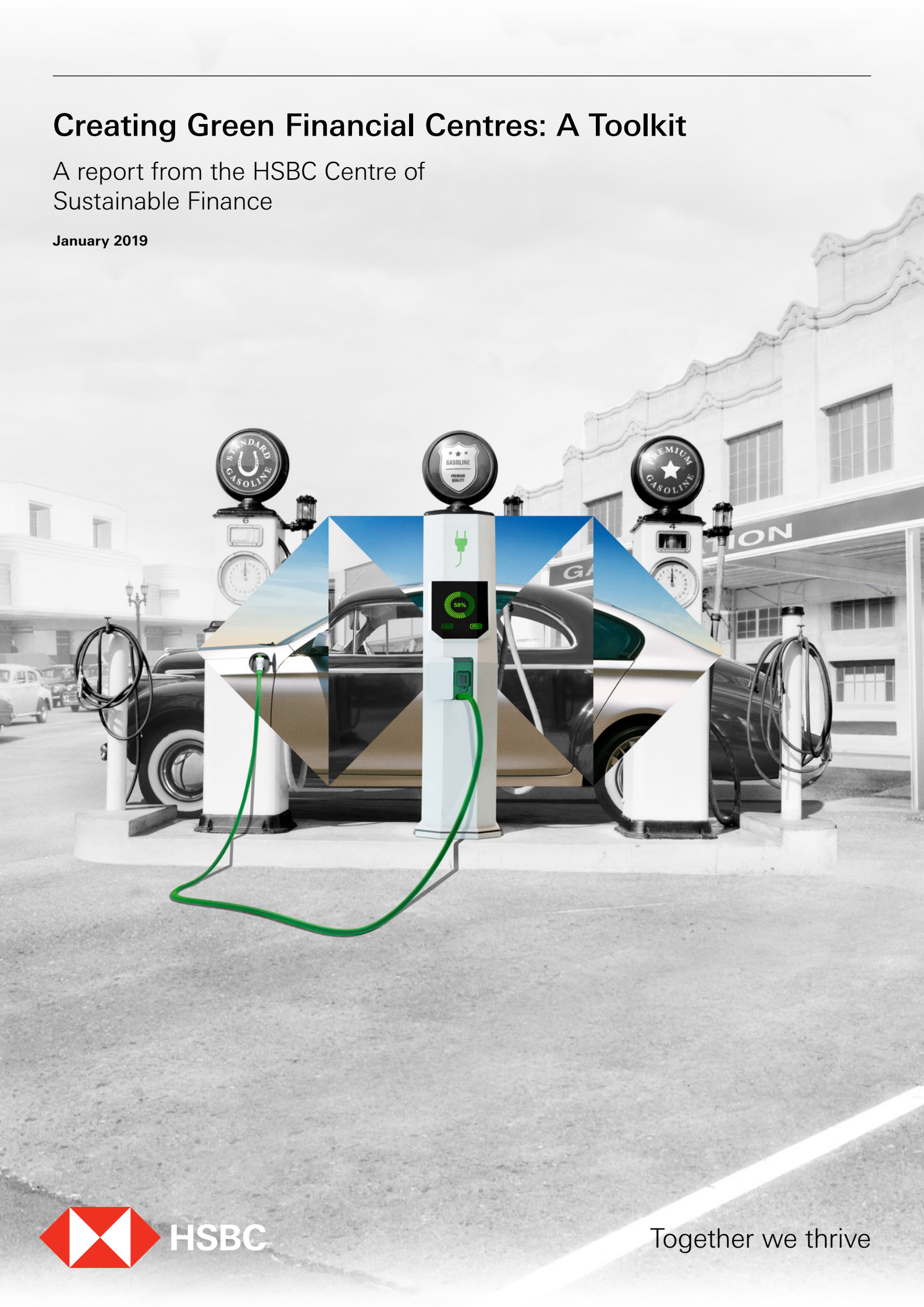
Creating Green Financial Centres: A Toolkit

A report from the HSBC Centre of Sustainable Finance

January 2019



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Foreword

Climate change represents one of the biggest challenges facing society. The need to limit global warming to two degrees has become a major imperative among world leaders. As a result, economies and societies are faced with the need to undertake a rapid transition out of high carbon activities.

Achieving the transition to alow carbon economy will require billions of dollars of extra investment flows facilitated via the development of green or sustainable financial centres. We view green financial centres as ones which successfully channel the capital required to foster the transition to carbon-free economy, thereby meeting social and environmental development needs, as guided by the UN Sustainable Development Goals. The Global Sustainable Investment Review of 2017 revealed that socially responsible investment (SRI), which includes green investments, is on the rise and reached $22.9 trillion during 2016.[1] Nonetheless, this is still just a drop in the ocean.

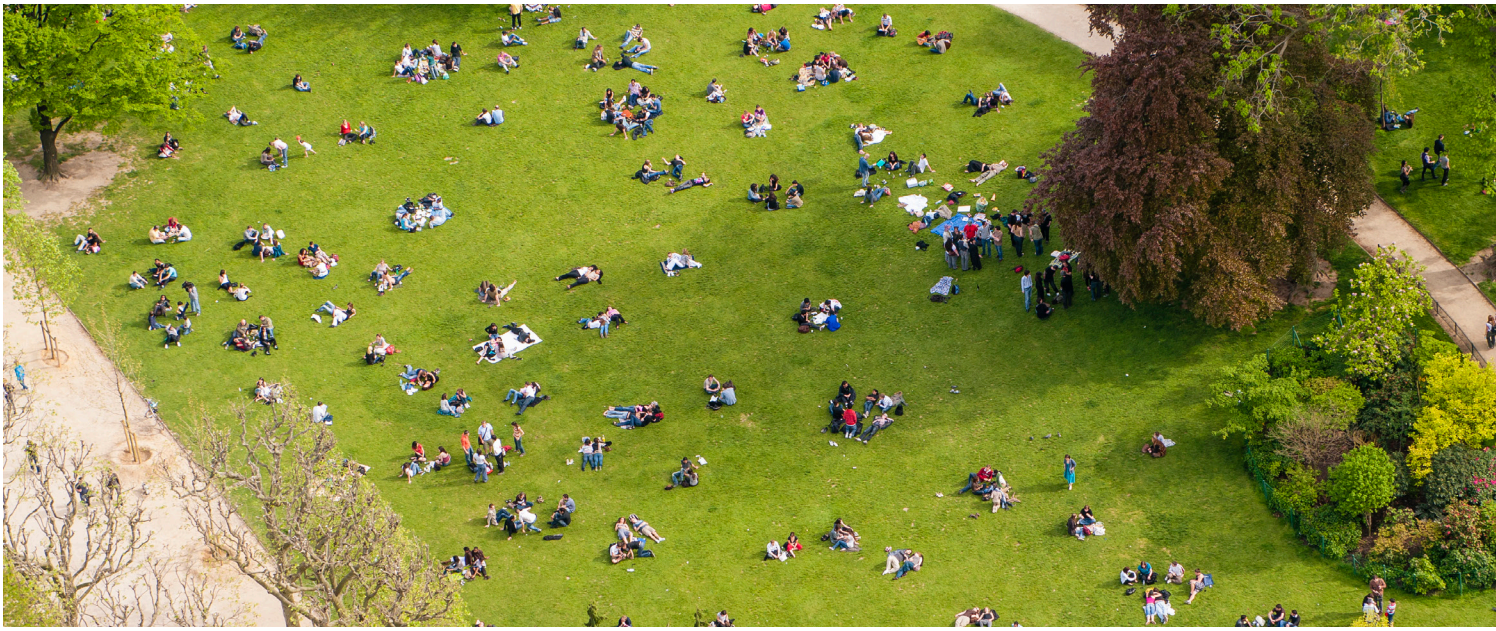
Within the public sector further efforts are needed at all levels – national, regional and local government. Just as national policymakers and regulators need to create frameworks to incentivize a sustainable finance approach for regulation, legislation and taxation, regional and city governments will become increasingly important drivers for change both as local standard setters on issues like clean air, but also in directing financial flows such as municipal pension funds. Given the competing demands on public finances, the need to mobilise private capital remains an essential part of the solution. This report identifies the various tools that financial centres can use to accelerate sustainable financial flows.

Every day financial centres help to intermediate or match the needs of those looking to raise money (through issuing debt or equity) and those looking to save and invest. Globally, this network of financial hubs manages over $91.8 trillion annually in stock market capitalisations alone.[2] However, significant barriers remain to securing adequate levels of sustainable finance.

Financial centres are currently constrained by factors such as ineffective assessments of sustainability related risks, ineffective disclosure and reporting requirements, a lack of suitable green labelled investment opportunities, illiquid markets, and insufficient investor awareness and engagement. In some cases, these constraints are compounded by the perverse incentives linked to the taxation and capital treatment of green versus brown investments. These constraints present even greater challenges in emerging markets, where many of the most pressing environmental challenges are located. For example, Europe still accounts for 53% of global SRI assets. In contrast, Asia, excluding Japan, accounted for just 0.2 percent of SRI assets in 2016.[3]

This report provides a toolkit for policymakers in relation to overcoming the barriers relating to address climate change and responding to the changes that come with warmer temperatures.

Zoë Knight, Group Head, Centre of Sustainable Finance



1 Global Sustainable Investment Alliance (GSIA) 2017
2 World Federation of Exchanges, 7 August 2018
3 Global Sustainable Investment Alliance (GSIA) 2017

Introduction

A green financial market is one which successfully channels the required capital into meeting our social and environmental development needs as set out by the UN's Sustainable Development Goals. It embodies sustainable values and practices in terms of governance and regulations as well as in the day-to-day interactions between all market practitioners including the largest financial institutions down to the smallest retail investor.

The critical role of financial centres in promoting sustainable finance is already firmly established and is reflected in numerous global initiatives, including the International Network of Financial Centres for Sustainability (FC4S) and the Network for Greening the Financial System (NGFS). These are already working to establish dialogue, cooperation and market solutions that address the growing need for green and sustainable finance. To address this growing need, different centres will perform this role in very different ways. The Global Financial Centres Index, compiled by London-based think tank Long Finance, lists 100 financial centres around the world which vary greatly in size, scale, the kind of functions they perform and their domestic / international focus.

Global financial centres by type and specialism[4]

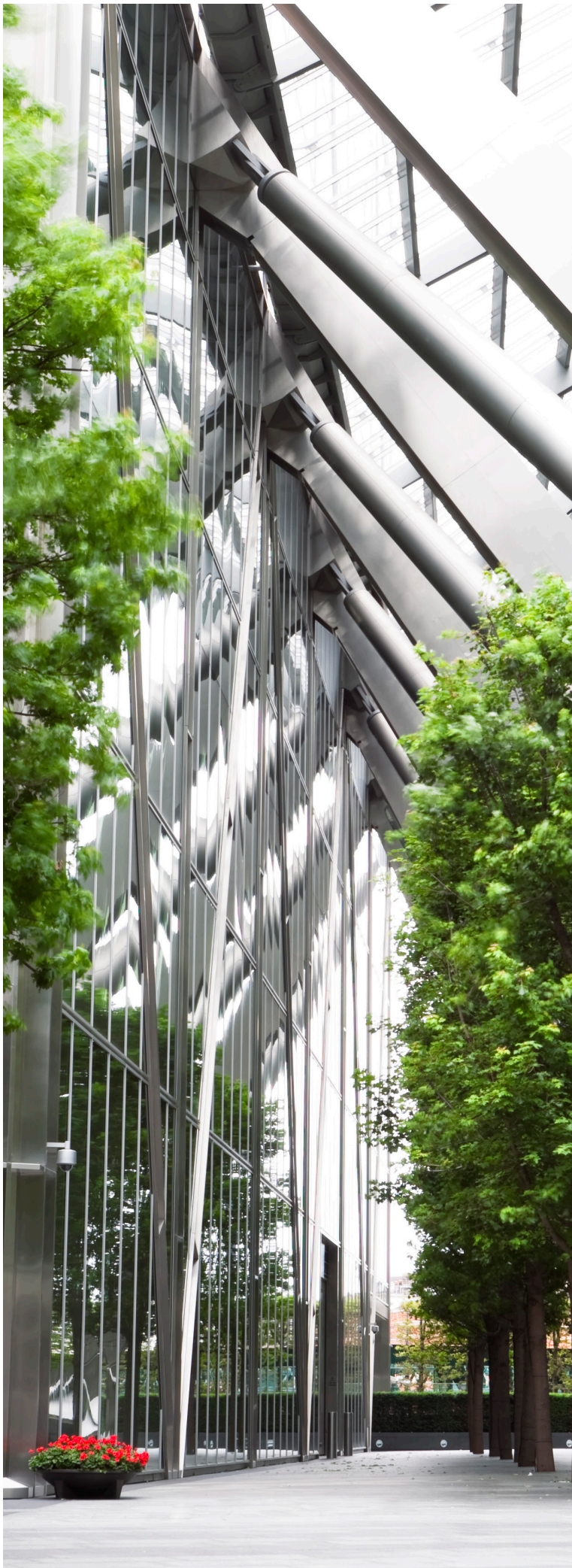
Type of centre	Examples
'Gobal leaders'	◆ London ◆ New York ◆ Hong Kong ◆ Singapore
'Local' financial centres	◆ Buenos Aires ◆ Mexico City ◆ Rome
'Specialist' financial centres	◆ Bermuda ◆ Mauritius ◆ Cayman Islands
Established sustainable finance leaders[5]	◆ Amsterdam ◆ Copenhagen ◆ Stockholm

4 Global Financial Centres Index 24, Long Finance, September 2018
5 Global Green Finance Index 2 (GGFI), Long Finance, October 2018

Within these broad categories, each centre operates its own distinctive financial ecosystem. Whereas many small countries have financial centres servicing local clients, large countries such as the US and China host several centres often specialising in different financing requirements to domestic and international clients. For example, part of China's response to its environmental challenge has been to develop five specialist sustainable finance centres each focusing on different aspects of green financing. Rural Guizhou for instance will focus on the treatment of agricultural waste, Guangdong will develop credit mechanisms to support energy conservation while Xinjiang, a key player in the Belt and Road Initiative, will strengthen cooperation with overseas financial institutions.[6]

The global diversity of financial centres means that there is no single template for the approach to develop sustainable financial centres. However, the UN Environment Inquiry into the design of a sustainable financial system highlighted two specific priority areas in the development of green financial centres. Firstly, the need to encourage action by financial centres to help address sustainability at the national level, and second, to promote international cooperation among financial centres on green and sustainable finance.

In Part 1 of this report, we consider some of the key ways in which policy action targeting the financial system at the national level can help to develop green financial centres by addressing regulatory, fiscal or market barriers. In part 2, we look at some of the specific initiatives being developed around to world to foster not only the development of green financial centres, but also to encourage greater cooperation between those centres.



6 The Chinese Government State Council, 14 June 2017

Part 1: Mobilizing capital through the growth of green financial centres

The role of financial centres in mobilising private capital

All financial centres have a common need, whether they serve domestic or international clients, to adapt and adjust to ensure a more sustainable path for investments and economic development. Globally, regulatory and market efforts are increasingly channelling savings towards the much needed, productive investments required to underpin sustainable development.

Several centres, including Casablanca, Frankfurt, Hong Kong, London, Luxembourg and Paris have launched green or sustainable finance initiatives, including the Finance for Tomorrow Initiative (Paris), the Sustainable Development Capital Initiative (London) and the Casablanca Network, all of which aim to mobilise private capital through the development of green finance hubs. In addition, governments and policymakers around the world are already directing public funds towards green investments. Examples include:

- Norway's Norges Bank Investment Management (NBIM), which manages the Government Pension Fund Global (GPFG) portfolio, excludes investments in firms which impede progress towards the SDGs as part of an investment strategy which seeks to reduce financial risks associated with environmental impacts.
- Luxembourg's FDC has issued mandates with a €1bn sustainability allocation during 2018. Six of FDC's sub-funds have been granted the LuxFLAG ESG label.
- France's ERAFP pension fund is also considering a shift to environmental impact investing.
- In the US, the State of California has long promoted policies to assist with climate change transition including water and energy efficiency, solar initiatives, and hybrid and zero emissions vehicles.

Such trends are consistent across the public sector in many countries. However, the ability to meet future investment needs through public finance alone is constrained by the growth of competing demands, such as ageing demographics which place extra strain on health and pensions systems. Alongside these financial constraints, there can be other less tangible ones, such as poor levels of governance, corruption, illicit financial flows and tax evasion. Such factors undermine efforts to channel sufficient public resources towards sustainable investment goals. It is therefore unlikely that governments acting alone can achieve their climate and sustainability goals. Utilising financial centres to mobilise private capital is a critical solution.

The Global Green Finance Index (GGFI), produced bi-annually by Long Finance, illustrates the constraints currently facing financial centres. The second GGFI report, published in October 2018, reveals that there is a lack of appetite among market practitioners to address high impact sectors, such as by divesting from fossil fuels. Regulated market incentives would help to shift capital away from environmentally damaging sectors. Achieving a better match between the long-term needs of investors and investees could present greater opportunities to shift assets into sustainably aligned investments. Centres can achieve more rapid progress by identifying existing obstacles to investor engagement. The G20 leaders' communique in September 2016 provided a clear summary of the issues currently constraining the market;

> "the development of green finance faces a number of challenges including difficulties in internalising environmental externalities, maturity mismatch, lack of clarity in green definitions, information asymmetry and inadequate analytical capacity"[12]

The cost and lack of investment opportunities remain significant market issues for investors looking to engage with sustainable investing. Others such as the Climate Bond Initiative (CBI) have highlighted constraints such as additional transaction costs because issuers must undertake additional due diligence to track, monitor and report on the use of proceeds. To overcome this, there have been further calls to make the prudential regulation associated with green bonds more attractive.[13] HSBC has undertaken surveys on market practitioners in 2017 and 2018 with the findings echoing the concerns highlighted above. The surveys confirm that investors – not regulations – ultimately drive market behaviour, but that investors are faced with a wide range of barriers when attempting to achieve sustainable finance objectives.

7 UN Environmental Inquiry, 2017
8 Responsible Investment, Government Pension Fund Global, 2017, NBIM
9 Fonds de Compensation, press release, 19 October 2018
10 Phillippe Desfosses, CEO, EFRAP, interviewed by IPE, 11 April 2018
11 UNEP inquiry into the State of Sustainable Finance in the United States, 2016
12 G20 Green Finance Synthesis Report, September 2016

Defining green investments – developing a taxonomy
One problem for financial centres to attract green capital is that there is limited standardised and comparable information on standards and definitions. The lack of accurate and comparable environmental data in financial markets, as well as informational asymmetries between market practitioners, leads to pricing inefficiencies both in cost of capital calculations for credit risk but also on valuing public equity, market opacity and duplication. Overcoming such information gaps requires consistent disclosure frameworks which provide clearly labelled products and services. By creating a clearly defined scope for what is considered 'green' or 'sustainable' will not only help to ensure that products are labelled accurately and in a consistent manner but will also help to monitor and encourage green financial flows over time. This will help to reduce transaction costs and promote greater market liquidity. As the International Network of Financial Centres for Sustainability (FC4S) has outlined in its call for a new green taxonomy, "a shared language for green and sustainable finance is critical for the growth of new markets". The creation of a new taxonomy for green finance requires both universally agreed definitions, and also the development of new regulatory standards and systems of classification.

FC4S has set out a detailed range of principles for policymakers in creating this new taxonomy. This encompasses:

- Developing a clear scope and purpose in defining what is green and what is not.
- Ensuring principles of good regulation such as proportionality.
- The need to undertake impact assessments and ensure a dynamic approach which evolves with market practice.
- The need for a strong evidence-base which draws upon existing good practice as well as coordination with existing frameworks for market transparency and disclosure such as the Task Force on Climate-related Financial Disclosures (TCFD).

Benefits of creating a green taxonomy

Reduced costs	Reduce transaction costs for green and sustainable finance
Market integrity	Build market trust and integrity which improves market liquidity
Transparency	Provide the right signals to consumers allowing them to exercise green investment choices
Clear Incentives	Provide a consistent framework for policymakers to apply effective market incentives and disincentives through regulatory and fiscal measures
Consistent market behaviour	Deliver consistent behaviours between financial institutions, regulators and policymakers

The process of defining a new taxonomy is simply the building block on which wider set of reforms must then take place. The Network for Greening the Financial System (NGFS), launched at the Paris summit in December 2017, published mandates in June 2018 for the creation of three separate technical workstreams on further developing the green finance market and employing micro- and macro-prudential tool-kits to help 'scale up' green finance.[14]

Following on from the NGFS's first workstream, the development of a new micro-prudential framework will play a significant role in assisting financial centres to help firms and investors to better understand the forward-looking financial risks and opportunities surrounding climate change. There will be many new opportunities in the shape of greater resource efficiency, new products and services, new markets, and greater business resilience.

Workstreams	Specific areas of activity
Supervisory / micro-prudential	◆ mapping of current supervisory practices for integrating environmental risks into micro-prudential supervision ◆ review the current practices on environmental and climate information disclosure by financial institutions ◆ consider the extent to which a financial risk differential exists between 'green' and 'brown' assets
Macro-financial	◆ sizing the risks to the macroeconomy and the financial system from the physical and transition risks associated with climate change ◆ identify examples of good practice in the activities undertaken by NGFS members ◆ identify key gaps in our understanding and toolkits to act as a call to arms to researchers and policy makers.
Scaling up green finance	◆ Update current practices of central banks and supervisors to incorporate ESG criteria in their operational activities ◆ monitor market conditions and developments ◆ outline the role that central banks and supervisors could play in scaling up green finance.

However, the speed and scale of climate change mitigation remains highly uncertain and firms and investors could also be faced with systemic risks including stranded assets or outdated business models. Enabling firms (and regulators) to model those risks through scenario analysis and other tools allows market practitioners to better analyse the uncertainty of the future and to build resilience against potential future business risks associated with environmental challenges and climate change mitigation. This helps not only businesses, but also investors and regulatory supervisors, to better evaluate the impact of future climate change on business strategy and financial plans.

Risk tools which regulators could consider for the development of a green financial centre:

- Integrating sustainability into regulator's existing supervisory review of firms' management and governance, risk management and controls.
- Development of best practice by mapping current supervisory practices for integrating environmental risks.
- Supervisors could seek to promote the use of Environmental Risk Assessments (ERA) by firms which make use of modelling techniques to assess the size of financial risks to micro-prudential objectives.
- This means identifying and addressing significant barriers to the wider adoption of ERA tools such as stress testing, scenario analysis and data issues.

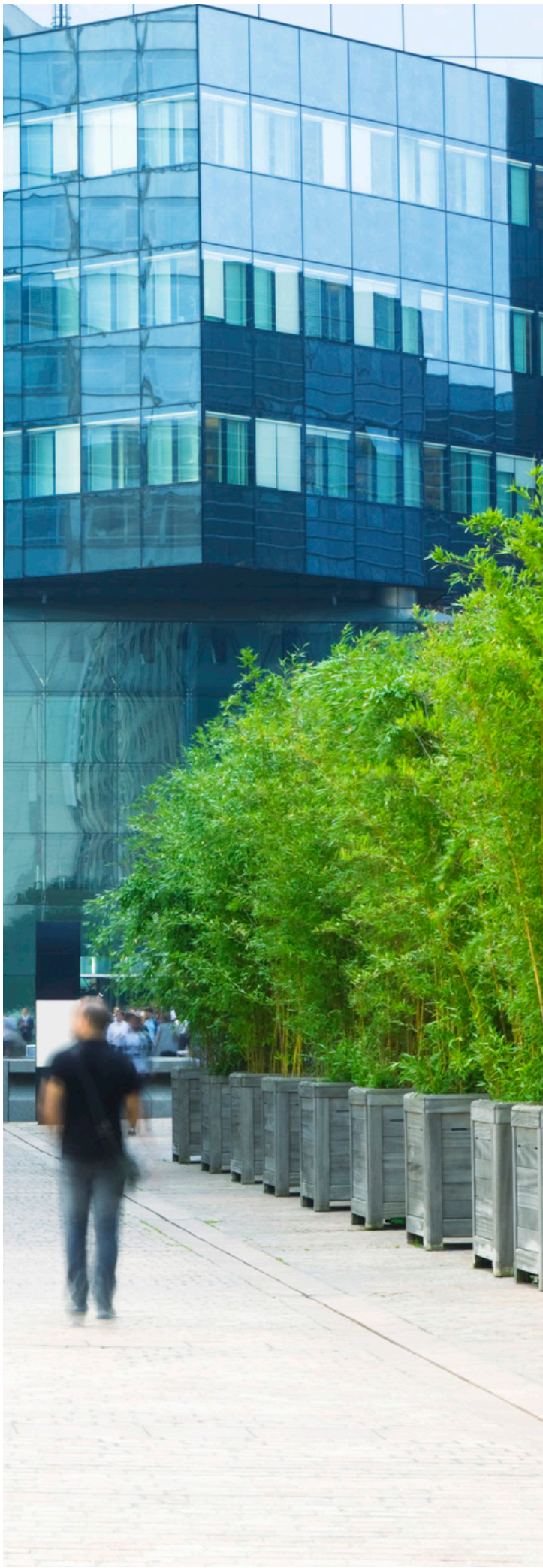
14 NGFS, Mandates for workstream 1-3, 2018

Improved financial disclosures

The need to improve the quality and consistency of environmental disclosures has led to an evolution of public policy frameworks and market practice in several countries, notably, the UK, France, Sweden and China which have already put in place disclosure requirements on banks and asset managers.

In future, successful green financial centres must enable investors and asset managers to clearly differentiate between those firms that are taking the necessary steps to develop climate resilient business plans to manage any downside risks, as well as positioning themselves to realise the opportunities. To achieve this market transparency, issuers of bonds and equities must be open in how they devise their future business plans, as well as in communicating to the financial market the steps they have taken to future-proof their assets against climate change.

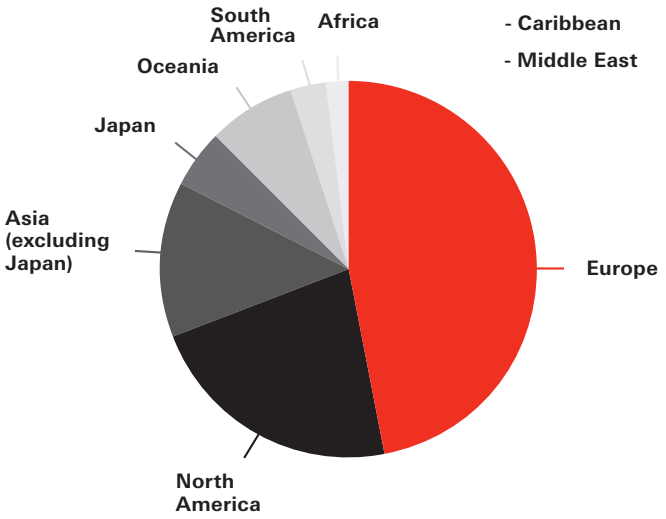
Financial markets are already engaged in developing disclosure requirements through the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) as well as other initiatives. The TCFD provides a set of voluntary disclosure recommendations around four key operational areas including governance, strategy, risk management and metrics and targets. These recommendations are designed to help firms comply more effectively with their existing disclosure obligations. By increasing transparency, the aim is to allow markets to more effectively price climate risks and allocate capital appropriately.



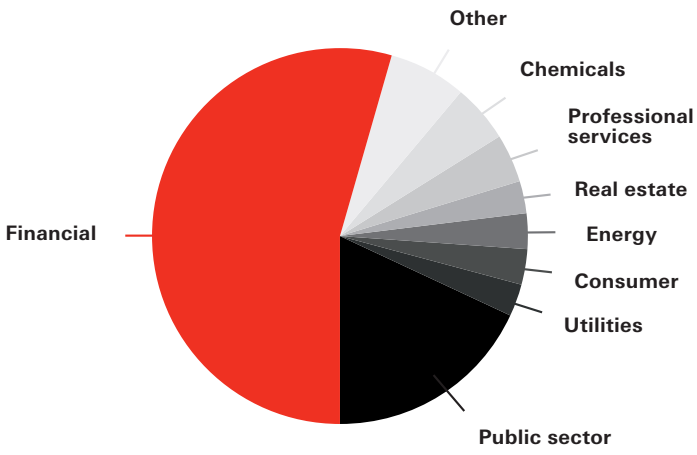
The TCFD recently published its first Status Report providing an overview of current market disclosure practices and their alignment with the core elements of the TCFD recommendations. At the publication of that report 513 organisations had expressed their support for the TCFD recommendations.[15]

Given that we are part-way through a five-year implementation process, the figures above should be regarded as an encouraging first step. But as we can see from them, there are still relatively few companies committed to disclosing the financially material consequences of climate change, and the amount of market information about the resilience of business strategies remains limited. The latest HSBC sustainable finance market study illustrates some of the problems, particularly that the current voluntary approach has low awareness in the market place. The HSBC survey data revealed that just 8% of issuers and 10% of investors globally are aware of the existence of TCFD, with awareness highest in UK and Canada. Likewise, awareness was higher among pension funds and Sovereign Wealth Funds (SWFs).[16] These figures are supported by the TCFD's own report in September 2018 which revealed that among those organisations which had expressed support for the recommendations, nearly two-thirds were in financial services or the public sector with an even greater number (72%) concentrated in Europe and North America.[17]

Support for TCFD principles by region



Support for TCFD principles by sector of the economy

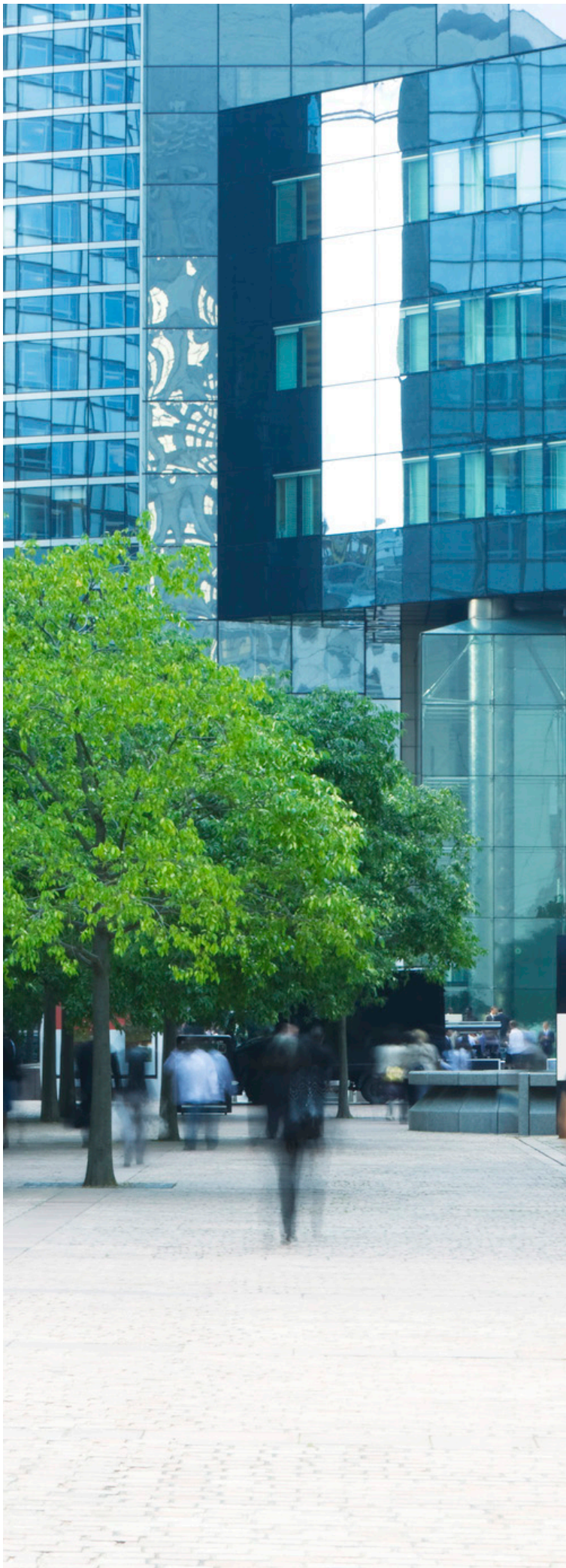


15 TCFD Status Report, September 2018
16 HSBC Sustainable finance survey, 2018
17 TCFD Status Report, September 2018

France – taking the global lead on statutory reporting

If the take up of voluntary approaches such as the TCFD remains low, then we cannot rule out the prospect of a broader shift towards a mandated approach. Some countries have already moved down the road towards implementing mandated disclosure requirements. In France, the introduction of mandatory ESG disclosure requirements, commonly referred to as Article 173, forms part of its Energy Transition Law and applies to publicly-traded companies, banks and credit providers, asset managers and institutional investors, including insurers, pension and mutual funds and sovereign wealth funds. The law provides investors with some flexibility in how they fulfill their obligations based on a 'comply or explain' basis. Firms can develop their own reporting methodology reflecting specific asset classes. Crucially, France's approach to mandated disclosure has been cited in the recent Global Green Finance Index as one of the factors helping to promote the growth of the Paris financial centre as a global leader in sustainable finance.

Ultimately, whether countries adopt voluntary or mandated approaches is secondary to the requirement to generate adequate firm-level data. With financial firms accounting for 55% of TCFD signatories, it is important that we broaden the level of engagement among non-financial institutions. Accessing the data to understand the impacts of climate change transition across all sectors of the economy will be vital in helping investors and markets to fully capture the potential value disruption associated with climate change factors. Encouraging more firms to opt-in to the existing TCFD process is a pressing need especially among mid-cap firms. Financial centres could help by encouraging financial institutions to take a leadership role in raising awareness around TCFD in the same way that they have been central to raising awareness on financial products such as green bonds.



Leveraging the asset management sector

The global fund management industry has a major role to play in mobilising resources towards green growth initiatives. This market contains a wide range of institutions. Not only are these institutions already stewards of a huge volume of capital, but those volumes are set to grow rapidly in the coming decade. PwC has estimated that assets under management will have almost doubled to $145.4 trillion by 2025 compared to $84.9 trillion in 2016.[18] This growth in assets also coincides with a major shift in the investor base with asset growth taking place in South America, Asia, Africa and the Middle East. This creates a window of opportunity to build a sustainable investment market framework capable of steering assets into sustainable finance opportunities. This demonstrates the potential for Emerging Markets to develop vital financial market infrastructure which will in turn help to fuel sustainable investment within their domestic economies. There is also huge scope for Emerging Market financial centres to work collaboratively to achieve this goal, for example, the Casablanca Finance City Authority aims to establish the city as Africa's leading hub for green finance including investments and banking but will do so working in partnership with 9 other centres including London, Luxembourg, Hong Kong and Shanghai.[19]

Traditional asset managers	Alternative investment managers
◆ Insurance funds ◆ Mutual funds ◆ Pension funds	◆ Hedge funds ◆ Private equity funds ◆ Exchange Traded Funds (ETFs) ◆ Sovereign Wealth Funds

18 PwC Asset & Wealth Management Revolution: Embracing Exponential Change, 2017
19 Casablanca statement of financial centres for sustainability, 2017
20 PwC Asset & Wealth Management Revolution: Embracing Exponential Change, 2017

Growth in asset management 2004-2020 (US$ trillions)[20]

Clients	2004	2007	2012	2015	2020
Pension funds	21.3	29.4	33.9	38.2	55.8
Insurance companies	17.7	21.2	24.1	27.1	38.8
Sovereign wealth funds	1.9	3.3	5.3	6.7	10.0
HNWI	37.9	50.1	52.4	57.8	83.5
Mass affluent	42.1	55.8	59.5	62.5	96.3
Total client assets	120.9	159.8	175.2	202.3	284.4
Global AuM	37.3	59.4	63.9	78.7	112.0
Penetration rate	30.9%	37.2%	36.5%	38.9%	39.4%

The growth in assets means there is major untapped potential for diverting these assets towards sustainable investing. Public policy frameworks help markets to realise this potential, for example, by better aligning investment and solvency regulations, pensions legislation and taxation. Specifically, barriers to pension fund involvement in green investments exist in a variety of regulatory and legislative forms such as asset limits and restrictions on illiquid or non-listed investments as well as solvency and accounting rules directing funds into government bonds.

The untapped potential also reflects the continued lack of appropriate investment vehicles, market liquidity and issues of scale. Part of the problem is the potential mismatch between the long-term investment needs of investors such as pension funds and the risk profile of green projects. Green projects, particularly sustainable energy sources and clean technology, include multiple technologies, at different stages of maturity, and require different types of financing vehicle. Most pension funds are more interested in lower risk investments which provide a steady, inflation-adjusted income stream. Against this backdrop, there is nonetheless increasing activity among institutional investors with green bonds gaining traction as an asset class, particularly over the last three to four years.

Another further potential reason for low levels of investor engagement is the lack of investor knowledge, track record and expertise among pension funds about green investments and their associated risks. Building institutional investor capacity by facilitating investor roadshows and better training and education will naturally help to shift behaviours.

Promoting green retail investment markets

"This new generation of savers is especially well-placed to take the long view and realise the benefits of a retirement plan that is truly sustainable for them personally, but also for their fellow citizen and the planet"

Frank Field, chairman of the UK Parliamentary Work and Pensions Committee [21]

Much of the current efforts to promote sustainable finance have targeted wholesale markets. By contrast, retail investors constitute a major source of untapped potential. With $180 trillion of assets expected to find their way into High Net Worth Individuals and mass affluent investments by 2020[22], developing the potential to channel those funds to towards green investment products represents a sizeable opportunity. Yet, currently much of the world's capital is sitting in asset classes which earn low or negative returns. For example, over one-third of household financial assets in OECD countries are held in currency and deposits rising to 39% in Germany, 41% in Spain, 44% in Korea and to over 51% in Japan[23], all countries which currently offer low or negative interest rates.[24] Realising the potential to mobilise household wealth will require significant changes to household behaviour, with greater levels of household wealth diverted towards capital markets, but also operational changes to retail investment markets are important:

- Products designed with sustainability as a core investment objective;
- Clear labelling and definitions of the different kinds of sustainability;
- Training for intermediaries such as investment brokers and advisors; and,
- Changes to the regulatory suitability requirements on recommendations from advisors

A shift from institutional money managers to self-directed retail funds is illustrated by the PwC report Asset Management 2020. The report highlights that one of the key areas of asset growth in the global fund management market will be the government-incentivised shift towards individual retirement plans, for example with the development of tax incentivised defined contribution personal pension plans.[25] The success of such policies have been most notable in the US. By March 2018 $5.3 trillion had been amassed in the US 401(k) market accounting for 19% of the $28 trillion in US pension assets.[26] These assets have been amassed in part thanks to the tax benefits gained by retail investors when saving money in personal defined contribution plans. Other countries such as Australia and the UK have followed suit with similar defined contribution savings arrangements. A report by EY also highlights how DC scheme assets are growing rapidly and beginning to offer more flexibility for members to select ESG themed funds.[27]

This process of directing more retail funds towards ESG investing could benefit by employing 'nudge' economics, applying different default setting to help frame investor choices in more sustainable ways. In 2012, the UK introduced automatic enrolment into workplace defined contribution pension plans. The plan has already increased the number of people saving for retirement by 9 million workers who are expected to save an additional £19.7bn annually by 2019-20.[28] Yet a recent study of the market place revealed that only one provider of automatic enrolled pension funds has a measurable and time bound target to reduce the portfolio's exposure to climate risks. This has led some to conclude that there is a mismatch between the attitudes of retail investors and the professionals who manage their money.[29]

21 Frank Field MP commenting in response to Share Action report, 8 June 2018
22 PwC Asset Management 2020, A Brave New World, 2018
23 OECD Household financial assets data, 2016
24 Trading Economics, November 2018
25 PwC Asset Management 2020, A Brave New World, 2018
26 Investment Company Institute and Federal Reserve data, Q1 2018
27 Investing in a sustainable tomorrow, ESG integration in European Pensions, EY, 2017
28 'UK Auto-enrolment: Good start, must do better' – IPE Magazine, February 2018

Case study – Sweden – reshaping investor demand from the top-down

Employing the tactics of behavioral economics, Sweden is planning to undertake a 'legislative overhaul' of its national pension system which currently manages $130bn in assets. The rationale for this policy shift is set out by Per Bolund, Swedish Minister for Financial Markets, who in 2017 commented "the sustainability train has left the station. Get on board or get left behind" Sweden's new legislative framework will provide a green 'nudge' to help steer those assets in a sustainable direction helping Sweden meet its international commitments such as the Sustainable Development Goals and the Paris Agreement. In future, funds will not be available via the national pension system unless they can demonstrate how sustainability is integrated into the fund's investment strategy.[30] This creates a sustainable-only investment landscape from which Swedish retail investors make their fund selections.

Efforts to reframe how investment professionals manage retail investment money has come into the scope of the EU's review of the Markets in Financial Instruments Directive or MiFID 2. On 8 March 2018, the Commission published its Action Plan 'Financing Sustainable Growth', setting out an ambitious and comprehensive strategy on sustainable finance. The Action Plan recommends that firms providing investment advice and portfolio management under MiFID rules should amend their suitability assessment to help identify the client's Environmental, Social and Governance (ESG) preferences with each client's individual ESG preferences considered on a case-by-case basis. These amendments could be in place within 18 months. [31]

EU Sustainable Finance Action Plan

- Establish a common language or taxonomy for sustainable finance to define what is sustainable and identify areas where sustainable investment can make the biggest impact
- Create EU labels for green financial products on the basis of a new EU classification system allowing investors to easily identify investments that comply with green or low-carbon criteria
- Clarifying the duty of asset managers and institutional investors to take sustainability into account in the investment process and enhance disclosure requirements
- Requiring insurance and investment firms to advise clients on the basis of their preferences on sustainability
- Explore the feasibility of recalibrating capital requirements for banks (the so-called green supporting factor) for sustainable investments while ensuring financial stability
- Revise the guidelines on non-financial information to align them with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

29 Share Action report, 8 June 2018
30 Speech given by Per Bolund, Swedish Minister for Financial Markets, 25 September 2017
31 EU action plan on financing sustainable growth, published 8 March 2018

Public policy responses to promoting green financial centres

Faced with the key challenges above, the UN Environment Programme (UNEP) has undertaken a four-year inquiry on the design of a sustainable financial system focussing on the current 'rules of the game' and how those rules impact on market behaviour. By identifying misalignments in the current market architecture, a process of public policy reform can provide the necessary catalyst for more rapid market adoption. Indeed, much has already changed in a relatively short period of time. UNEP signalled there was already a 'quiet revolution' underway:

> "at the outset of the Inquiry (in 2015), it would have been a challenge to find a small handful of financial regulators or central bank governors willing to go on record that "sustainable development was part of their business". Today, four years later, it would be hard to find one who would go on record to say that their work had nothing to do with sustainable development"[32]

G20 Leaders have committed to align the G20's work with the 2030 Agenda, as part of its mission to advance "strong, balanced, sustainable and inclusive economic growth." In 2018, G20 themes include the future of work, the energy transition, climate and sustainability, financial inclusion, sustainable finance and the digital economy, which are all central elements of the 2030 Agenda. Critically, there has been the widespread recognition that the large-scale deployment of private capital was essential in realising these global ambitions. The Argentinian presidency of the G20 in 2018 created the Green Finance Study Group (GFSG) and the Sustainable Finance Study Group, co-chaired by the UK and China, two nations which have already established a position of leadership in promoting green finance.

UNEP acknowledge that converting political goodwill into practical behaviour change within financial markets remains a work in progress. Short-termism in capital markets is still prevalent. UNEP notes that little has been done to mitigate the focus on short-term returns at the cost of long-term value creation which in turn leads to a marginalisation of the social and environmental effects of those investments which only become apparent over the longer term.[33] Among the numerous UNEP recommendations are the need to develop innovative financing mechanisms which blend public and private finance, addressing the shortages in public finance (it was noted that the regional development banks are already utilising their balance sheets to leverage private capital). UNEP also consider the need to offer greater subsidies and incentives for private lending, investment and insurance; and new measures to re-risk investments. Attempts to harness the power of public policy fall into four broad categories.

32 Making Waves: Aligning the Financial System with Sustainable Development, UNEP, April 2018
33 UNEP, 2018, p. 13

Policy Goal	Requirement / objective
Price externalities	◆ Create market price mechanisms which reflect the true long-term cost of any market activity. This will play a crucial role in redirecting capital flows towards more sustainable investments.
Promoting innovation	◆ Provide a stimulus to new or embryonic markets using common standards, capital allowances and other subsidies.
Ensuring financial stability	◆ Align existing financial stability rules to reflect the true long-term risks associated with climate change. ◆ Greater understanding of how the environment will impact on the stability of the financial system. ◆ Develop common supervisory and macroprudential practices to address climate-related and environmental risks.
Ensuring policy cohesion	◆ Ensure financial systems are consistent with sustainability objectives. ◆ Align capital requirements for banks and insurers with ESG.

In addition to this initiative, the European Banking Authority (EBA) has identified four areas of focus for prudential supervisors. The first focuses on the need to integrate sustainability into strategy and governance of large banks and other financial institutions. As part of this process, financial firms must also align disclosure and sustainability into their broader reporting requirements aligned to Paris Agreement (e.g. Mandatory carbon disclosure requirements). Another issue highlighted by the EBA is the need to improve risk management and assessment including through bank stress testing. The EBA recognizes the difficulties in undertaking this work given the current lack of market data on which to conduct the risk assessments. A further, fundamental issue, yet to be properly addressed, is the prudential treatment of environmental exposures, with the need to fully integrate sustainability into solvency and capital assessments (e.g. Climate risk stress testing). As part of its work the NGSF is considering the possibility of Pillar 1 or Pillar 2 adjustments to capital charges for “green” or “brown” assets. This work is also being undertaken by the EU.

Part 2: Green finance in practice

Implementing the reforms outlined in Part 1 should help to create the conditions for green financial centres to evolve and build scale. While policymakers will drive that process, the responsibly for shaping and embedding those policies into market practice rests with financial institutions and investors.

Market practitioners contribute by developing and promoting market best practice. As such, the greening of financial centres is already well under way. However, green finance markets have developed unevenly reflecting the differing levels of investor engagement.

Market	Overview
Bonds	Strong investor engagement matched by a market commitment to develop voluntary approaches to improve labelling, certification and external review. The development of a Climate Bonds Taxonomy and reporting requirements under the Climate Bonds Initiative helped green bond volumes grow from $160bn in 2017 to an estimated market value of $210bn in 2018 representing a 30% growth.[34]
Securitization	The Green Asset-Backed Security (ABS) market was launched in 2013 with SolarCity (now Tesla Energy) issuing the first ABS in November of that year. The market now contains a growing range of products including Solar ABS, green MBS, green CMBS, property assessed clean energy or PACE ABS, and auto ABS. June 2018 witnessed the largest Solar ABS issued to date.
Mortgages	Fannie Mae is now the world's biggest issuer of Mortgage-Backed Securities (MBS) but the green mortgage market remains small in contrast to the total volume of mortgage lending: just 15% of all syndicated loans in the US.[35] The European Mortgage Association has now created an Energy efficient Mortgages Action Plan (EeMAP) in conjunction with 37 European banks to analyze the whole value chain step-by-step in terms of origination, risk management, marketing, funding and IT. This think tank will aim to identify and address the specific barriers to developing the green mortgage market.[36]
Equities	The concept of ESG and SRI labelled investments have become widely accepted within both institutional and retail markets. The UN PRI Sustainable Stock Exchanges initiative looks at how equity markets, working with investors, regulators and companies can enhance corporate transparency and improve the overall performance of equity markets in promoting ESG issues. However, SRI-Labelled investments still account for only a small share of global AuM.
GreenTech	Further efforts are required to promote nascent market segments such as Greentech Venture Capital. Greentech start-up companies play a vital role in developing the technologies which underpin the transition to a low- or zero-carbon economy but financial markets have struggled to channel capital investment. The value of VC investment in cleantech companies has stalled in recent years and currently accounts for just 7 percent of the total global VC market.[37]

34 Climate Bond Initiative website as of November 2018
35 White & Case, European Leveraged Finance Alert Series, Issue 3, 10 April 2018
36 European Mortgage Federation and European Covered Bond Council, Energy efficient Mortgages Action Plan, October 2017
37 Brookings Institute analysis, published 2017

The examples above point to areas where markets have begun to evolve. However, major market gaps persist. A recent assessment by the World Economic Forum (WEF) identified just $1 in every $4 of professionally managed money was reviewed on environmental, social and governance (ESG) grounds and that less than 1% of global investments sought to achieve measurable societal outcome.[38] The table below highlights specific areas where market interest has remained low including loans, insurance and carbon markets. In addition, WEF identified general market gaps which present implications for asset owners, asset managers and development finance institutions (DFIs).

6 Market Gaps[39]

1	2	3
Need for stronger leadership and commitment	Better data and clearer standards to drive SDG investments	Aligned capabilities to effectively bridge the impact finance ecosystem with mainstream finance
4	**5**	**6**
Need for structural alignment around scale, time horizon and costs to promote uptake and scaling up	New models of intermediation to bridge impact/development finance into the capital markets	Need for more catalytic support for the development and scale of products and investments

Global Green Finance Index

In among this unevenly developed market, there is a need to identify best practice. Defining what good practice looks like is one of the motives behind the development of the Global Green Finance Index (GGFI), launched in March 2018.

The Index makes use of the G20 definition of green finance as the "financing of investments that provide environmental benefits in the broader context of environmentally sustainable development" as well as the OECD which considers the term to be "stand-alone, a sub-set of a broader investment theme or closely related to other investment approaches such as SRI (socially responsible investing), ESG (environmental, social and governance investing), sustainable, long-term investing or similar concepts" Using this broad definition the GGFI attempts to create a framework setting out the key characteristics for sustainable financial markets, placing the emphasis on the need to create a much more diverse and liquid market place."[40]

The GGFI shows how innovation and leadership is being provided by both established and emerging markets. Currently, good practice is – as reflected in the TCFD and HSBC market data – concentrated in Europe. However, the GGFI also reveals a significant recognition of the work being undertaken to promote green finance in China with the country providing 3 financial centres in the global top 20.

38 WEF, 20 September 2018
39 WEF, The 6 market gaps the finance sector must address to help meet the SDGs, 20 September 2018
40 Global Green Financial Index report, March 2018

The report also highlights the specific financial markets and activities where investor engagement in green finance is particularly strong. Based on survey responses from market practitioners, engagement is greatest on:

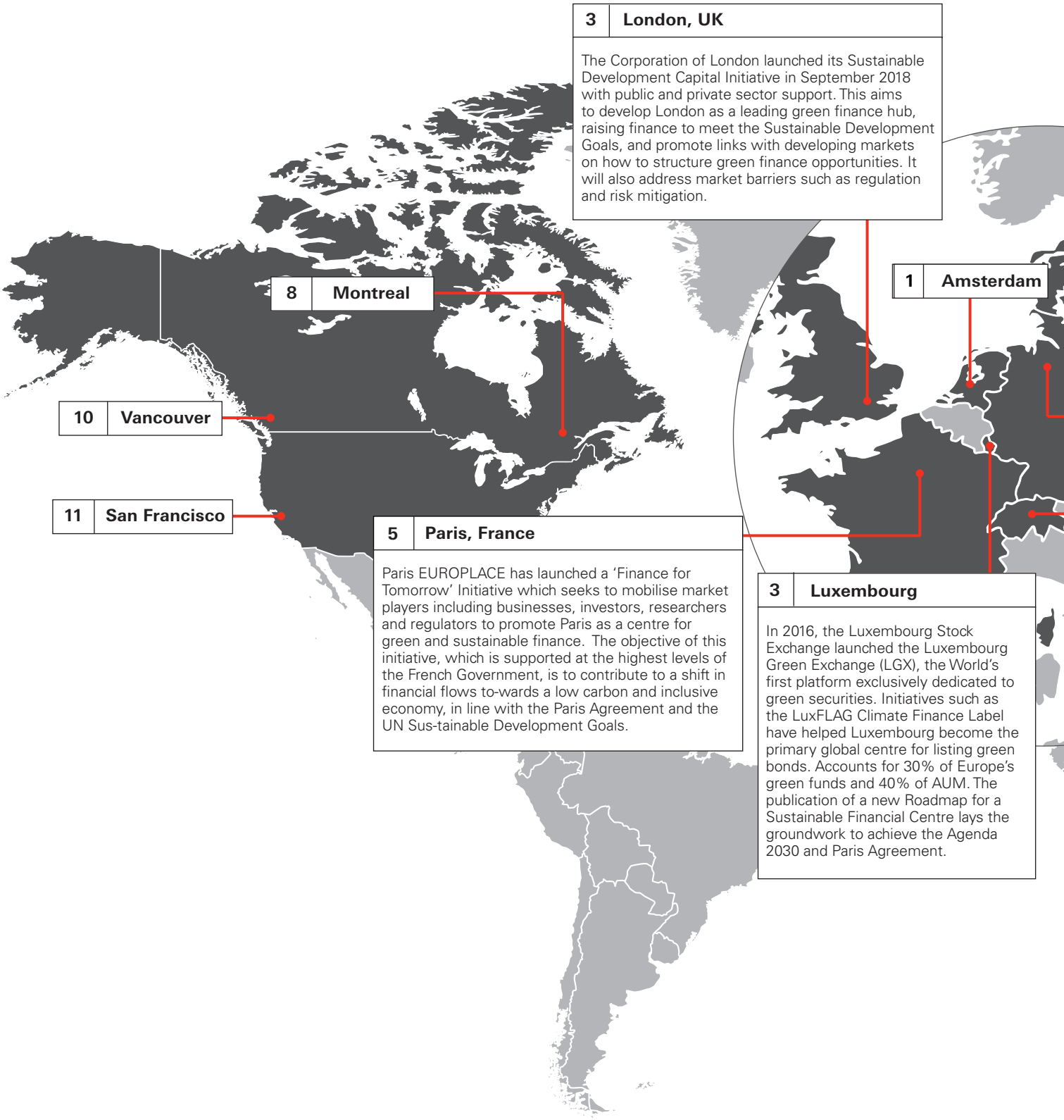
1.	Sustainable infrastructure finance	13 percent (of respondents)
2.	Green bonds	12 percent
3.	Renewable energy investment	11 percent
4.	ESG analytics	9 percent

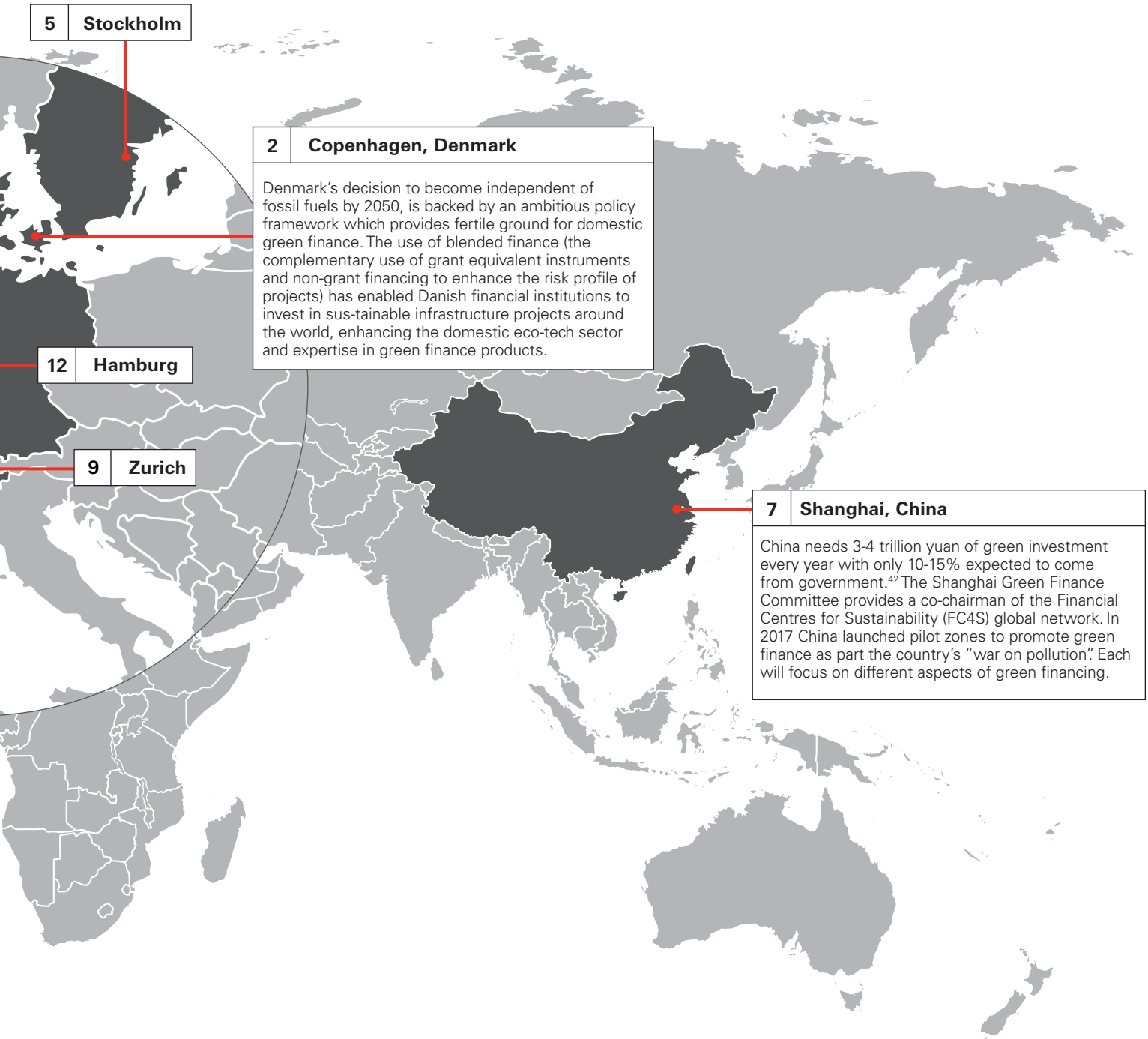
This correlates with current market activity; for example, green bonds have been around since 2007 and have become a well-established market. The GGFI reveals that other areas such as SRI investments, climate risk stress testing and carbon markets have so far generated much less interest. Green insurance products and green loans also enjoy much lower levels of investor interest. This lower degree of investor appetite is a major factor in explaining the slower progress in other areas of the financial market.

Areas of investor interest versus market impact[41]

41 Global Green Finance Index 2, October 2018

Top 12 Green Centres





42 Speech by Ma Jun, chief economist at the People's Bank of China, September 2016

Emerging markets – widening access to sustainable finance

It should come as no surprise to find that so many of the leading green financial centres are located in Europe. Financial markets there have simply been responding to the clear and well-established public policy direction towards sustainability both within national governments as well as at the EU level. As a result, many of the barriers to green finance discussed in this report, have been addressed to a much greater extent:

- Europe accounts for around 53 percent of global SRI assets compared with just 0.2 percent in Asia excluding Japan.
- European financial centres such as Amsterdam (#1), Copenhagen (#2) and Stockholm (#5) dominate the global green finance index.
- High levels of investor engagement mean that (as of 2016) as many as 82% of Dutch pension funds held ESG investments.[43]

The obstacles to developing green financial centres remain stronger in Emerging Markets where the tradition of developing environmental policies is less engrained. The UN 2030 Agenda calls for the adoption of investment promotion regimes for lesser developed countries to help build investor engagement within the emerging markets in Africa, Asia and Latin America. The nascent signs of a shift in behaviour in emerging markets is already being observed; the HSBC sustainable finance and ESG investing surveys in 2017 and 2018 highlight that investor demand was growing most rapidly in Asian markets. China has already established itself as a leader among Emerging Markets, but other countries are still playing catch up.

The UN is prioritising the development of green finance in Emerging Markets. A 2018 report by the Boston Consulting Group in revealed that the number of privately investible, largescale projects in developing countries with the potential to advance progress towards the SDGs has fallen since 2012 and been flat since 2015.[46] Yet, as the PwC data demonstrates, global capital markets are experiencing major growth in assets under management driven in large part by wealth accumulation in Emerging Markets. There is therefore a clear opportunity to mobilise this wealth locally and reinvest those funds back into meeting national and regional sustainable development priorities.

Secondly, there is broader evidence to suggest that market activity demonstrates a bias towards domestic investment markets.[47] This means that funds raised predominantly in Europe among European investors are largely invested there. This creates an additional impetus for Emerging Markets to better mobilise their own growing domestic investor base if they too want to tap into sustainable finance.

Engaging Emerging Market financial centres in this process will benefit from two key prerequisites. Firstly, working in collaboration with leading financial centres in Developed Markets will help with capacity building. Secondly, enabling the city governments to develop strong political leadership in developing climate policies and sustainable finance strategies will provide a significant spur to market activity.

Case study – China – emerging as a global leader in sustainable finance

China provides a positive example in which the political will to change course has been particularly strong. With the IMF[44] calculating that most of the fossil fuel public subsidy is due to undercharging for domestic environmental damage including local air pollution, they estimate that this cost is particularly high in China. A recognition of this high domestic cost helps to explain the strong political momentum which has built within China to place the country at the forefront of the global sustainability agenda –

Yi Gang, the Deputy Governor of the People's Bank of China, has spoken of China's challenges in addressing air, water and soil pollution, and the need to finance its ambition to develop an 'eco-civilization'. The Global Green Finance Index indicates that Shenzhen, Guangzhou, Beijing and Shanghai are already recognised among the world's leading green financial centres. This is reflected in China's growing market share in green bond issuance up from 8 percent in 2017 to 26 percent of monthly issuance in June 2018.[45]

43 Wagemans, van Kppen and Mol (2018)
44 IMF Survey, Counting the Cost of Energy Security, 17 July 2015
45 China's Green Finance Report, British Embassy, 2018
46 Boston Consulting Group, Narrowing the SDG Investment Gap, 12 February 2018
47 Bauer, Clark and Viehs (2013)

1. Building collaboration

The development of green finance in the Emerging Markets has demonstrated the willingness of financial markets to collaborate on building local capital market capacity. As mentioned above, the development of Casablanca as a green finance hub forms part of a ten-country network. The Casablanca Statement committed all signatories to:

- Launch an international network of financial centres for sustainability
- Share knowledge and build human capacity, including on measuring the financial centre contribution to climate action and sustainable development
- Cooperate on expanding the pipeline of green assets and products
- Work with policymakers at national, regional and city level to build positive conditions favouring green and sustainable finance

Case Study – GGFI #16 – Casablanca Network, Morocco

In September 2017 ten financial centres created the Casablanca Network led by the Casablanca Finance City Authority which aims to establish the city as the leading hub for green finance dedicated to Africa. Casablanca already has an excellent track record in financing renewables (assisted by the EBRD funded Morocco Sustainable Energy Financing Facility) and is likely to be a gateway centre for green bonds issuance across Africa.

2. Empowering cities

Developments in Emerging Markets have also demonstrated the power of cities to drive environmental change. The need to address the sustainability impact of climate change on our cities ensures that mayors and municipal governments will remain key actors in creating new environmental standards as well as becoming sizeable green investors. Green 'muni' bond issuers include the City of Johannesburg and Province of la Rioja (Argentina).

As part of the efforts to develop green financial markets, cities and regional governments provide an important stimulus playing a crucial role in creating sustainable policy frameworks. Cities not only develop local policy priorities and strategies across a wide range of markets including transport, energy and housing, they also direct large capital flows. The importance of cities is recognised within the UN Sustainable Development Goals which includes a focus on making cities and human settlements 'inclusive, safe, resilient and sustainable'.[48] This requires municipal leaders to develop strategies to invest in sustainable housing and transport systems, as well as improvements in local air quality and waste management. The role of city governments can also be seen in the transition from carbon-based combustion engines towards zero emission electric batteries.

Case study – GGFI #48 – Mexico City Green Corridor, Mexico

Mexico City issues some $200m in municipal bonds every year. In December 2016 it became the first city in Latin America to finalise a green bond worth $50m (1 billion pesos) to finance the Green Corridor, an ambitious plan to build a 23 km "green corridor" along the Eje 8 Sur Popocatepetl, one of Mexico City's largest arterial roads. In developing this bond, Mexico City worked with C40 Cities Finance Facility (CFF) to develop a sellable plan. Launched at the Paris COP21, the CFF assists cities to develop capacity to prepare urban climate change projects.

Case study – CCGI #40 – Cape Town Greencape, South Africa

South Africa ranks 13th out of 21 countries to use tax as an incentive to drive the green growth agenda (ahead of Australia, Singapore, and Finland) according to the KPMG Green Tax Index. A range of funding solutions is available to green technology manufacturers and service companies, as well as those who use or procure such goods and services. These cover development finance institutions (DFI), local public and private sector financiers and investors, and a considerable range of tax incentives. The Green Finance Desk at Greencape acts as a facilitator in the financing of green projects and green business and acts as a gateway to a network of financial institutions (private and public) with green finance interests.

48 Goal 11, UN Sustainable Development Goals

Conclusion

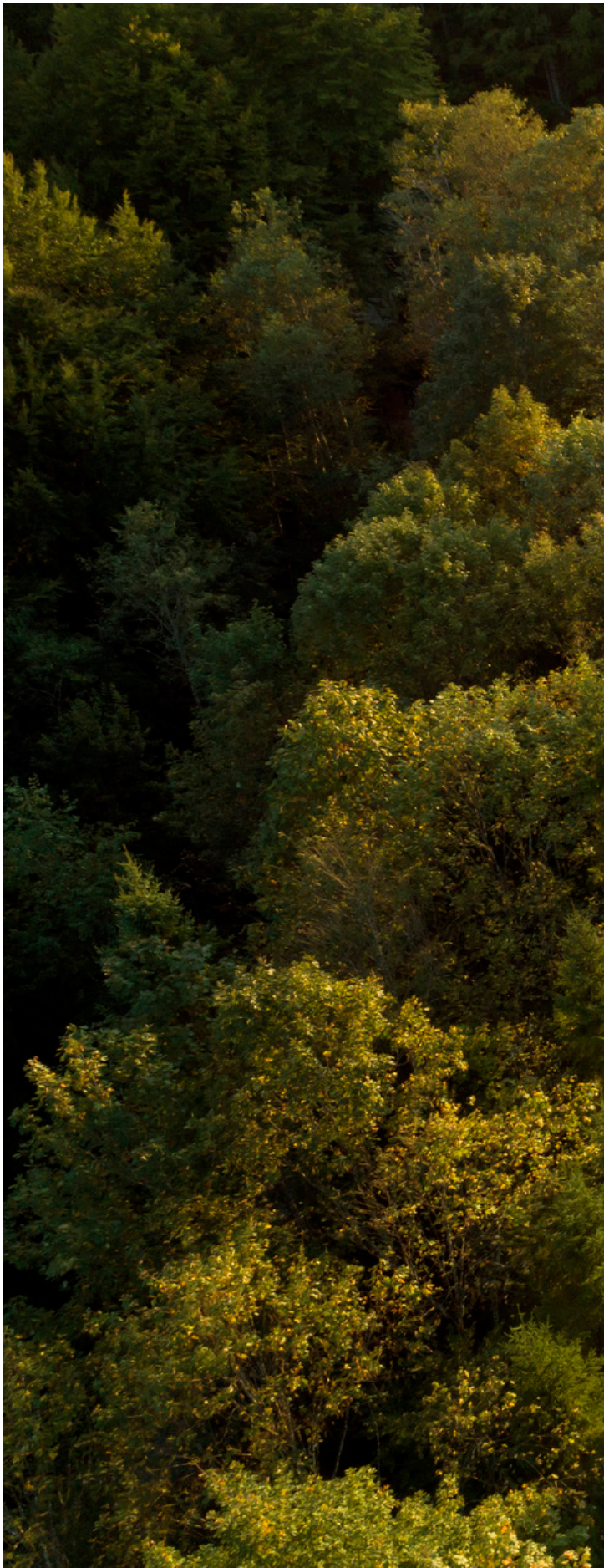
Mobilising finance is critical to address climate change. As green finance markets develop the sovereign debt market in particular is an important source of market liquidity. However, one of the key messages contained in this report is that governments alone cannot hope to fulfil the world's green finance requirements. These can only be met through public and private sector collaboration.

Across the public sector, national, regional and local governments have a central role to play in helping to develop the necessary market framework to incentivize a sustainable finance via regu-lation, legislation and taxation. Yet, there are major perverse incentives linked to the taxation and capital treatment of green versus brown investments. For example, the IMF highlight fossil fuel subsidies worth over $5 trillion (equal to 6% of global GDP).

For the private sector, accelerating the development of green financial centres is an essential ingredient for channeling capital for low-carbon transition. Global initiatives to engage private investors, financial institutions and corporates have rightly placed financial centres in the foreground. The International Network of Financial Centres for Sustainability (FC4S) and the Network for Greening the Financial System (NGFS) demonstrate not only a clear commitment to increasing collaboration between the world's leading and emerging financial centres, but they also showcase how financial centres are active in helping identify and address the key regulatory and market barriers for mobilising private finance.

Work is in progress to overcome barriers, with the Task Force on Climate-related financial disclosure a key initiative that pushes for transparency on how companies are assessing climate factors. There is still more work to do however, as at September 2018, just 513 companies had signed up to that initiative of which over half (55%) were in the financial sector and almost half (49%) were in Europe. Improving awareness of, and active engagement in, efforts to improve financial disclosures – through voluntary, and if necessary mandatory approaches – remains a key priority.

To mitigate climate change on a meaningful scale as well as address how warmer temperatures might play out, finance is crucial. Much progress has been made on using green finance to shine a light on the areas that support low-carbon transition. This report shows that policymakers can help speed up capital deployment by applying a wide range of policy incentives to enable green financial centre growth.



About the Centre of Sustainable Finance

"Each and every one of us has a stake in developing a sustainable economic system. It is the combined responsibility of all players in society to respond to climate change, rapid technological innovation and continuing globalisation to secure a prosperous future. Yet addressing these changing forces is by no means straightforward. More work is needed to provide the financial system with the right toolkit to solve sustainability challenges.

Working with internal and external partners, this central think tank is uniquely positioned to lead and shape the debate. We will promote the sustainable finance agenda using our global network which covers the world's largest and fastest growing trade corridors and economic zones. We can provide the connections needed to foster sustainable growth across borders and geographies. We aim to mobilise the capital flows needed to address the world's major sustainability challenges."

Zoë Knight, Group Head,
HSBC Centre of Sustainable Finance

"For more than a decade, HSBC has been at the forefront of the sustainable finance market. In November 2017, HSBC made five sustainable finance pledges. We committed to provide USD100 billion of sustainable financing and investment by 2025, source 100 per cent of electricity from renewable sources by 2030, reduce our exposure to thermal coal and actively manage the transition path for other high carbon sectors, adopt the recommendations of the task force on climate related financial disclosures to improve transparency, as well as leading and shaping the debate around sustainable finance and investment. Taken together, these commitments reflect the scale of the challenge of delivering the Paris Agreement and UN Sustainable Development Goals. They also demonstrate the heights of our ambition to be a leading global partner to the public and private sectors in the transition to a low-carbon economy."

Daniel Klier, Global Head of Sustainable Finance

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