

5.3 Proposed Measures

Main proposals

Measure 5a: Develop and set standards for key sustainability issues in sustainable investments, complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs) (ESG research & development, ESG standards)

Engaging in ESG research and development and setting standards would improve the basis and tools to effectively integrate ESG factors into investment decisions. Setting sustainable investment standards for institutional investors would provide guidance to institutional investors on integrating ESG factors. Furthermore, they would ensure that certain minimal requirements are met, which would build up trust on the part of clients. Sustainability standards could define the most relevant sustainability issues for investments (e.g. exclusion of so-called "inhumane weapons" or adherence to the 2 degree climate goal). Standards could also define certain quality requirements for sustainable investment strategies such as exclusion screenings, best-in-class approaches, thematic investing or impact investing.

Another research and development task is to complete current empirical research on the effects of specific ESG factors on the risk-return of investments and on tracking errors. The aim is to establish more reliable, comparable and relatively comprehensive statistical data pools, as a fundamental basis for ESG integration and due diligence processes.

Another task is to develop KPIs for the most relevant sustainability impact of portfolios as well as respective methods and tools for their assessment throughout value chains chains of invested companies. These should be rather easy to understand and apply, and could be, at least at first, rather pragmatic. However, with impact assessment methods becoming more sophisticated and implementable over time, these could be set as standards for assessing KPIs to allow for better consistency and comparability.

Important stakeholders for achieving measure 5A are universities, private research institutions, rating and consulting organisations, and institutional investors. This measure is to some extent in the interest of financial actors, as it increases the credibility of ESG-related activities and helps to exploit market potential for sustainable investments. To exploit this potential, however, institutional investors need to improve their relationship to and dialogue with beneficiaries. Furthermore, the measure would also help institutional investors to understand and manage the ESG-related impacts and risks (of both their clients' and their own assets) more effectively and efficiently, with a positive effect on investors' reputation, the risk-return of investments and, finally, with a positive contribution to their own resilience and the resilience of the entire financial system.

Therefore, the standards to be developed could possibly be set as voluntary standards and promoted, for example, by industry associations, such as Swiss Sustainable Finance (SSF) or the Swiss Association for Responsible Investments (SVVK). Furthermore, the measure can be stimulated by initiatives such as the UN Principles for Responsible Investment (PRI). Additionally, it would be beneficial if the state provided. One such option is to fund research programmes such as the "Sustainable Economy"[64] National Research Programme, which includes possible research on sustainable finance. Further supportive activities could include the state expanding its collaboration with working groups that set guidelines or standards, such as those of the OECD[65], or provide initial funding for platforms, such as for setting up Swiss Sustainable Finance (SSF).

Measure 5b: Educate and raise awareness among institutional investors and beneficiaries (ESG education & awareness, ESG preferences)

Educating and raising awareness among institutional investors and beneficiaries empower institutional investors and beneficiaries to evaluate and communicate ESG preferences concerning financial products.

The aim of this measure is, first of all, to educate foundation, management board and investment committee members, chief investment officers and others on the ESG impacts of investments and on ESG integration, based on sound empirical data, investment cases and concrete examples. Asset managers should be trained to understand and assess ESG factors, while client advisors should be trained to engage with clients in order to inform and sensitise them on how to assess and meet their sustainability-related preferences.

This knowledge could be provided through in-house training and exchanged in internal committees, and/or through external institutions such as universities, specialised schools, consulting and sustainability rating providers (see chapter 8). To facilitate and encourage in-house education, a variety of players such as AZEK and CFA could take up ESG issues in their curricula. Industry associations could prepare and disseminate teaching materials, providing the basis for effective ESG integration, and the state could provide some financial support.

Measure 5c: Provide transparency on ESG-related investment policies, goals, and portfolio impact; set standards concerning the ESG transparency of portfolio impact (ESG transparency, ESG assessment, ESG standards)

Another measure is for institutional investors to publish their ESG-related investment policies and adhering investment goals (or explain why they do not establish these). Institutional investors could also report on the sustainability impact of their portfolios, and this reporting would adhere to standards developed beforehand (see measure 4c).

ESG-related investment policies and goals would be mainly set by investors' board members and supported by in-house ESG experts, product managers and external consultants. The ESG impacts of portfolios would primarily be assessed by asset managers, in-house financial and ESG analysts, as well as auditing agencies. Investors might seek the support of external service providers, especially consulting or sustainability rating providers, as well as critical stakeholders (NGOs, sustainability rating agencies, client organisations, etc.).

Transparency is to some extent in the self-interest of institutional investors (credibility, development of market potential, enhanced risk assessment, resilience). However, transparency also increases the pressure on investors to commit to sustainability issues. Therefore, this measure may require involvement of other stakeholders to be effectively implemented: Generally, transparency and reliability are in the interest of beneficiaries and could be enhanced through recommendations or requirements by stock exchanges (see

Proposed measures / Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
5. Institutional Investors						
5a Develop and set standards for key sustainability issues in sustainable investments, complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs).	ESG research & development; ESG standards	voluntary standards, possibly state incentives	high	medium	now	medium
Universities, other research institutions, rating and consulting organisations, together with institutional investors, supported by industry associations; target audience: institutional investors						
5b Educate and raise awareness among institutional investors and beneficiaries.	ESG education & awareness; ESG preferences	information and awareness, voluntary standards	high	medium	now	long
In-house training departments, universities, specialised schools, consulting and sustainability rating providers, supported by industry associations and possibly the state; target audience: institutional investors (especially foundation/ management board and investment committee members, asset managers, client advisors) and beneficiaries						
5c Provide transparency on ESG-related investment policies, goals, and portfolio impacts; set standards concerning the ESG transparency of portfolio impacts.	ESG transparency; ESG assessment; ESG standards	voluntary standards	high	high	now	long
Policies and goals: board members, supported by in-house ESG experts, product managers, external consultants; assessments: asset managers, in-house financial and ESG analysts, auditing agencies, possibly supported by external service providers (consulting or sustainability rating providers), NGOs, client organisations; target audience: beneficiaries and other stakeholders						
5d Integrate ESG impacts into policies and related asset management goals, systematically evaluate and meet the ESG preferences of beneficiaries.	ESG integration; ESG preferences	voluntary standards	high	high	now	long
Policies and goals: board members (especially foundation boards), supported by in-house ESG experts, product managers, external consultants; ESG integration: asset managers; Target audience: client advisors, supported by in-house ESG experts, possibly external service providers						

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

chapter 7), so that ESG-related reporting becomes a self-regulated industry standard. In the long run, however, and if voluntary measures prove ineffective, the state could evaluate the necessity of regulatory measures towards higher transparency such as publication requirements.

Measure 5d: Integrate ESG impacts into policies and related asset management goals, systematically evaluate and meet the ESG preferences of beneficiaries (ESG integration, ESG preferences)

To formally integrate ESG factors into the investment processes of institutional investors, a strategic ESG position (policy) should be established and concrete and ESG-related asset management goals should be derived from it. Insurances and large pension funds could make these ESG goals mandatory for internal or mandated external asset managers. Smaller pension funds could reach ESG goals by deliberately demand-

ing asset products that provide the necessary transparency on ESG factors and adhere to the set goals. To be able to demand these products, however, smaller pension funds would depend on adequate product offerings.

In line with their ESG policies, institutional investors offering individualised product solutions to beneficiaries, such as insurance companies, could establish systematic dialogue to evaluate the ESG preferences of clients and meet them by offering adequate sustainable investment solutions that are associated, for example, with life insurance products. Institutional investors that do not offer individualised product solutions, such as pension funds, would systematically inform their beneficiaries about ESG-related investment strategies and goals, such as at foundation board meetings and through newsletters.

The main stakeholders that should set ESG policies and related asset management goals are board members (especially on foundation boards for pension funds), in-house ESG experts, product managers at institutional investors, and external consultants. Asset managers are the main stakeholders that should integrate ESG factors into asset management according to ESG goals, while client advisors would be mainly responsible for evaluating and meeting the ESG preferences of beneficiaries. In-house ESG experts and possibly external service providers, such as consultants, should support these efforts.

Other proposals

Apart from the high priority measures discussed above, the following proposed measures are also helpful, but are considered either less effective or much more difficult to implement:

> State-related institutional investors, such as PUBLICA, the Swiss Accident Insurance Fund (Suva), or the public old-age and survivors' insurance (OASI), could serve as good examples and start to systematicall integrate ESG factors on a voluntary basis. This measure could build on the process recently started by the PUBLICA, Suva and other public pension funds[66] to integrate ESG criteria into their investment decisions (see chapter 5.1).

> Further sustainability benchmarks could be developed with traditional risk-return profiles and low tracking errors, such as for equities in cleantech companies, based on a more comprehensive coverage by ESG research providers on listed and non-listed stocks and bonds. These benchmarks play an important role for the passive investment styles used by many institutional investors, especially pension funds.

> State promotions and incentives such as subsidies, guarantees or other de-risking elements that enhance the financing of sustainable projects and sustainable investments (UNEP/PSI 2015) could be established. This could particularly spur the development of innovative financial products for sustainable infrastructure investments and help to exploit investment chances associated with current investment needs for sustainable infrastructure, especially in developing and emerging countries.

> It could be evaluated if there are obstacles in economic and/or financial regulations that impede sustainable investments by institutional investors.

6. Credit Business

6.1 Sustainability Goal and Challenges

Credit is essential to a functioning and thriving economy. The focus of this chapter is on loans to businesses, not to private individuals. The key to a bank's lending practices is its evaluation of the creditworthiness and borrowing capacity of a potential debtor, and the ability to charge different rates of interest, based upon that evaluation. The purpose of the loan is also a factor in the lending decision; loans taken out to purchase real estate property are generally considered less risky than lending for business expansion, bridge loans, or project financing.

Credits can contribute to positive or negative ESG impacts on the environment and on society and to its transformation towards a sustainable economy. This, in turn, can have positive or negative effects on the quality of a loan in terms of default or reputational risk for the creditor. Factors like the industry sector of a debtor, the location of its operations, its operational standards and the use of proceeds determine whether a loan can contribute to such positive or negative ESG impacts, and, in turn, to financial, legal, and/or reputational implications for a creditor.

The scope for integrating sustainability and ESG factors into banks' credit policies, goals, and processes, however, depends on different factors: the materiality of ESG impacts and the availability of ESG data from debtors, potential business opportunities such as specialised credit products for green projects or micro-loans, and potential incentives such as risk-reducing loan guarantees for sustainable technologies or for activities addressing climate change, energy efficiency, waste and other key sustainability challenges. Such loan guarantees could be provided by privately or publicly-funded bodies.

The first steps toward achieving the sustainability goal for credit business have already been taken. The identification, assessment and management of environmental and social risks in project financing, triggered by the launch of the Equator Principles (EP) in 2003[67], is now a fairly common practice among banks, at least among those with operations in emerging markets. This voluntary industry initiative provided a standard for due diligence based on the International Finance Corporation (IFC) Performance Standards on Environmental and Social Sustainability as well as the World Bank Group's Environmental, Health and Safety Guidelines. While the EP continue to apply to a narrow, but recently broadened set of financial products[68], the standard has had significant influence as a guideline used by banks to establish environmental and social due diligence procedures for lending transactions beyond project finance, as well as for other types of financial services.

Sustainability goal for credit business

The sustainability goal for credit business is to systematically integrate ESG factors into banks' lending decisions. In doing so, the aim is to contribute to an improved sustainability impact.

This requires positive and adverse ESG impacts associated with lending decisions, especially debtors' business operations, to be systematically assessed. Material ESG impact should then be translated into opportunities and risks, according to sustainability-related credit policies and goals.

On this basis, lending processes should be restructured, and credit products and services should be offered that contribute to an improved sustainability impact. This implies that ESG opportunities are systematically exploited, and ESG-related financial, legal and reputational risks for the creditor are reduced. It also implies that adequate interest rates are charged.

In so doing, credit business improves the risk profiles of credits and fosters risk-adequate interest rate calculations, and helps to better serve client needs. It also contributes to financing the transition towards sustainable development and to minimizing negative impact of credits on the environment and society.

It is not surprising, therefore, that a study conducted by KPMG with the support of the WWF in 2015 on twelve major European banks found that all participating banks had ESG risk management frameworks in place. These were applied to identify, assess and manage potential risks associated with a transaction or a client (KPMG 2015)[69]. ESG risk management frameworks typically apply clearly defined procedures, governance structures and sector-specific policies to identify and assess impact and to rate clients' operational standards.

However, the frameworks mostly target reputational risks and are rarely incorporated into the banks' general risk management. This is mainly due to the difficulty of quantifying the risks. As for external effects (especially environmental or social externalities), there are no markets that compose adequate prices. One exception is real estate financing, where risks of site contamination can be quantified quite well.

Additionally, while many banks have developed robust frameworks to assess ESG risks at the origination of a loan, few continue to appraise and monitor such risks consistently

through the lifetime of the loan. Also, the risk assessment of most banks focuses on individual transactions and clients, disregarding aggregate ESG risks comprised in a loan portfolio, such as for an industry sector or a geographic region (KPMG 2015). The lack of such a portfolio view distinguishes the management of ESG risk from the management of credit, market or liquidity risks, which are regularly reassessed and managed in line with predefined risk appetites per sector, country or region. Stress tests and scenario analyses conducted for these more conventional types of risks are generally not applied to ESG risks, which are classified in qualitative rather than quantitative ways.

Another relevant issue in credit business is credit ratings. A debtor's creditworthiness, which determines its cost of capital, is based on the outcome of sophisticated rating processes applied by rating agencies (such as Standard & Poor's, Moody's, etc.) as well as by banks. Given that small and medium-sized enterprises (SMEs) account for 90% of the outstanding credit volume of Swiss companies[70], banks' proprietary rating models are just as important as those offered by global rating agencies. A debtor's credit rating is the product of financial and non-financial factors, as well as sector and company-specific factors. Non-financial aspects of the rating include a debtor's business model, management and market positioning, among others.

While the global rating agencies are making initial efforts to incorporate ESG risks into the credit analysis of companies and sectors, ESG factors are currently not systematically incorporated into banks' own rating models. As a consequence, potential ESG risks are not considered in the decision to grant or not grant credit or in the price of credit (interest rate). Furthermore, as the Basel III framework for capital requirements does not consider ESG factors, the quality of a bank's loan book, in terms of the ESG risks contained, has no impact on the calculation of the bank's regulatory capital requirements and therefore does not provide any financial incentive to shift a loan book from higher towards lower ESG risks. For the banks, this might be less relevant in the short run, but in the longer run, higher ESG risks might become more and more associated with hidden financial risks. The root cause of this incomplete assessment of capital costs for debtors lies in the fact that environmental externalities (such as carbon emissions, water depletion, deterioration of ecosystems) are not internalised and made visible on a company's balance sheet.

6.2 Barriers to the Integration of ESG Factors

The full integration of ESG factors into risk management processes, the continuous monitoring of portfolio-level ESG risks and the integration of ESG risks in rating systems are inhibited by a number of barriers:

The Equator Principles

The Equator Principles (EPs) is a risk management framework adopted by financial institutions for determining, assessing and managing environmental and social risk in projects. It is primarily intended to provide a minimum standard for due diligence in order to support responsible risk decision-making. The EP apply globally to all industry sectors and to four financial products: 1) project finance advisory services 2) project finance 3) project-related corporate loans and 4) bridge loans.

Currently 82 financial institutions in 36 countries have officially adopted the EPs, covering over 70% of international project finance debt in emerging markets.

See http://www.equator-principles.com/index.php/about-ep

Compartmentalisation of ESG risk management

Banks have made significant progress in assessing ESG risks in commercial and investment banking, including credit business. In most cases, however, ESG risk assessment and management falls into the responsibility of specialised sustainability or corporate responsibility teams and/or is conducted as part of a broader appraisal of reputational risk. As a result, ESG risk reviews take place outside the general risk management structures of most banks, without the application of sophisticated quantitative and qualitative risk management tools, and often without a link to the general Risk Appetite Statements. Unlike credit, market and liquidity risk management, due to the difficulty of quantifying ESG risks, these are not monitored continuously, and in most cases are not appraised in aggregations at the portfolio level. Therefore, ESG risks contained in a bank's loan portfolio do not affect the bank's capital requirements or its strategic and commercial decisions.

Slow integration of ESG risks in rating systems

Credit ratings developed by specialised rating agencies or banks contain quantitative and qualitative factors, among others. A company's impacts on climate, water and biodiversity may at some point become a financial liability, just like dependency on the availability of water or the risk of droughts or flooding may become a financial risk. Existing models are only starting to include such ESG risks as one of several factors when calculating the rating of a debtor (or an issuer), the result of which determines the cost of capital.

Lack of internalisation of externalities

Mainly due to external effects, long-term systemic ESG risks to society and prosperity, such as carbon emissions, pollution

Promising approaches

Incorporation of ESG risks into credit ratings by Moody's

What is it? Moody's has started to incorporate ESG considerations into its credit analysis. The agency published its approach and provided examples of how ESG considerations are captured in its ratings, methodologies and research (see Moody's 2015).

Why is it promising? Moody's states that it includes ESG considerations in its ratings "when they are likely to affect the probability of default of a debt issuer or expected credit loss in the event of default" (Moody's 2015). The rating agency noted, however, that credit impact by ESG factors may be mitigated by other considerations, such as the financial strength of a debt issuer, and that issuers often have the operational and financial flexibility to adjust to emerging ESG risks and thereby prevent them from becoming material to credit quality. Yet Moody's approach can be seen as a promising first step towards integrating ESG factors into mainstream credit ratings.

Guarantees for sustainable credits

What is it? ESG factors are only insufficiently weighted in credit cost calculations. Therefore, debtors developing innovative (i.e. little tested, with only short track records) approaches or technologies that lead to environmental and / or social benefits usually do not receive advantageous pricing. To make up for this relative disincentive, governments, government-funded or private bodies offer blended financial instruments. Examples include the Technology Fund in Switzerland, which offers loan guarantees to Swiss companies whose novel products contribute to a considerable reduction in greenhouse gas emissions (Technology Fund w/o year, http://www.technologiefonds.ch), or the IFC's Blended Finance Program (IFC w/o year).

Why is it promising? Credit guarantees reduce credit or investment risks by providing loan guarantees if the intended use of proceeds meet predefined sustainability criteria, or co-invest in projects to catalyse the participation of investors that would otherwise not have participated. These instruments can partly compensate for currently distorted credit incentive structures.

Natural Capital Declaration

What is it? The Natural Capital Declaration is a financial industry-led initiative aimed at quantifying the risks to natural capital (e.g. water, soil, rainforest) in investment and lending decisions of financial institutions. A methodology will be elaborated and tested at the global level and in some of Switzerland's priority countries in terms of economic development cooperation. It will enable the financial sector to identify companies and projects that are most vulnerable to Natural Capital (NC) depletion or scarcity.

Clean water, for example, is a key resource that humanity depends upon for survival, the availability of which is dwindling in many locations worldwide. Therefore, the costs of securing water inputs are rising for many companies: Since 2011, companies have spent more than 84 billion USD worldwide on conserving, managing and obtaining water, according to the Financial Times (Clark 2014).

Why is it promising? Negative externalities such as NC depletion or scarcity are currently not internalised as risks by financial institutions. The methodology is developed with academic financial experts and interested financial institutions and aims to go beyond a due diligence process currently conducted by financial Institutions. The tools used for water, for example, use water stress data from the World Resources Institute, combined with production locations and financial information, to identify projects or companies most vulnerable to current and future water stress.

By quantifying NC risks, NC risks will be directly linked to core financial metrics and create risk-adjusted premiums for the corporate sector. This is achieved, for instance, by adjusting loan conditions for companies to their specific NC risk exposure and by shifting investment portfolios to more sustainable economic sectors. The methodology could therefore be used as part of a financial stress-testing.

of air and water, water scarcity, deterioration of ecosystems, etc., are not effectively priced (see also chapter 2.2). That is why these externalities do not appear on a company's balance sheet. Without robust approaches to measuring and accounting for the most material externalities, even the best intended attempts to quantify ESG risks in lending will only remain approximations.

Absence of regulatory attention to systemic risk

National financial market regulators and international standard setting bodies have only recently started to look at the potential systemic impacts that the neglect and sudden materialisation of ESG risks could have on the financial system and the world economy. An example is fossil fuel assets becoming stranded assets. While the Financial Stability Board (FSB) has recently set up an industry-led Task Force on Climate-related Financial Disclosures[71], there is currently no agreement at the highest levels of banking supervision whether banks should be required to disclose their ESG risk profiles and management practices as part of the Pillar 3 reporting under the Basel III framework[72].

6.3 Proposed Measures

For a full integration of sustainability factors into credit business and to overcome the barriers described above, several measures are suggested. Of these, the following main proposals are considered high priority because they are quick wins and / or highly effective and relatively feasible to achieve:

Proposed measures / Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
6. Credit Business						
6a Raise awareness among banks about blended finance instruments. / Financial industry associations and/or governmental bodies		voluntary standards, information and awareness	low	medium	now	medium
6b Systematically assess ESG factors and integrate them into banks' risk management processes. / ESG risk responsible specialists and risk managers at credit institutions		voluntary standards	medium	low	now	short
6c Systematically assess ESG factors and integrate them into the credit ratings of banks and rating agencies. / Credit rating agencies and banks, especially developers of bank-internal rating models; possibly supported by specialised sustainability rating agencies		voluntary standards	high	high	now	long
6d Engage in research on the integration of ESG factors into credit ratings. / Universities, other research institutions, rating and consulting organisations, together with credit institutions; target audience: credit institutions		voluntary standards, possibly state incentives	high	medium	now	medium

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

Main proposals

Measure 6a: Raise awareness among banks about blended finance instruments (ESG education & awareness)

A quick win measure is to increase the awareness among banks about blended finance instruments for sustainable technologies or activities. To achieve this, the financial industry associations and/or governmental bodies should compile and distribute an overview of publicly and privately-funded institutions that reduce the risk of lending to or investing in sustainable technologies or activities by providing credit guarantees or catalytic first-loss capital for eligible debtors. One promising institution in Switzerland is the Technology Fund, as described in the text box above. The banks would then spread knowledge about blended finance instruments among the clients who might benefit from such instruments[73].

Measure 6b: Systematically assess ESG factors and integrate them into banks' risk management processes (ESG assessment, ESG integration)

The assessment and management of ESG risk should move closer to overall risk management in a bank. While acknowledging the differences in the nature of credit risks and ESG risks, the respective specialist functions would collaborate more closely to identify which credit risk management procedures can be applied – after necessary adjustments – to the assessment of qualitative ESG risks and their translation into quantitative risks, as well as the ongoing monitoring and portfolio-level quantification of ESG risks. Eventually, ESG risk management should become part of a bank's overall risk management.

The main stakeholders that should carry out this measure are banks that can implement it as a means to increase their competitive edge. Some banks (e.g. UBS) have already managed to successfully integrate ESG factors into their risk management processes.

Measure 6c: Systematically assess ESG factors and integrate them into the credit ratings of banks and rating agencies (ESG assessment, ESG integration)

Another measure is to systematically assess ESG factors and integrate them into the credit ratings of banks and rating agencies, so that ESG factors would influence credit decisions and pricing. Big credit rating agencies like Moody's and Standard & Poor's have only recently started to incorporate ESG factors into their credit rating methodologies (see promising approaches in the text box above). The developers of bank-internal rating models could benefit from investigating the respective methodologies in order to apply similar approaches to their own risk models. As the existing rating models cover both quantitative and qualitative criteria, ESG factors could be conceptually tied to some sub-criteria of the valuation of a company's business model, but particularly to its strategy, competitive advantages or disadvantages, and to dependencies or risks. Sector-specific ESG impacts and dependencies can be linked up to the sector assessment of a debtor.

Leading stakeholders would be credit rating agencies and banks, especially the developers of bank-internal rating models. Specialised sustainability rating agencies could provide some support with their sustainability ratings. Above all, it is important for ESG assessments to include entire value chains, as major sustainability impacts occur in many cases outside of companies' direct spheres, i.e. in the supply chain, during the usage or disposal phase of products. However, these assessments are relatively complex. They require elaborate assessment methods, comprehensive data about how ESG factors affect credit risks as well as reliable ESG reporting by companies. As the first steps in carrying out this measure, banks could start by exploring existing approaches (e.g. from rating agencies) and work with academics, consultants and selected clients in pilot projects to identify suitable approaches.

Measure 6d: Engage in research on the integration of ESG factors into credit ratings (ESG research & development)

Further research efforts are important to facilitate the integration of ESG factors into credit ratings and pricing. Academia would conduct further research on effective ESG assessment methods comprising entire value-added chains and on how ESG factors affect credit risks. Based on this, applied research activities could focus on how ESG factors can be integrated into credit rating models so that they have a measurable impact on the pricing of a loan, and then test the robustness of such approaches in collaboration with banks. Here, esp. for smaller financial institutions, tools should be developed that are easy to understand and be applied. These research activities can be supported by the state, e.g. via research programs.

Other proposals

Apart from the measures that are considered high priority, the following proposed measures are also useful and partly already being tackled:

> Banks could continuously monitor or periodically reassess the ESG risks of individual loans throughout their lifetime. They could also develop approaches to monitor and measure ESG risks[74] of aggregate loan portfolios e.g. at the sector or geographical level.
> Banks could advice their clients on how to reduce adverse and increase positive ESG impacts, and how to minimise ESG risks, possibly save costs, or benefit from tax refunds or other subsidies for environmentally-friendly measures.
> Banks could share their experiences in integrating ESG factors into risk management with peers in formal groups (e.g. industry associations that can play a role in engaging with policymakers) or in informal settings[75].
> Banking supervisory bodies could require banks to have ESG risk management processes in place[76], possibly based on an extended legal supervisory mandate. The bodies evaluate the effectiveness of respective organisational structures and processes[77] and also consider whether banks should be required to report on their ESG risk profile and risk management practices under Pillar 3 of the Basel III framework.
> The internalisation of externalities (as described in chapter 2.2) should set the right framework conditions for internalising ESG costs on corporate balance sheets.

7. Capital Markets

7.1 Sustainability Goal and Challenges

Capital markets (as discussed in this chapter) are transaction platforms and market places where debt and equity can be raised, bought and sold. Capital markets channel savings and investments between suppliers of capital, such as private investors and institutional investors, and users of capital like governments or businesses. As such, capital markets are central to the functioning of national and global economies. Arguably, in their current form, they do not sufficiently reward sustainable behaviour, nor punish unsustainable business activities. As mentioned above (chapter 2), there is a disconnect between long-term ESG risks and the often shorter-term decision-making focus in the financial system. Capital markets, therefore, fail to take account of the full cost or value of traded securities, which leads to capital market transactions that are "based on incomplete and insufficient knowledge of the associated impact and trade-offs"[78]. One outcome of this is that on capital markets, the cost of capital for companies is not sufficiently influenced by how sustainable the company is[79].

The term "sustainability" is often used in the context of outstanding debt on capital markets. This raises the question whether sovereign (countries) or corporate (companies) issuers are able to service the debt, and whether the overall level of indebtedness is a threat to global financial stability. By analogy, the sustainability of our over-indebtedness to nature needs to be questioned in the same way, given that humanity is currently consuming 50% more natural resources than the Earth's ecosystems can replenish.

As the key trading venues for global finance, capital markets play a role in this over-indebtedness, as they tend to allocate capital to short-term, sometimes unsustainable uses, as environmental and social externalities are not factored in the pricing system (see chapter 2.2). The unsustainable use of natural and social capital constitutes a threat to financial stability and long-term economic growth.

Major rating agencies have started to incorporate ESG factors into their credit rating methodologies. This is a significant development, as corporate and sovereign ratings are critical in determining the interest rate to be paid for raising debt. However, besides the ratings, capital market participants need to be equipped with material information about an issuer's commitment, capacity and performance to manage the ESG impacts along entire value chains, and then take such information into account as substantive factors for making investment decisions.

Sustainability goal for capital markets

The sustainability goal for capital markets is to make it possible to raise capital to finance a (more) sustainable development, and to provide the necessary information and price signals to integrate ESG opportunities and risks into capital costs. This requires the positive and adverse ESG impacts associated with capital transactions (e.g. of securities bought and sold) to be made transparent, and for material ESG opportunities and risks to be systematically integrated into price signals on the markets.

In this way, capital markets would be able to better serve market participants that want to integrate ESG impacts, opportunities and risks into their investing decisions. In doing so, capital markets would serve as transmission belts for investments in (more) sustainable development, and provide the necessary information and market signals so that adverse environmental and societal impacts associated with financing and investment decisions can be minimised.

The current reporting model is determined by the leading international financial reporting standards, national accounting standards and stock exchange rules. This model, however, does not provide the necessary framework for encouraging non-financial factors to be taken into account systematically in reporting and decision-making. Additionally, insufficient consideration is given to longer-term non-financial impact and dependencies that can become material sometime in the future. Even though most corporate issuers on capital markets provide some form of ESG disclosures, there is an apparent mismatch between what is disclosed and what is perceived as being material for investment decisions.

7.2 Barriers to the Integration of ESG Factors

The capacity of capital markets to more fully account for longer-term ESG factors and their associated positive and negative impacts is inhibited by a number of barriers:

Insufficient disclosure and processing of non-financial information

Capital markets are inefficient because the financial reporting frameworks provide insufficient guidance on how issuers seeking capital should disclose material non-financial information, and how investors providing capital should process and integrate such information into their risk-return calculations. The result is an insufficient distinction in pricing and value between companies that have business models that

Promising approaches

Stock exchange rules on the disclosure of material ESG factors

What is it? As the earliest innovators, Brazil's BOVESPA stock exchange requires listed companies to publish a sustainability report, and the Johannesburg Stock Exchange (JSE) has started to require an integrated report in accordance with the King III Code in 2011 (both requirements work on an apply or explain basis).

Why is it promising? Since then, 24 stock exchanges around the world have committed to enhanced disclosure through their membership in the Sustainable Stock Exchange Initiative (SSE) (see UNEP 2015). The initiative, convened by UNEP FI, UNCTAD and the UN Global Compact, brings together exchanges, policymakers and other key stakeholders. Its aim is to collaborate on facilitating more sustainable financial markets and on promoting the achievement of the UN Sustainable Development Goals. (see http://www.sseinitiative.org)

Integrated reporting standards

1. Sustainability Accounting Standards Board

What is it? The Sustainability Accounting Standards Board (SASB) has designed standards for the disclosure of material sustainability information in mandatory SEC filings, such as the Form 10-K and 20-F. Through 2016, SASB is developing sustainability accounting standards for more than 80 industries in 10 sectors.

Why is it promising? The SASB is an independent non-profit organisation with a mission to develop and disseminate sustainability accounting standards that help public corporations disclose material, decision-useful information to investors. That mission is pursued through a rigorous process that includes evidence-based research and broad, balanced stakeholder participation (see http://www.sasb.org).

2. International Integrated Reporting Council

What is it? The International Integrated Reporting Council (IIRC) aims to align capital allocation and corporate behavior with the wider goals of financial stability and sustainable development. To achieve this, the IIRC has developed a corresponding framework that is supposed to be adopted by reporting organisations around the world.

Why is it promising? The IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs. As such, it promotes communication about value creation as the next step in the evolution of corporate reporting (see http://integratedreporting.org).

3. Task Force on Climate-related Financial Disclosures

What is it? The industry-led Task Force on Climate-related Financial Disclosures, which was set up by the Financial Stability Board (FSB), aims to develop voluntary, consistent climate-related financial disclosures. These are to be used by companies for providing information to lenders, insurers, investors and other stakeholders.

Why is it promising? The climate-related financial disclosures are a first and important step in the right direction, as they might serve as blueprints for the integration of other ESG factors into financial disclosures.

robustly incorporate sustainability impacts and dependences, and those that do not.

There are laudable efforts to improve the disclosure of non-financial information, such as international non-financial reporting initiatives, national corporate governance and reporting regulations, as well as individual stock exchanges' listing rules. However, a multitude of diverse disclosure standards may, in return, create disincentives for companies operating in various jurisdictions.

When it comes to processing non-financial reporting, for-profit ESG research institutions play an important role. However, the current coverage of ESG research (on listed and non-listed stocks and bonds, real estate, etc.) is still not comprehensive enough. In addition, most research institutions focus on management systems and controversies, and do not provide sufficient information on material ESG impacts.

Slow integration of ESG factors into banks credit ratings

Given the importance of determining the prices for securities traded on capital markets, the big rating agencies, with their global reach, are in a unique position to help overcome the challenge of adhering to differing disclosure standards and processing the respective information. They have started to publish research reports about how material ESG factors or mega-trends like climate change could impact corporate and sovereign ratings, and how to incorporate such factors into these ratings. Given the magnitude of some of the sustainability challenges and the urgency of addressing them, these initial considerations of ESG factors and their low weighting in the overall issuer rating may not be enough to tilt the price signals towards a fuller reflection of the true cost. Also, if banks do not follow suit by integrating material non-financial factors into their own rating models, there may be limited incentives for the big rating agencies to make further progress in that direction.

Low mainstream investor demand

Besides the supply side, i.e. the capabilities of issuers and rating agencies to disclose material non-financial information or to consider such factors in the development of ratings, respectively, the demand side, i.e. the investors, asset managers, investment managers, etc., have a role to play in explicitly asking for relevant ESG disclosure and making this a substantive part of their investment decisions. While there is

a growing trend towards "sustainable investment" (see chapter 4) in many countries and on a global scale, this movement has still failed to sufficiently spur mainstream investors (pension funds, insurance companies, investment managers, etc.) to create a perceptible demand for such disclosure. Arguably, incorporation of material ESG information into investment decisions by mainstream investors could move capital markets quickly towards a tipping point of more sustainability and less price distortion.

Lack of internalisation of externalities

As already stated in chapter 2.1, the costs of externalities are not effectively accounted for in the current economic models. Capital markets participants send out and receive distorted price signals because ESG factors are mispriced. Without robust mechanisms to measure and account for material externalities, capital markets will continue to misallocate capital towards short-term and unsustainable investments. While promising approaches are being developed, it will take years before concepts are robust enough to be applied on a wide scale. Furthermore, broad international application may require some form of intergovernmental agreement to ensure a level playing field and to avoid regulatory arbitrage.

7.3 Proposed Measures

Different measures are proposed in order to enable capital markets to effectively raise capital for sustainable projects and activities. In this way, capital markets can serve as a transmission belt for investors to finance the transition towards a sustainable economy. The following main proposals are considered high priority:

Main proposals

Measure 7a: Further develop ESG assessment methods, systematically assess ESG factors and integrate them into securities ratings (ESG research & development, ESG assessment, ESG integration)

In the absence of a complete internalisation of externalities, approximations of the quantification of ESG costs and benefits should be strengthened and further developed. Approaches by rating agencies to incorporating ESG factors into corporate or sovereign ratings should be made known, broadly discussed, further improved and taken up by other market participants – including banks that develop their own rating systems[80]. Specialised sustainability rating agencies should provide some support with their sustainability ratings.

Principally, ratings should comprise ESG impacts along entire value-added chains. This is why this measure requires some research activities beforehand.

Measure 7b: Provide transparency by integrating ESG and financial reporting into reporting standards (ESG transparency, ESG standards)

Industry associations should encourage companies in their respective sectors to road-test evolving integrated reporting standards such as IIRC and SASB (see chapter 7.1) and share experiences, so that they can be made to work in the marketplace. Institutional investors and investment managers, in turn, would utilise the information reported for their investment analysis. They may benefit from establishing or participating in industry initiatives to further improve their ability to understand and act upon ESG information and, ultimately, to more actively exert their role as company owners (for example through the Principles for Responsible Investments initiative[81]). Technological innovations by Fintech companies and the ever increasing data processing capacities ("big data") would likely simplify selecting, monitoring and handling large volumes of ESG data going forward.

Measure 7c: Systematically assess ESG factors in investment analyses, systematically integrate ESG factors into issued investment recommendations (ESG assessment, ESG integration)

Brokers, research houses and investment banks that provide buy, sell or hold ratings on companies should systematically and explicitly integrate ESG factors into their analyses before issuing investment recommendations. Where they are not including such factors, they should explain the reasons for not doing so. Sustainability rating agencies and mainstream rating agencies that increasingly integrate ESG factors can support these activities.

Other proposals

Apart from these high-priority measures, the following proposed measures would also be helpful, but are considered lower priority:

> Public actors at the governmental, federal, state and municipal levels could explore the possibilities of issuing Green Bonds (e.g. to finance a new or expanded municipal sewage treatment plant) and thereby act as credible role models for other issuers.
> Stock exchanges might consider participating in the SSE, together with policymakers and capital market participants, and could also help develop a common international framework for the disclosure of material ESG information by issuers to the extent applicable by country and industry[82].
> In order to correct distorted price signals on capital markets, governments could start to internalise externalities, especially by eliminating fossil fuel subsidies and by introducing tax-neutral fiscal measures (a tax on carbon) or adequate market mechanisms (trading schemes for emissions or scarce natural resources).

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
7. Capital Markets							
7a Further develop ESG assessment methods, systematically assess ESG factors and integrate them into securities ratings.	Rating agencies, banks and other financial actors, possibly supported by specialised sustainability rating agencies	ESG research & development; ESG assessment; ESG integration	voluntary standards	high	high	now	medium
7b Provide transparency by integrating ESG and financial reporting into reporting standards.	Standard-setting bodies, industry associations, companies (in general, exchanging experiences with their sector peers); target audience: investment managers, supported by industry initiatives, possibly Fintech companies	ESG transparency; ESG standards	voluntary standards	high	medium	now	long
7c Systematically assess ESG factors in investment analyses, systematically integrate ESG factors into issued investment recommendations.	Brokers, research houses, investment banks that provide buy, sell or hold ratings, supported by rating agencies	ESG assessment; ESG integration	voluntary standards, information and awareness	high	high	now	long

ESG research & development; ESG education & awareness; ESG standards; ESG assessment; ESG transparency; ESG integration; ESG preferences

> The effect of increasing the relative attractiveness of Green Bonds by waiving the stamp duty on them could be analysed. Currently, there is sustainability premium in terms of pricing for such Green Bonds. This could serve as a reward and incentive towards more sustainability.

8. Research and Education

8.1 Sustainability Goal

Research and education are central elements in mainstreaming sustainable finance. Serving research needs associated with integrating ESG factors into financing and investment decisions (e.g. concerning data, assessment methods and tools, etc.) and training actors that will make tomorrow's financing and investment decisions are the keys to this.

This chapter is structured slightly different than the preceding chapters. Chapter 8.2 is dedicated to academic research, chapter 8.3 to academic education, chapter 8.4 to professional education, and chapter 8.5 to in-house and executive education.

In each chapter, the challenges are discussed, followed by proposed measures for dealing with the challenges. The proposed measures present only a small selection of what could be done. The dialogue between all stakeholders must be encouraged at all levels. For example, a dialogue between financial sector actors and education authorities should occur on a regular basis.

Sustainability goal for research and education

The sustainability goal for research and education is to systematically integrate sustainable finance into educational (academic, professional and in-house) and research bodies (e.g. research institutes, universities, including top journals). This requires research needs associated with integrating ESG factors into financing and investment decisions (e.g. data, assessment methods and tools, etc.) to be served, and actors that will make tomorrow's financing and investment decisions to be trained and enabled to integrate ESG factors into their activities. In doing so, research and education will enable the financial system to become more sustainable.

8.2 Academic Research

Challenges

In order to transform the financial system into a more sustainable financial system, research in the field of sustainable finance should be expanded. The chapters above on core areas in the financial system mention various measures focused on specific research and development needs. These can be summarised accordingly:

> Develop standards for key sustainability issues that should be considered in sustainable investments[83].
> Complete empirical research on the effect of ESG impacts on the risk-return profiles of financing and investment decisions and assets as well as on tracking errors[84]. This would provide better (more comprehensive, reliable and comparable) insight into what ESG factors are material for investments in different industries and different asset classes, and under what conditions risk-return profiles can be improved and tracking errors reduced.
> Complete empirical research on the financial materiality of specific ESG factors for different asset classes, and industry sectors.
> Develop key performance indicators, assessment methods and tools to assess the ESG impacts and risks of financial products and assets along entire value chains[85].
> Research how ESG impact and risk assessments can be effectively integrated into the current financing and investment decision-making processes, especially for asset management, risk assessment in credit business, ESG ratings of credits, securities, and further asset classes, etc.

To meet these research and development needs, interdisciplinarity and trans-disciplinarity must be recognised and encouraged explicitly. This research could then form the basis of training and capacity building (view below). However, very few research papers related to sustainable finance can currently be found in financial journals, as there is a clear lack of incentives to conduct research in the field. To raise research funds from institutions like the Swiss National Science Foundation or other international funding organisations, and to become a chaired professor, researchers must publish in top journals which are typically determined by citation-based impact measures. Yet, most top journals are mono-thematic and quantitative-oriented. This leads to few published papers in the field of sustainable finance. Even though there is evi-

The Swiss Finance Institute

The Swiss Finance Institute (SFI) is an example of a successful incentive-based institution. The SFI is a network of six Swiss universities and was ranked 12th in finance research performance worldwide between 2010 and 2014 (See http://apps.wpcarey.asu.edu/fin-rankings/rankings/results.cfm). It provides clear financial incentives to its researchers to publish in top journals and therefore supports research focusing on the ESG factors of investments. SFI believes that promoting and encouraging sustainable finance is essential to the future of the Swiss financial centre.

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
8. Research and Education: Academic Research							
8a Strengthen academic research on sustainable finance by improving the funding situation for PhD students in this field.	Universities, possibly funded by financial institutions and the state; target audience: PhD students	ESG research & development	voluntary standards, state incentives	high	medium	now	medium
8b Strengthen academic research on sustainable finance by increasing the visibility and awarding research in this field.	Universities, supported by the government and financial institutions; target audience: researchers	ESG research & development	voluntary standards, state incentives	medium	medium	now	medium

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

dence that this is changing – several ESG-related papers were published in top finance journals in 2015 – publishing on sustainable finance issues still remains difficult[86].

Main proposals

In order to better meet the research needs on sustainable finance in academic research, the following high-priority measures are suggested:

Measure 8a: Strengthen academic research on sustainable finance by improving the funding situation for PhD students in this field (ESG research & development)

To attract talented and promising PhD candidates, it is of utmost importance to improve the funding situation for students who would like to conduct research in the area of sustainable finance. Therefore, one important measure should be for financial institutions and the federal government to create a pool of PhD scholarships for students interested in sustainable finance. Young researchers, who are likely to be creative and come up with new ideas, could then apply for funding. The students who obtained such PhD scholarships would then be assigned to research centres in Switzerland that are active in the area. This measure could be implemented in collaboration between universities, the government, and financial institutions.

Measure 8b: Strengthen academic research on sustainable finance by increasing visibility and awarding research in this field (ESG research & development)

Swiss universities, with the support of the government and financial institutions, should create a prize following the example of the prestigious Moskowitz Prize, which recognises outstanding quantitative research in socially responsible investing (SRI)[87]. Creating a prize in sustainable finance would, on the one hand, help develop ideas, technologies, products or services and, on the other hand, raise awareness, mobilise action and inspire transformation[88]. As a result, it could strengthen measures aimed at increasing the funding situation of Swiss researchers active in the area of sustainable finance. This is an

Schools and organisations that could promote and integrate sustainable finance

The CFA Society Switzerland is a global, non-profit organisation whose members include financial analysts, portfolio managers and other investment professionals. Its aim is, among other goals, to help financial professionals earn the degree of Chartered Financial Analyst®.

The Swiss Training Centre for Investment Professionals provides an opportunity to study for the federal diploma of a financial analyst and portfolio manager / Certified International Investment Analyst (CIIA).

University Activities on Sustainability and Finance

The University of Geneva has recently created a new tenure track assistant professorship position for sustainable finance, and has set sustainable finance as mandatory course in its finance program. Another positive example is the creation of a CAS (Certificate in Advance Study) in Sustainable finance by the University of Zurich.

Student organisations like Oikos St. Gallen (Students for sustainable economics and management) try to integrate sustainability into the academic world.

Proposed measures / Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
8. Research and Education: Academic Education						
8c Strengthen academic education on sustainable finance by creating new joint/ interdisciplinary master study programs with a "sustainability" dimension.		voluntary standards, state incentives	high	medium	now	medium
Universities, supported by the state, especially cantons; Target audience: students specialising on sustainable finance						
8d Strengthen academic education on sustainable finance by implementing sustainable ECTS credits in academic programs.		voluntary standards, state incentives	high	high	now	long
Universities; target audience: students studying economics, management and finance						

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

effective strategy and an efficient use of funds for advancing sustainable finance research (in Switzerland).

Other proposals

Apart from these high-priority measures, other measures are proposed that are considered either less effective or more difficult to implement:

> Researchers and experts could be encouraged to participate in the "Sustainable Economy"[89] National Research Programme which also includes research possibilities in the field of sustainable finance.

> The volume of sustainable finance research published in top journals could be increased by identifying a journal that would accept interdisciplinary papers and become a top journal and/or by encouraging world renowned top researchers in the field to create a specific journal. As publishing in top-journals is the key to an academic career, there must be a way to enter this system and find a promising journal that will accept interdisciplinary articles.

8.3 Academic Education

Challenges

Academic education refers to education provided by higher level education institutions (traditional universities, universities of applied sciences, business schools, etc). These institutions require a university entrance qualification in the form of a high school diploma, like the baccalaureate.

Currently, in many Swiss universities, students are neither required nor encouraged to take courses that discuss sustainability issues, particularly in finance. Only a few courses exist, mostly thanks to the engagement of a few individual professors who created them. This indicates that sustainability is not sufficiently integrated into the current core finance curricula (WWF 2014).

There are also specific schools that teach finance specialists, and some of them offer continuing education courses. Such schools could play an active role in further integrating sustainable finance into education.

The aim of the following proposed measures is to spread sustainability and sustainable finance concepts in the academic world and particularly integrate sustainability in current economic, management and financial curricula. To achieve this objective, there are two complementary approaches: incorporating sustainability concepts into existing finance courses with economic, management and financial curricula, and teaching sustainable modules in finance programs, potentially in conjunction with experts from other fields (e.g. environmental or more generally, sustainability experts). Though mainstreaming may be seen as the best way, it is potentially more difficult to achieve rapidly. Encouraging multidisciplinary collaboration is probably a more realistic strategy for a transitional phase and an important first step towards mainstreaming sustainable finance in academic education.

Main proposals

In order to integrate education on sustainable finance into academic education, the following high-priority measures are proposed:

Measure 8c: Strengthen academic education on sustainable finance by creating new joint/ interdisciplinary master's programs with a "sustainability" dimension (ESG education & awareness)

To increase the visibility of the field, a joint master's program that combines existing expertise from various higher education institutions in Switzerland should be created. Considering that there are still not enough professors who are active in sustainable finance, this master's program could be a joint-master's program between several Swiss universities and/or Swiss universities of applied sciences and business schools. Such a joint master's program could have national or even international visibility and would probably attract a great deal of interest.

To create such a master's program, professors who teach sustainable finance would need to take the lead. Even more important, a strong administrative and support staff unit would be necessary to overcome the hurdles of a master's program involving several universities. Also, political support or incentives, especially from cantons, would be required, as well as additional financing, to create this master's program.

To assure the scientific quality of such a program, participating institutions and individuals could be chosen using standard approaches where public research and teaching funds are allocated to universities, i.e., approaches that take into account research and teaching excellence.

Measure 8d: Strengthen academic education on sustainable finance by implementing sustainable ECTS credits in academic programs (ESG education & awareness)

Academic courses dedicated to sustainable economy or finance should be labelled with "Sustainable" ECTS credits. Then a certain number of such sustainability ECTS credits should be made compulsory in order to obtain a bachelor's or master's degree in economics, management and finance. This sustainability portion would be to be determined and depend on the number of courses offered. This measure is only effective if a sufficient number of course offerings exist. To achieve this critical mass of courses, professors would be given incentives to create course offerings at the intersection of sustainability and finance.

The measure could also be implemented as a partnership between finance, sustainability and environmental sciences faculties. Environmental or sustainability science professors could teach parts of a finance course and finance professors could teach in sustainability science programs.

Other proposals

Apart from these high priority measures, the following proposed measure is considered helpful, but less effective:

> The dialogue between finance and economics academics and professionals from the financial sector could be strengthened, e.g. through the Swiss Finance Institute Knowledge Centre[90] or the Swiss Sustainability Hub[91].

8.4 Professional Education

Challenges

In general, not only professional financial actors, but (almost) every person in Switzerland is either actively involved in the financial system as a client or more passively involved as a beneficiary of a pension fund. This should be addressed when integrating ESG into education. In other words, all apprentices and high school students should become familiar with the basic notions of sustainable finance. This could raise awareness among future employees of the financial sector as well as future clients.

Two-thirds of young people in Switzerland choose a professional education and training program as their first step toward the Swiss professional education system. This highlights the importance of integrating sustainability into this area of education. The objective here should be to provide basic knowledge on sustainable development to larger audiences and specific knowledge on sustainable finance to people who might work in the field of banking or other financial activities. Consequently, there are different target audiences: all apprentices, commercial apprentices, and high school students.

All apprentices take general education courses (cours de culture générale). In the "plan d'étude cadre pour l'enseignement de la culture générale" from 2006, the "5.4 Economy" section states that sustainable development should be given "specific attention". If this is consistently applied in every apprenticeship and specific plan of studies, it would ensure that all future financial professionals and clients have an idea of what sustainable development means and implies.

The study plans of the commercial apprenticeships are based on the "Ordonnance de l'OFFT sur la formation professionnelle initiale d'employée de commerce/employé de commerce avec certificat fédéral de capacité (CFC)". A module such as "Sustainability and Commerce" could be developed and integrated into education programs. This already happened in the training programs of bank apprentices in 2013, when the Swiss Bankers Association helped to create a "Sustainability and Banking" module.

One cannot assume that every high school student will attend university and study economics. This is why it is impor-

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame: Starting point	Time frame: Duration
8. Research and Education: Professional Education							
8e Strengthen professional education on sustainable finance by integrating sustainability into professional school training programs for commercial employees.	Schools offering formation for (future) commercial employees, the Swiss Conference of Cantonal Ministers of Education, the confederation and professional associations; target audience: (future) commercial employees	ESG education & awareness; ESG preferences	voluntary standards, state incentives	high	medium	now	medium

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

tant to ensure that sustainable finance also has its place in high school education. Currently, it seems that sustainable development is not part of the program of every cantonal high school. In a declaration of 2015 on common education objectives in Switzerland, the Swiss Conference of Cantonal Ministers of Education (EDK) and the Federal Department of Economic Affairs, Education and Research stated that education on sustainable development is one of the subjects that requires special collaboration between the cantons and the Confederation[92]. Furthermore, education on sustainable development is part of Curriculum 21 ("Lehrplan 21")[93].

Main proposals

In order to integrate education on sustainable finance into professional education, the following high priority measure is proposed:

Measure 8e: Strengthen professional education on sustainable finance by integrating sustainability into the programs of professional schools that train commercial employees (ESG education & awareness, ESG preferences)

To provide initial insight into the issues of sustainable development and the challenges arising with its complexity, "sustainable economy and finance" is introduced as a subject in professional training programs for commercial employees. In this way, future employees of banks and other segments of the financial sector will gain basic knowledge in that area. Additionally, the broader impact of this measure is that apprentices would be empowered in their role as future clients of financial services and they would be better able to identify and communicate their ESG-related preferences.

This measure is introduced in the "Ordonnance de l'OFFT sur la formation professionnelle initiale d'employée de commerce/employé de commerce avec certificat fédéral de capacité (CFC)". Also, it would be interesting to expand the Swiss Banking module to all commercial apprentices. As far as that is concerned, three actors are concerned: the Swiss Conference of Cantonal Ministers of Education, the confederation and professional associations.

8.5 In-house education

Challenges

Some financial institutions already have in-house formation for sustainable finance. For example, Credit Suisse provides employees training to ensure that the expertise required to address environmental und human rights risks is firmly embedded within the company[94].

Zurich Insurance Group also provides sustainability training. The idea is that the "mainstream" portfolio managers, analysts and client advisors who are expected to integrate ESG risks receive adequate training. It is expected of portfolio managers to understand how ESG factors drive investment, risk and return, to make use of ESG data and research,

The PRI Adacemy

The PRI Academy provides training for financial services, corporate and other professionals on how ESG issues affect company performance, shareholder value and investment decision-making.

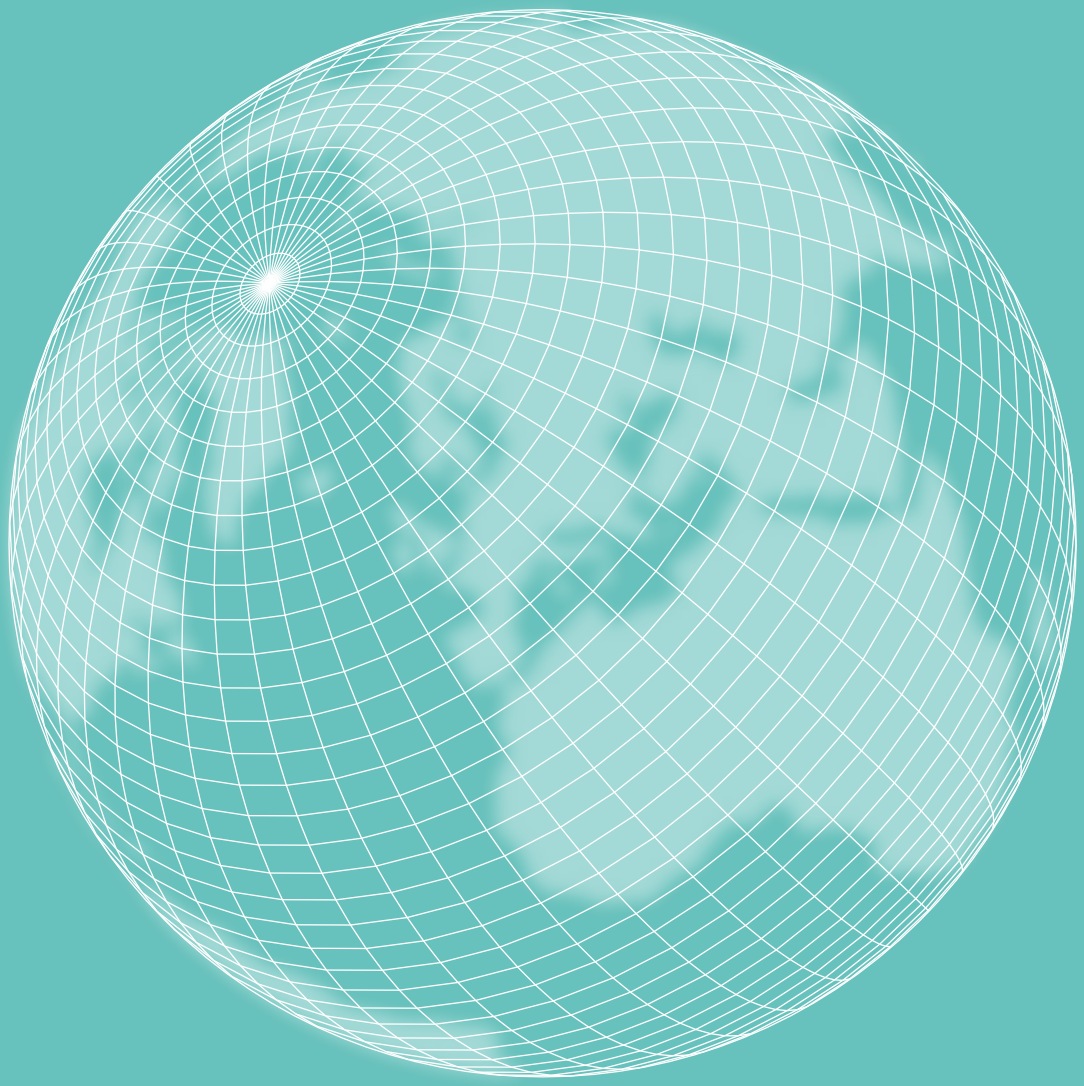
The training is completely web-based, which allows easy and flexible access to the courses offered.

See http://www.e-brochure.riacademy.org

and finally to integrate the assessment of ESG factors into investment analyses, recommendations or decisions. A basic in-house online training module, which is mandatory at Zurich Insurance for all investment management employees, has been designed, and an external provider, the "PRI Academy" (priacademy.org), is used for portfolio management teams.

In-house education on several issues of sustainable finance is discussed above in the respective core area chapters, along with very specific measures. See measures A for asset and wealth management (chapter 4.3), for institutional investors (chapter 5.3), and for credit business (chapter 6.3).

Part III: Conclusion and Outlook



9. Conclusion

9.1 Overview of Proposed Measures

The following table provides an overview of the proposed measures. These are specified and prioritised according to the

> targeted levers (see chapter 2.4),
> stakeholders,
> implementation methods through instruments (pioneers, voluntary standards, self-regulation) and/or the political system (information and awareness measures, state as role model, positive incentives, evaluation of future state regulations), as specified in chapter 2.3,
> effectiveness in terms of transforming the financial system towards a more sustainable system,
> difficulty to implement, e.g. due to methodological difficulties or high costs,
> time frame, i.e. when the measure should be started (starting point) and how long it might take to finalise it (duration).

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame* Starting point	Time frame* Duration
Asset and Wealth Management (Chapter 4)							
4a Educate and raise awareness among portfolio managers and relationship managers.	Universities, professional schools, in-house education, consulting and sustainability rating providers, supported e.g. by industry associations and the state; target audience: portfolio managers and client relation-ship managers		voluntary standards	high	medium	now	long
4b Provide transparency on the ESG impacts, risks and opportunities of financial products for investors.	Asset and wealth management as well as invested companies, supported e.g. by industry associations such as Swiss Sustainable Finance (SSF); target audience: clients and other stakeholders		voluntary standards	high	high	now	long
4c Complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs); define assessment standards; investigate on potential regulatory barriers.	Universities, other research institutions, supported e.g. by industry associations and asset and wealth management; target audience: portfolio and client relationship managers		voluntary standards, state incentives	high	high	now	medium
4d Systematically assess and integrate ESG factors into investment processes.	Asset and wealth managers, supported by sell-side ESG research providers, and industry associations		voluntary standards	high	high	medium	long

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame* Starting point	Time frame* Duration
Institutional Investors (Chapter 5)							
5a Develop and set standards for key sustainability issues in sustainable investments, complete empirical research on the financial effects of ESG factors, develop methods and key performance indicators (KPIs).	Universities, other research institutions, rating and consulting organisations, together with institutional investors, supported by industry associations; target audience: institutional investors	ESG research & development; ESG standards	voluntary standards, possibly state incentives	high	medium	now	medium
5b Educate and raise awareness among institutional investors and beneficiaries.	In-house training departments, universities, specialised schools, consulting and sustainability rating providers, supported by industry associations and possibly the state; target audience: institutional investors (especially foundation/ management board and investment committee members, asset managers, client advisors) and beneficiaries	ESG education & awareness; ESG preferences	information and awareness, voluntary standards	high	medium	now	long
5c Provide transparency on ESG-related investment policies, goals, and portfolio impacts; set standards concerning the ESG transparency of portfolio impacts.	Policies and goals: board members, supported by in-house ESG experts, product managers, external consultants; assessments: asset managers, in-house financial and ESG analysts, auditing agencies, possibly supported by external service providers (consulting or sustainability rating providers), NGOs, client organisations; target audience: beneficiaries and other stakeholders	ESG transparency; ESG assessment; ESG standards	voluntary standards	high	high	now	long
5d Integrate ESG impacts into policies and related asset management goals, systematically evaluate and meet the ESG preferences of beneficiaries.	Policies and goals: board members (especially foundation boards), supported by in-house ESG experts, product managers, external consultants; ESG integration: asset managers; Target audience: client advisors, supported by in-house ESG experts, possibly external service providers	ESG integration; ESG preferences	voluntary standards	high	high	now	long
Credit Business (Chapter 6)							
6a Raise awareness among banks about blended finance instruments.	Financial industry associations and/or governmental bodies	ESG education & awareness	voluntary standards, information and awareness	low	medium	now	medium
6b Systematically assess ESG factors and integrate them into banks' risk management processes.	ESG risk responsible specialists and risk managers at credit institutions	ESG assessment; ESG integration	voluntary standards	medium	low	now	short

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame* Starting point	Time frame* Duration
6c Systematically assess ESG factors and integrate them into the credit ratings of banks and rating agencies.	Credit rating agencies and banks, especially developers of bank-internal rating models; possibly supported by specialised sustainability rating agencies		voluntary standards	high	high	now	long
6d Engage in research on the integration of ESG factors into credit ratings.	Universities, other research institutions, rating and consulting organisations, together with credit institutions; target audience: credit institutions		voluntary standards, possibly state incentives	high	medium	now	medium
Capital Markets (Chapter 7)							
7a Further develop ESG assessment methods, systematically assess ESG factors and integrate them into securities ratings.	Rating agencies, banks and other financial actors, possibly supported by specialised sustainability rating agencies		voluntary standards	high	high	now	medium
7b Provide transparency by integrating ESG and financial reporting into reporting standards.	Standard-setting bodies, industry associations, companies (in general, exchanging experiences with their sector peers); target audience: investment managers, supported by industry initiatives, possibly Fintech companies		voluntary standards	high	medium	now	long
7c Systematically assess ESG factors in investment analyses, systematically integrate ESG factors into issued investment recommendations.	Brokers, research houses, investment banks that provide buy, sell or hold ratings, supported by rating agencies		voluntary standards, information and awareness	high	high	now	long
Research and Education (Chapter 8)							
8a Strengthen academic research on sustainable finance by improving the funding situation for PhD students in this field.	Universities, possibly funded by financial institutions and the state; target audience: PhD students		voluntary standards, state incentives	high	medium	now	medium
8b Strengthen academic research on sustainable finance by increasing the visibility and awarding research in this field.	Universities, supported by the government and financial institutions; target audience: researchers		voluntary standards, state incentives	medium	medium	now	medium
8c Strengthen academic education on sustainable finance by creating new joint/ interdisciplinary master study programs with a "sustainability" dimension.	Universities, supported by the state, especially cantons; Target audience: students specialising on sustainable finance		voluntary standards, state incentives	high	medium	now	medium

Proposed measures	Stakeholder	Affected levers	Implementation	Effectiveness	Difficulty to implement	Time frame*	
						Starting point	Duration
8d Strengthen academic education on sustainable finance by implementing sustainable ECTS credits in academic programs.	Universities; target audience: students studying economics, management and finance		voluntary standards, state incentives	high	high	now	long
8e Strengthen professional education on sustainable finance by integrating sustainability into professional school training programs for commercial employees.	Schools offering formation for (future) commercial employees, the Swiss Conference of Cantonal Ministers of Education, the confederation and professional associations; target audience: (future) commercial employees		voluntary standards, state incentives	high	medium	now	medium

ESG research & development · ESG education & awareness · ESG standards · ESG assessment · ESG transparency · ESG integration · ESG preferences

* Time frame: short-term: < 1 year; medium-term: < 3 years; long-term: > 3 years.

9.2 Proposals for a Roadmap

The figure below sorts the proposed measures (as summarised in the table above, chapter 9.1) on a timeline to show when they should be started and how long they would probably take. The figure also categorises the proposed measures according to their effectiveness for the transformation towards a more sustainable financial system. Some measures can be considered "low-hanging fruits", meaning that they can be rather easily implemented within a short to medium time frame, while other measures are more fundamental and would need to be discussed further and implemented with a multi-actor approach involving financial institutions as well as regulators, politicians, clients and academia.

The following proposed measures are summarised, briefly discussed and sorted by the targeted levers and how they are based upon each other.

ESG research and development

ESG research and development measures are considered high priority measures for all core areas. They are highly effective for the transformation of the financial system and are generally preconditions for most other measures. The measures are sometimes comparably easy (complete empirical research), but mostly of medium difficulty (develop ESG assessment methods and tools based on commonly agreed standards, set standards for key sustainability issues for institutional investors, strengthen academic research on sustainable finance). The measures can be started in the short term and implemented in the medium term.

The research and development measures are mostly carried out by universities and other institutions engaged in research, and could be supported by financial industry associations. They should always build on existing research, data, methods and standards. Additionally, it is crucial for the target audience of these measures, i.e. asset managers, credit managers, etc., to be involved in the research and development process as well. This ensures that the data pools and methods developed are both practical and sophisticated enough to be applied in the financial industry. The research and development measures will most likely not be fully implemented on a voluntary basis unless the state provides some incentives, such as through research programs on closing existing research gaps. The measures can be started nationally and enhance the competitiveness and reputation of the Swiss financial centre. However, international cooperation is necessary, as data, methods and standards need to refer to and be applied on an international basis.

The first step to implementing these measures is to identify current data and research gaps concerning the financial effects of both the ESG factors in investing and the requirements that should be met by consistent, corresponding data pools. Additionally, the strengths and weaknesses of current ESG impact assessment methods for financial products and different asset classes should be evaluated and developed further on that basis. Here, it is crucial for ESG assessment methods to include ESG factors throughout life cycles.

ESG education and awareness

Other high priority and highly effective measures are ESG education and awareness measures. Similar to research and development, education and awareness measures are prerequisites for most other important ESG levers. They are mostly of medium difficulty, with the exception of the rather difficult measure of integrating sustainable finance into existing academic programs for finance professionals. They can be started in the short term and will in a few cases be implemented in the medium term, but mostly in the long term.

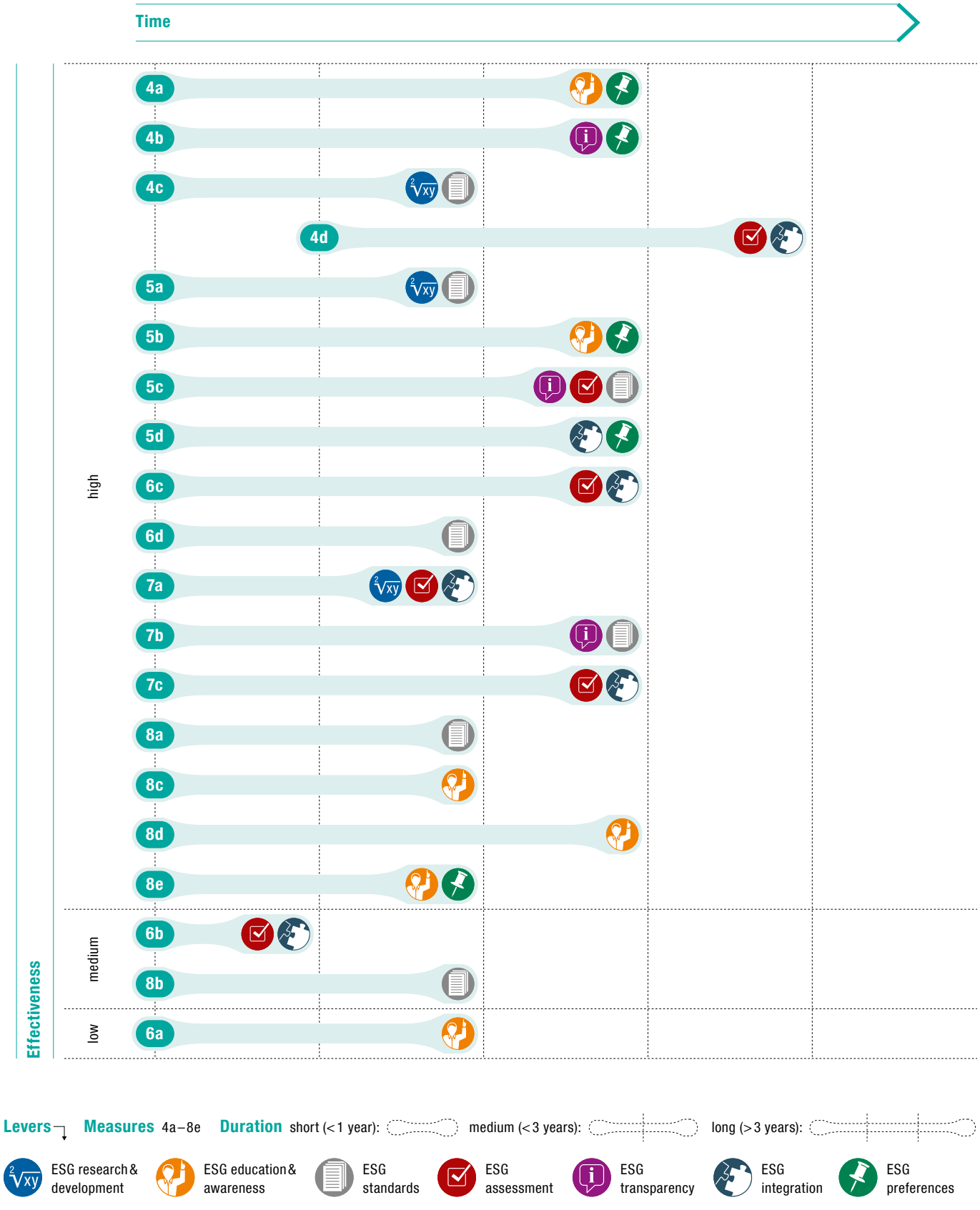
Education is mainly provided by universities, professional schools and in-house within financial institutions. The main target audience is financial sector employees, such as asset, wealth and credit managers and client advisors, as well as strategic managers in financial institutions, such as CEOs and foundation board members. Another target audience is students studying at professional schools who may be employed by financial institutions and will, in any case, become clients of financial institutions. The first step in implementing the education and awareness measures is to integrate sustainable finance into the in-house education activities of financial companies. The state could support this, such as by providing teaching material.

ESG assessment, standards, and transparency

The financial system is only sustainable if assessments of the ESG factors of financial activities are systematically carried out by financial actors (asset and wealth management, institutional investors, banks, rating agencies, etc.), adhere to reliable ESG standards and are used to provide ESG-related transparency for clients and other stakeholders. The first step towards this, which should have medium effectiveness, is for financial actors to publish their ESG-related policies and goals, or explain why they do not have them ("report or explain" principle). Due to the rather low cost of this measure, it can be implemented on a self-regulated basis.

More important than transparency on policies and goals, however, is the reliable transparency of the actual ESG impacts, risks and opportunities of financial products and services (investment portfolios, credits, etc.), the financial companies' entire activities (total assets, total credits granted, etc.) and the activities of companies in the real economy (CO_2 emissions, water usage, etc.). This transparency is crucial for financial actors to effectively manage ESG opportunities and

Proposals on a Timeline



risks within their activities and effectively meet the ESG-related preferences of clients so that market potentials can be exploited and client loyalty increased.

Most measures that would achieve this are difficult to implement. Therefore, they should be started in the short term, but will be completed in the long term. The main actors that should implement these measures are companies seeking financing and financial actors, such as asset managers and credit managers. Research, rating and consulting institutions could engage in setting standards and offer ESG assessments, while the state could act as facilitator.

Reliable and easily applicable ESG assessment methods and standards as well as ESG-related reporting standards for financial companies are lacking at this time. Additionally, ESG assessment and transparency in the financial industry depend on ESG reporting by companies in the real economy. However, the current situation of ESG reporting in the economy is far from comprehensive, reliable and comparable. Therefore, a starting point is to establish voluntary pragmatic, general ESG-related product information and ESG reporting standards for financial companies, based on the publications currently provided by invested companies. After the research and development measures described above are implemented, and provided that ESG reporting by companies in the real economy is improved, more sophisticated and mandatory standards can be set and ESG assessments carried out. Generally, transparency standards need to be easy to understand for clients and allow for comparability between different products and assets. The described ESG assessment and transparency standards should be binding, yet self-regulated industry standards.

ESG assessments already make good business sense on an individual financial company level, as well as on a national, pre-competitive level, where financial actors cooperate to increase the competitiveness of the entire Swiss financial centre. However, the measures do not achieve their full effectiveness unless assessment methods are harmonised. Then assessments results become more comparable internationally, and financial actors compete on a level playing field.

ESG preferences

All of the measures described above are pre-requisites for ensuring that the ESG preferences of clients can be systematically evaluated and met by client relationship managers, and that clients themselves are being educated and made aware of financial products (investment, pensions, etc.) that are in line with their ESG preferences. That is why measures aimed at ESG preferences are rather difficult to implement. They can be started in the short term, but would be completed in the long term. Meeting ESG preferences makes business sense for individual financial companies and for the entire financial industry in Switzerland, as this makes it possible to exploit market potentials and increase client loyalty, in the face of rising national and international competitive pressure. Basically, these measures can be implemented for merely competitive reasons.

ESG integration

ESG integration measures are carried out by financial actors themselves, possibly supported by external service providers such as consulting or rating institutions. A quick win measure is to systematically assess and integrate ESG factors into banks' credit risk management processes. Some banks have already succeeded in doing so, such as HSBC and UBS, and others could follow their example. This measure could achieve a medium impact in the short term. All other ESG integration measures, however, rely on the measures described above (especially ESG research and development, ESG education and awareness, ESG assessment and standards) and are therefore generally difficult to implement. They can nevertheless be started now, based on rather pragmatic impact assessment methods and currently available data and research on the materiality of ESG factors. However, due to the prerequisites mentioned above, it will take a rather longer period of time for ESG integration to become fully effective. ESG integration measures generally make good business sense on a competitive level, as they increase the risk-return profile of investments and, due to improved risk competencies, client loyalty as well.

10. Outlook

The "Proposals for a Roadmap towards a Sustainable Financial System in Switzerland" point to the most important measures for transforming the financial system in Switzerland into a (more) sustainable system. They reflect expert opinions that seek to strengthen the financial system in Switzerland so that it effectively exploits the current momentum worldwide, triggered by sustainability-related treaties, frameworks and initiatives such as the Paris Agreement in 2015 on global consolidated action to limit climate change.

The proposed measures can build on the innovative and outstanding commitment of some institutions and pioneering financial companies in Switzerland. However, the selection of measures also reflects the fact that the integration of sustainability factors into financing and investment decisions has not yet gained a foothold in the financial mainstream, and that the Swiss financial system is at an early stage of transformation. A few countries have taken further steps (see UNEP 2015):

> The Bank of England prudentially reviews the climate risks of the UK's insurance sector, based on core prudential duties and the UK Climate Change Act, and the Dutch and Swedish national banks require climate-related financial disclosure.
> The UK Pensions Act 2000 and the 2015 French Energy Transition Law require investors to report on how ESG criteria are considered in investment decisions.
> France's Energy and Ecology Transition Act (TEE) of 2015 sets ESG-related transparency requirements for institutional investors, and the EU Directive 2014/95/EU (amending Directive 2013/34/EU) sets them for large companies including investors (EU).
> The US has set fiscal incentives for investors that target renewable energy investments.
> The China Banking Regulatory Commission has established green credit guidelines to show the banks how to integrate sustainability thinking into lending processes, while the People's Bank of China (PBOC) has established the Green Financial Bond Directive, which outlines standards for green bonds, and the Chinese government has included Green Finance into its 5-Year Plan.
> The Johannesburg Stock Exchange (JSE) and Brazil's BOVESPA stock exchange were two of the earliest innovators in reporting for equities by requiring sustainability disclosures (see also chapter 7.1).
> South Africa has set up a voluntary standard of ESG integration, the "CRISA Code" (Code for Responsible Investing in SA), and has defined the integration of ESG standards as a fiduciary duty for pension funds in its "Regulation 28" of the 2011 Pension Funds Act.
> In its Sustainable Finance Roadmap adopted in 2014, Indonesia has taken action to enhance the current skill set of financial professionals and regulators.

The proposed measures in this report aim to address and improve ESG impacts, such as by reducing the climate impacts and resource usage of activities associated with financing and investment decisions. This strengthens the competitiveness of the financial system by enabling financial actors to better manage the ESG-related opportunities and risks of their activities and to better serve clients according to their ESG-related preferences. They also strengthen the resilience of both financial actors and the entire financial system against shocks. As a result, the financial system in Switzerland will serve the needs of the real economy better and accelerate the transition of the real economy towards sustainability. In the long run, it will also save the costs of remaining inactive (cost of non-action).

To reach these potentials, the next steps are possibly the following:

> Research institutions close research gaps concerning the materiality of ESG factors, in collaboration with investment managers, credit managers and other financial actors, possibly supported by financial industry associations, such as Swiss Sustainable Finance (SSF), the Swiss Insurance Association (SIA), the Swiss Pension Fund Association (ASIP), and Swiss Banking, as well as the state.
> Investment managers, credit managers and other financial actors engage in dialogue with research, consulting and rating institutions, supported by financial industry associations and possibly the state, on their needs concerning ESG-related data, impact assessment methods and standards to further concretise open research questions and development needs.
> Financial institutions (e.g. pension funds, banks, insurances, etc.) and financial industry associations, possibly supported by the state, collaborate to strengthen ESG-related in-house education.
> Financial institutions (e.g. asset and wealth mangers, banks, insurances, pension funds, etc.) engage in discussions with research, consulting and rating institutions, data providers and other stakeholders on developing sustainable investment standards, as well as ESG-related transparency standards for financial products and invested assets. These efforts should be coordinated with interna-

tional actors and initiatives and could be encouraged by financial industry associations and the state.

Switzerland, with its advanced financial sector, its pioneers and technical expertise in the field of sustainable finance, is in a unique position to accelerate the transition to a more sustainable financial system. The proposed measures and next steps are meant to spark and open up the discussion with a broader group of financial, scientific and other stakeholders from the real economy, civil society and the general public, as well as the state. The discourse should be on the future of the financial system in Switzerland and how it can become more sustainable, based on the proposed measures that are to be challenged, adjusted and further concretised. The path forward entails far-reaching opportunities and challenges. An open discussion on new visions, innovative solutions and cooperative approaches, not only within the financial industry but also with the different stakeholder groups mentioned above, will broaden the scope and successfully advance the financial system in Switzerland.

> Annex: Footnotes

1 See chapter 4.1 with further references.

2 See FÖS 2015.

3 See Dyllick / Muff 2015.

4 SuRe® – the Standard for Sustainable and Resilient Infrastructure was developed by Global Infrastructure Basel together with the French Investment Bank Natixis and was successfully launched at COP21 in December 2015. The Standard was created to provide the various stakeholders in infrastructure projects, namely developers the public sector and financiers, a universal instrument for the evaluation of sustainable and resilient infrastructure. A series of additional products and services stemming from the Standard are also currently being developed together with commercial partners (ratings agencies and insurance companies. The main focus of these initiatives is the capacity of sustainability, as defined by the SuRe® Standard, to help reduce the social and ecological risks of long-term, capital intensive investments in infrastructure. The inclusion of all relevant interest groups during the preparation and use of the Standard helps to guarantee the improved long-term stability and acceptance of infrastructure projects.

5 See FOEN 2015.

6 See FOEN 2015.

7 See FOEN 2015.

8 Basel III provides a framework for regulators and bank risk management to assess and measure the financial stability risks associated with environmental risks. However, this has not been utilized by most bank regulators in their national supervisory frameworks. See CISL / UNEP FI 2014.

9 See Carney 2015.

10 See Bank of England 2015 and Carney 2015.

11 See FOEN 2015.

12 According to the Forum Nachhaltige Geldanlagen FNG, sustainable investments are defined as follows: "Sustainable investments supplement the traditional criteria of profitability, liquidity and security with environmental, social and ethical evaluation criteria". This definition includes investment strategies with explicit ESG-related investment goals.
See http://www.forum-ng.org/en/fng-sustainability-profile/project.html

13 Markets included in the study are Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland, United Kingdom, see Eurosif 2014.

14 Exclusion screenings are investment strategies that remove companies or sectors from the investible universe of a portfolio due to infringements with at least one ESG-related exclusion criterion (Eurosif 2014).

15 According to Article 2.1 (c), one of its objectives is to make financial flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development, which is a clear political signal to investors worldwide, see UNFCCC 2015.

16 Target 10.b, for example, requires that financial flows from both the private and public sector become consistent with sustainable development and contribute to achieving the Sustainable Development Goals (see UN General Assembly 2015).

17 The Framework was adopted at the Third UN World Conference in Japan in 2015. It requires, among other things, that public and private investments take into account economic, social, structural, technological and environmental impact assessments and that disaster risk reduction considerations and measures be integrated in financial and fiscal instruments (see paragraphs 29 to 31 in UNISDR 2015).

18 See OECD 2015.

19 The Agenda was adopted at the Third International Conference on Financing for Development. In paragraph 37, it encourages investments with a positive non-financial impact and the use of sustainability indicators in the investment context. Paragraph 38 formulates the endeavour to design policies, including regulations, to promote the integration of sustainability indicators and long-term performance in financing and investment decisions (see UN 2015a).

20 Such as the Sustainable Stock Exchanges Initiative, the Carbon Disclosure Project, and the Green Growth Knowledge Platform.

21 Examples of binding regulations are the French Energy and Ecology Transition Act (TEE) of 2015 and EU Directive 2014/95/EU.

22 The Group of Friends of Paragraph 47 (GoF47) is composed of several governments, including Switzerland. GoF47 promotes increased corporate transparency and accountability through non-financial disclosure and also closely follows international guidelines and the development of national transparency regulations directed at the financial sector.

23 See https://sustainabledevelopment.un.org/topics and UNCTAD 2014.

24 The fact that public funding will not be enough to achieve the ambitious goals was specified in the Addis Abeba Action Agenda, adopted in July 2015, see UN 2015a.

25 See chapter 4.1 for further references.

26 See Knoepfel / Imbert 2013.

27 See FOEN 2015.

28 SSF 2014.

29 See https://www.evb.ch – and more specifically the "Banks and Human Rights" campaign at http://banksandhumanrights.ch

30 Art. 2 and 73 were added to the Swiss Constitution in 1999. This national aim has been specified and advanced within four national sustainability strategies since 1997, and the environmental law has been based on fundamental principles such as the precautionary principle, the polluter pays principle, and the cooperative principle. Further principles address the root cause and the holistic approach principle. See FOEN 2013, p. 8–9.

31 So far, the National Council and Council of States approved the first package of the Energy Strategy 2050 on 8 December 2014 and 23 September 2015 respectively. Currently (January 2016) the two councils are in the process of resolving their differences over the measures before they vote again on the entire bill. The bill on the KELS was approved by the Federal Council on 28 October 2015 and is currently in discussion in the parliamentary commissions of the National Council.

32 EU Directive 2014/95/EU.

33 The French Energy and Ecology Transition Act (TEE), 2015, and the Grenelle II Act, 2011, see also chapter 5.1.

34 See UNEP w/o year. Some private actors are also engaged in advancing sustainability reporting in the financial sector, e.g. Swiss Re in the "Task Force on Climate-related Financial Disclosures".

35 OECD 2014.

36 51% of net income of Swiss Banks stems from Commission and Trading business. Only 38% stem from interest earning business: SBVg Bankenbarometer, September 2015, p. 12.

37 As illustrated in the Swiss Bankers Association's 2015 Banking Barometer of September 2015, see SBA 2015a.

38 According to the Forum Nachhaltige Geldanlagen FNG, sustainable investments are defined as follows: "Sustainable investments supplement the traditional criteria of profitability, liquidity and security with environmental, social and ethical evaluation criteria". This definition includes investment strategies with explicit ESG-related investment goals.
See http://www.forum-ng.org/en/fng-sustainability-profile/project.html

39 See SBA 2015b.

40 FNG 2016, p. 6.

41 A report by Oekom (2013) revealed that investors are the second driver after clients when encouraging companies to improve their sustainability performance. Hoepner (2015) revealed a 4.4% annual outperformance of companies being engaged vs. companies not being engaged.

42 Sustainable funds, for example, represent only around 4% of all funds managed in Switzerland; see FNG 2015, p. 13.

43 Capgemini/ RBC Wealth Management 2015, p. 27.

44 Symbiotics 2015.

45 responsAbility has been appointed the investment manager of a KfW-led climate fund in 2014.

46 FNG 2015, p. 7.

47 See https://www.credit-suisse.com/ch/de/asset-management/solutions-capabilities/real-estate-ch/investments/cs-ref-green-property.html and https://www.raiffeisen.ch/raiffeisen/internet/home.nsf/pageid/immobilienfonds+nachhaltigkeit

48 The Climate Bond Initiative has been supported by SECO and Credit Suisse.

49 First eco efficiency fund of Sarasin investing across sectors. First global sustainable index series launched by RobecoSAM in cooperation with Dow Jones Indices. Identification and application of sustainability as a factor by RobecoSAM. Development of a reputational risk indicator by RepRisk. Development and application of the unique "best-in-service" approach by Inrate, which identifies investments (across traditional industries) that meet societal needs in the most sustainable way.

50 GSIA 2015, p. 8.

51 ZKB 2015.

52 https://footprint.globalance-bank.com/de/portfolio.html

53 Paetzold 2015, p. 22.

54 Paetzold / Busch 2014.

55 Friede et al. 2015.

56 Paetzold 2015, p. 25.

57 In its recently published report, the Task Force has set out the scope, high-level objectives and fundamental disclosure principles (TCFD 2016). In a second report, the Task Force will set out specific recommendations and guidelines for voluntary disclosure by identifying leading practices to improve consistency, accessibility, clarity, and usefulness of climate-related financial reporting. See https://www.fsb-tcfd.org/phase1report/

58 The budget of the research programme will be 20 million CHF. Research projects will start in 2017 and last until 2021 and 2022. See http://www.snf.ch/de/fokusForschung/newsroom/Seiten/news-160323-bundesrat-lanciert-neues-nationales-forschungsprogramm-nachhaltige-wirtschaft.aspx

59 For the process of defining a strategic ESG position, banks and investment managers might learn from values-based banking. See Global Alliance for Banking on Values (2014) in order to rethink existing business models. Pioneers on values-based banking could serve as inspiration for mainstream institutions.

60 Deutsche Bank Climate Advisors 2012.

61 E.g. Bassen 2015 (with further references) reviewed 1,600 primary studies on the link between ESG factors and the financial performance of investments. The result was that 90% of all studies did not find negative correlations, and 48% of vote-count studies and 72% of meta-analyses found positive correlations.

62 One exception here is RobecoSAM (2015). With its analytical reporting tool, it helps institutional investors monitor the direct environmental impact of their portfolios (excluding, for example, the usage phase), based on a selection of quantitative environmental indicators.

63 Most people, if asked openly what they expect from their pension funds, do not mention ESG factors. However, if people are asked specifically if their pension funds should invest according to ESG factors, the issue becomes important to them (gfs-Zürich 2014). This indicates that most beneficiaries do not associate pension funds with ESG factors and impact (yet). The awareness is generally higher for private mobility, heating and warm water usage and buying food. In 2014, 81% of Swiss consumers were aware that private mobility had a strong impact on climate change, 71% were aware of this for heating and warm water in households and 67% for nutrition. See Schwegler et al. 2015.

64 The program was approved by the Swiss Federal Council in March 2016. The budget will be 20 million CHF. Research projects will start in 2017 and continue until 2021 and 2022. See http://www.snf.ch/de/fokusForschung/newsroom/Seiten/news-160323-bundesrat-lanciert-neues-nationales-forschungsprogramm-nachhaltige-wirtschaft.aspx

65 The FOEN and Seco, for example, are participating in the OECD Working Party on Responsible Business Conduct and financially supporting the Proactive Agenda Project on Responsible Business Conduct in the Financial Sector.

66 Namely the BVK ("Personalvorsorge des Kantons Zürich"), compenswiss, comPlan, Pensionskasse Post, Pensionskasse SBB. See http://www.svvk-asir.ch/verein/ (last visited on February 15, 2016).

67 The Equator Principles (EP) is a risk management framework adopted by currently 81 financial institutions for determining, assessing and managing environmental and social risks in projects.

68 The EP applies globally to all industry sectors and to four financial products: project finance advisory services, project finance, project-related corporate loans, and bridge loans.

69 KPMG 2015.

70 Outstanding credit volume as of April 2015 was CHF 323 billion, according to SNB's credit volume statistics.

71 See FSB 2015.

72 See University of Cambridge Institute for Sustainability Leadership / UNEP Finance Initiative 2014.

73 See also the increasing number of lenders on http://www.technologyfund.ch/organisation/lenders/

74 See e.g. Bank of England 2015.

75 E.g. the Thun Group of Banks. This informal group discusses, among other things, how human rights issues can be applied in banking businesses. See e.g. Thun Group of Banks 2013.

76 Such as the Brazilian and Peruvian banking regulators do. See UNEP 2015, pp. 20 (Brazil), 13 (Peru).

77 To this end, it might be worthwhile to explore whether financial regulators should be given a mandate which also considers how financial regulation could be beneficial to the internalisation of environmental and social externalities.

78 FOEN 2015, p. 8.

79 Aviva PLC 2014, p. 28.

80 For example S & P 2014: A rating agency recognised for the first time an environmental issue in its forecast of countries' economic health and their ability to honour their sovereign debt. In April 2015, S & P Dow Jones Indices and RobecoSAM launched the S & P ESG Pan-Europe Developed Sovereign Bond Index, which is designed to measure the performance of European sovereign bonds based on the notion that ESG factors are an important part of a country's long-term investment profile.

81 See http://www.unpri.org for details.

82 As far as the issue of climate change is concerned, the SSE should look towards the "Task Force on Climate-related Financial Disclosures" recently established by the Financial Stability Board, which will make recommendations for consistent company disclosures that will help financial market participants understand their risks related to climate change. See the press release by the Financial Stability Board issued on December 4, 2015, http://www.fsb.org/wp-content/uploads/Climate-change-task-force-press-release.pdf

83 See measure 4.C for institutional investors in chapter 4.3.

84 See measure 4.C for asset and wealth management in chapter 4.3, and measure 5.A for institutional investors in chapter 5.3.

85 See measures 4.C for asset and wealth management in chapter 4.3, measure 5.A for institutional investors in chapter 5.3, and measures 5.A for credit business in chapter 6.3, and measure 7.A for capital markets in chapter 7.3.

86 WWF 2014.

87 The award was won 2015 by Philipp Kruger, Assistant Professor of Responsible Finance at the University of Geneva and Junior Chair at the Swiss Finance Institute.

88 Goldhammer et al. 2014.

89 The program was approved by the Swiss Federal Council in March 2016. The budget will be 20 million CHF. Research projects will start in 2017 and continue until 2021 and 2022. See http://www.snf.ch/de/fokusForschung/newsroom/Seiten/news-160323-bundesrat-lanciert-neues-nationales-forschungsprogramm-nachhaltige-wirtschaft.aspx

90 http://www.swissfinanceinstitute.ch

91 http://www.bsl-lausanne.ch/thought-leadership/swiss-sustainability-hub/

92 http://www.edk.ch/dyn/12043.php

93 http://vorlage.lehrplan.ch/index.php?nav=10|40&code=t|105

94 The training consists of three modules: general training on sustainability, information about the Reputational Risk Review Process for employees in contact with clients, and sector-specific training for relationship managers who serve clients in sensitive industries.

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