The Paris Green and Sustainable Finance Initiative
Commitment, expertise, and acceleration of international action! That is how the Paris financial marketplace wants to distinguish itself in the mobilisation for the fight against climate change and especially the promotion of a low-carbon economy.

This commitment to sustainable finance is one of Paris EUROPLACE’s long-term priority actions: we have always acted collectively to promote finance dedicated to the needs of companies and States. With regard to green finance, organising the first International Climate Finance Day on 22 May 2015, in partnership with Caisse des dépôts and the European Investment Bank, was a major step forward that has been recognised by NGOs; among others. This event marked a new boost to the growing awareness of the impact of climate change on our financial and economic models, above all in terms of risks for the sector. This day was also the opportunity for major announcements, especially from investors, with initial commitments to stop funding for coal, assess the carbon footprint of asset portfolios, and launch new renewable energy investment funds.

We want this to be a lasting mobilisation of all the players of the Paris financial marketplace. This is the essence of the initiative that we launched last May, one year after Climate Finance Day, with the “Paris Green and Sustainable Finance Initiative”, of which this report constitutes a first step. It sets out the paths that the financial marketplace’s players want to develop to make Paris a major player in sustainable development financing.

Expertise, because in international competition we enjoy a significant lead in research, a strong commitment from various branches of the financial industry, and significant support from the public authorities: in short, we have the strength of a true ecosystem. I will stress a single example – and it is also the industrialist that I am who is proud of it – the Green Bonds market, on which France now holds a leading position.

Lastly, contribution to international action. Paris EUROPLACE drives recommendations and actively participates in European efforts, particularly on sustainable development, as well as in the B20 - G20 efforts to finance growth and develop green finance, including in the area of adapting international financial regulations.

This report is a further encouragement to continue and develop our action.
Financing sustainable development is a huge, exciting and complex challenge. This challenge is characterised above all by its urgency, embodied by the adoption of the Paris Agreement and the UN’s Sustainable Development Goals in 2015.

The launch of the Green and Sustainable Finance Initiative by the Paris financial marketplace aims to respond to this need for rapid, massive mobilisation of the financial sector, in line with the commitments and actions initiated by the public authorities.

The title “Green and Sustainable” illustrates that, in a situation where the urgency of climate issues has led green finance to mature more quickly, this field must pave the way for sustainable development financing in all its components. With this in mind, the first step was to identify whether the Paris financial marketplace is well positioned to meet these challenges. The answer is clearly yes, for several reasons.

First of all, because Paris has a robust, comprehensive financial system. Also because, in the context of structuring a complex market, France has managed to consider these issues of sustainable development financing far in advance, with a long-established, virtuous public/private dialogue that is ultimately rather unique in the world. This has resulted in innovative regulations, greater appropriation of topics by the private sector than elsewhere, and the development of sustainable finance tools and expertise recognised for their quality. Other strengths like research, training, and the presence of international organisations can help French players mobilise even further.

The challenge for the Paris financial marketplace now is to join forces and give itself the means to strengthen synergies and collaborations in order to develop its exceptional ecosystem to serve sustainable development financing. This report, drawn from the vision of a large number of players of the financial marketplace, identifies three areas of work to accelerate this collaborative dynamic.

First of all, we must strengthen our capacity for innovation and the relationship between research and expertise, to develop financing with measurable environmental and social added value.

We also propose innovative modes of collaboration to continue working with public authorities as well as with civil society to construct a market framework that will help to lift barriers and reinforce the integrity of our approach.

Lastly, we intend to step up our contribution to international work in this area, both at the European level and at the B20/G20 level in particular, as part of the discussions on financing growth. We also must highlight and promote the ecosystem and the Paris financial marketplace’s approach for quality sustainable finance, from a European and international perspective.

The current window of opportunity is exceptional for advancing the field of finance to serve the economic, social, and environmental needs of our society: let’s not waste this opportunity.
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PROPOSALS

References
Appendices
Launched in May 2016 within Paris EUROPLACE, the “Paris Green and Sustainable Finance Initiative” was created on the basis of a double observation:

- on the one hand, the Paris financial marketplace is historically well positioned in terms of socially responsible investment (SRI), and many French companies are leaders in corporate social responsibility (CSR), which is a particularly favourable starting point for the development of sustainable finance. Mobilisation for sustainable finance, and especially green finance, has accelerated since 2015, with new commitments made by French players against the backdrop of the COP21 hosted in France, particularly during the International Climate Finance Day organised in Paris in May 2015;

- on the other hand, with the acceleration of initiatives and mobilisation at the international level, the coordination efforts must be stepped up and the Paris financial marketplace’s action on the topic must become more visible.

**METHODOLOGY**

One of the first priorities identified by the members of the Committee was the need to take stock of the Paris financial marketplace’s strengths regarding green finance and the recommended actions to accelerate the mobilisation already undertaken. The steering of this initial work was entrusted to Philippe Zaouati, Managing Director of Mirova.

More than forty interviews were organised over the summer of 2016 with a sample that is not exhaustive but is representative of the marketplace’s various players in parallel with a review of the available analyses and literature. The purpose of this report is to summarise the key lessons from this work.

**CLIMATE FINANCE, GREEN FINANCE, SUSTAINABLE FINANCE**

Given that green finance is a relatively new concept, its players and tools are still being structured. From a conceptual point of view, different definitions have been developed at the national and international level in connection with the emergence of dedicated financial instruments like green bonds. The concept of green finance thus relates to other more or less broad approaches, with which it is often associated.

Green finance thus includes, but is not limited to, “carbon finance” and “climate finance”, generally associated with the United Nations Framework Convention on Climate Change (UNFCCC), the reduction of greenhouse gases, and adaptation to climate change.

The synthesis report of the Green Finance Study Group (GFSG) of the G20 of the G20 thus establishes that green finance can be understood as “financing of investments that provide environmental benefits in the broader context of environmentally sustainable development. These environmental benefits include, for examples, reduction in air, water and land pollution, reductions in GHG emissions, improved energy efficiency while utilizing natural resources, as well as mitigation of and adaptation to climate change and their co-benefits. Green finance also involves efforts to internalize environmental externalities and adjust risk perceptions in order to boost environmental friendly investments and reduce environmentally harmful ones. Green finance covers a wide range of financial institutions and asset classes, and includes both public and private finance. Green finance involves the effective management of environmental risks across the financial system.”

However, green finance in the strict sense covers a more limited scope than “sustainable finance”, which also includes financing investments that provide social and societal benefits, such as those targeted by the UN’s Sustainable Development Goals as part of the 2030 agenda.

Sustainable finance, which aims to finance assets that have a positive impact in terms of sustainable development, should not be confused with the simple integration of best environmental, social, and governance (ESG) practices into investments.

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1. See detailed list of interviews in the appendix
2. UNEP Inquiry, Definitions and concepts background note, September 2016
Beyond the more or less exhaustive scope of these various notions of climate finance, green finance, and sustainable finance, what they have in common is actually the financing of investments with environmental or social benefits. This means developing an investment approach aimed at obtaining a positive sustainable impact. The environmental or social impact objective provides insight for choosing to which asset capital will be allocated, in addition to evaluating the best ESG practices associated with that asset.

**GREEN FINANCE AND SUSTAINABLE FINANCE FOR THE PARIS FINANCIAL MARKETPLACE**

The question of the exact scope of the Paris EUROPLACE Committee’s initiative – green finance or sustainable finance – was asked repeatedly during the interviews, in a French context characterised by a strong historical development of socially responsible investment (SRI).

As a comparison, the City of London’s Green Finance Initiative and the Luxembourg Green Exchange (LGX) of the Luxembourg marketplace focus their initiatives only on environmental subjects.

As a conclusion of the discussions carried out, the proposal of this report is to move the approach initiated by Paris EUROPLACE forward by launching the Paris Green and Sustainable Finance Initiative. Developing this type of approach would make it possible to synthesise various areas of consensus raised during the interviews:

- the approach must promote the Paris financial marketplace’s action in sustainable development financing in general;
- it must highlight all of the financial marketplace’s players and their expertise, while supporting an innovative approach;
- the ESG analysis of processes is an essential aspect of the evaluation of green and sustainable assets;
- the initiatives, products, tools, and methodologies of green finance, although still insufficiently developed, are currently the most advanced;
- focusing the approach on the environmental aspect at first would make it possible to bring new methodologies to maturity, which will pave the way for integration of the social aspect;
- the Paris financial marketplace must also encourage the establishment of additional approaches to further integrate the social aspect and more globally the implementation of the SDGs.

**ANALYSIS OF THE POSITIONING OF THE PARIS FINANCIAL MARKETPLACE IN A GLOBAL CONTEXT**

The series of interviews provided insight to analyse the positioning and mobilisation of the Paris financial marketplace to become the benchmark in financing sustainable development, primarily for green finance. The analysis presented in this report is structured to evaluate:

- the general and international context of the Paris financial marketplace’s actions with a first part (Part I) describing the entire current dynamic related to the development of green finance at the international level and the resulting opportunities, but also the market risks associated with the development of green finance and the challenges to be anticipated (Part II);
- the Paris financial marketplace’s strengths to meet these new financing needs (Part III) and the identified working axes (Part IV) to fully develop these advantages, seize opportunities, and anticipate risks.

All of this work made it possible to come up with proposals, formulated on the basis of a double objective:

- strengthening the mobilisation of the Paris financial marketplace to massively contribute to sustainable development financing;
- being sufficiently operational for quick implementation and meeting the need for strong international mobilisation of the financial sector in the very short term.

The recommendations made following these interviews were structured into three areas grouping together 15 proposals:

- Allowing the Paris financial marketplace to stand out through the quality of its products and its expertise in green and sustainable finance;
- Strengthening synergies and public/private joint construction, sources of the French green and sustainable finance ecosystem’s vitality;
- Organising the European and international standing of Paris as a green and sustainable financial marketplace.
FINDINGS

PART I.
MASSIVE, NEW FINANCING NEEDS REQUIRING MOBILISATION OF THE PRIVATE SECTOR

The concept of green finance emerged simultaneously with the inclusion of sustainable development issues on the international policy agenda and the agenda of many States. As a result of human pressure on Earth’s resources, natural capital has declined in 116 out of 140 countries. If the current trends continue, they could lead to a further erosion of more than 10% by 2030, causing substantial harm to humans, threatening development models, and irreversibly damaging natural systems essential to life. Approximately four million people die prematurely every year due to air pollution exposure, and natural disasters displace tens of millions of people. Climate change, pollution, and the depletion of natural resources impose significant constraints and high costs on the economy. In such an environment, a massive reallocation of capital to finance a sustainable economy is necessary, with required investments that need to move from “billions to trillions” according to international organisations.

5 WHO (2014); Burden of disease from the joint effects of household and ambient air pollution for 2012; WHO press release, March 2014.
The initial impact of the transcription of environmental and sustainability issues onto the economy was the mobilisation of insurers on climate risks. Their translation into international and national political and economic objectives established the link between those issues and the massive investment needs on the global scale.

2015 was a particularly important step in this regard, with the acceleration of mobilisation around the climate and the expansion of the international financial community’s mobilisation in support of sustainable development, marked by:

- the success of the COP21, which made it possible, with the signing of the Paris Agreement, to commit States to new objectives to limit greenhouse gas emissions in order to keep the rise in temperatures below two degrees;
- the adoption by the United Nations of the Sustainable Development Goals (SDG), which established a framework for global public engagement in environmental and social matters;
- the launch in 2016 of a Green Finance Study Group (GFSG) as part of the G20 co-chaired by China and the United Kingdom. Its mandate is to “identify institutional and market barriers to green finance, and based on country experiences, develop options on how to enhance the ability of the financial system to mobilize private capital for green investment”;
- the establishment of the Task Force on Climate-related Financial Disclosures (TCFD) by the Financial Stability Board (FSB) with the objective of setting guidelines for the disclosure of carbon information.

Although there is no single estimate of the global financing needs for green and sustainable growth, various leading international institutions, like the International Energy Agency (IEA), the Organisation for Economic Co-operation and Development (OECD), and the World Economic Forum (WEF), delivered initial estimates and demonstrated the need to deploy tens of thousands of billions of dollars in the coming decades to finance green projects, particularly in the fields of construction, energy, infrastructure, water, and waste. For the IEA, a total of no less than 45 trillion dollars in investments would be necessary to achieve the Paris Agreement’s goal of limiting global warming to two degrees. The UNCTAD (United Nation Conference on Trade and Development) estimates the investments required to implement the SDGs and the 2030 Agenda at between 5 and 7 trillion dollars per year.

The need to mobilise the financial system as a whole

With the international goals in place, the horizon has been clarified but without any precise definition of the exact contributions of each of the players of the financial system. However, there is a general consensus at the international level that public financing has an essential role of driving and encouraging the private sector, which must ensure a major share in volume of the investments necessary to meet the identified needs. China estimates its green project financing requirements at approximately 500 billion euros per year and indicates that less than 15% of this total will come from public or government sources, with the rest coming from private capital. In particular, market players can be encouraged by providing with the means for incorporating environmental and social externalities into their investment reasoning (on this point, see also Part II), by coordinating public and private financial players and setting up mechanisms for joint risk-taking between public and private financing.

The need to spur the private sector’s commitment was fully integrated into the international agenda, and the G20 GFSG emphasised the examination of flows of green financing from private sources, to which its mandate is limited, incorporating into its conclusions the assessment of the current situation, the challenges, and the political options to make the financial system “go green” through the banking system, the bond market, and institutional investors. The GFSG’s synthesis report, welcomed by the G20, led international leaders to declare that green finance needs to “scale up” and that additional
efforts could be made so that clearer political signals are put in place to move in that direction. The governor of the Bank of England, Mark Carney, declared “[The Paris Agreement] clarifies actual and stretch objectives. It provides detailed climate policies and creates the prospect of a future ratcheting up of efforts. In doing so, it greatly increases transition risks as well as opportunities. By bringing forward the horizon, it puts a premium on the ability of private markets to adjust. [...] For this to happen, however, green finance cannot conceivably remain a niche interest over the medium term.”

More recently, at the European level and as part of the approach of the Capital Markets Union (CMU), the European Commission made a commitment to develop a complete sustainable finance strategy in order to support green investments and to ensure that the financial system can finance growth in a sustainable manner over the long term.

2

A PROMISING INTERNATIONAL MARKET DYNAMIC

THE GROWING COMMITMENT OF THE FINANCIAL SECTOR

The market as a whole has begun to respond to these new needs, in a context after the financial and economic crisis of 2008 marked by general uncertainty about guidelines for the global financial system. Various initiatives have been carried out with or by market players, resulting in growing mobilisation in support of green and sustainable finance:

► The United Nations, in particular the United Nations Environment Programme (UNEP), has launched several approaches with market players, in particular:

► UNEP Inquiry, whose advisory board includes various personalities from the financial sector, has launched an approach to define the “financial system we need” to align global financial systems with the issues of sustainable development;

► UNEP FI PSI (Principles for Sustainable Insurance) has launched the preparation of a platform, “Insurance industry commitments to build disaster resilience and promote sustainable development”, to encourage insurers around the world to publicise their climate commitments;

► Organised by the UNCTAD, the UNEP FI, the Global Compact, and the PRI, the Sustainable Stock Exchange Initiative (SSE) gathered together Asian and African stock exchanges from the start and now counts all of the world’s major stock exchanges among its signatories. Euronext joined the initiative during the COP21 in December 2015;

► Portfolio Decarbonization Coalition, at the initiative of the UNEP, the UNEP FI, and the Carbon Disclosure Project (CDP), aims to mobilise institutional investors to decarbonise their portfolios and fight against climate change, supported by representative investors; the Montreal Carbon Pledge, launched at the initiative of the PRI and the UNEP FI, which aims to publish the carbon footprint of managed portfolios. It has been signed by more than 120 investors, managers, and asset holders, such as insurers, who alone account for more than 10 trillion dollars;

► In order to increase the transparency of the commitments made by the financial sectors, the United Nations, at the initiative of the Principles for Responsible Investment (PRI) in particular, established the “Investor Platform for Climate Action” in connection with the Climate Finance Day organised in Paris in May 2015. It aims to identify the climate actions of more than 400 investors from 30 countries covering 25 billion dollars and provide progress reports to civil society and traders.

► In the same vein, associations created at the initiative of market players aim to advance certain asset classes. Founded in 2014 by and for investors, the Long-Term Infrastructure Investors Association (LTIIA) works with various stakeholders – from infrastructure investors to regulators as well as academics – to support the responsible, long-term deployment of capital in public infrastructure;

► Lastly, commitments that are still limited but growing are beginning to emerge in support of impact investments, seeking to reconcile environmental – and/ or social – benefits with the creation of financial value.

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14 UNEP Inquiry, The Financial system we need, aligning the financial system with sustainable development, October 2015.

15 unepfi.org/pdc/

16 www.ltiia.org/
The investment horizon is often fixed by the financing of the SDGs with, for example, the Catalytic Finance Initiative (CFI), a consortium of financial institutions and leading investors, involving 8 billion dollars in commitments supporting high-impact sustainable development projects or, at an individual level, with recent stands taken by certain Anglo-American leaders and investors.

**FROM THE INTEGRATION OF ENVIRONMENTAL AND SOCIAL FACTORS TO THE STRUCTURING OF NEW MODES OF FINANCING**

Beyond commitments to redirect funding, other initiatives dedicated to developing green and sustainable finance have gradually come about within the financial system:

- **The role of banks**
  Under the strong influence of the best practices of national and international development banks, this evolution was first of all reflected in the gradual integration of environmental factors into traditional bank financing products. Although there is wide variety of practices in the G20 countries depending on “the size and capacity of banks, as well as the market and regulatory context”, the GFSG notes that today “most green investments are funded by banks, [...] by supplying credit and raising capital for green investments, banks are the primary source of funding for renewable energy” with debt transactions reaching 104 billion dollars in 2015. In addition, banks are increasingly incorporating environmental opportunities and risks into their decision-making processes, particularly with the implementation of the Equator Principles, which integrate the management of environmental and social risks for more than 70% of international funding projects in emerging markets, or by implementing systems to manage ESG issues.

- **Investments**
  Equity and private equity players have also begun to address green finance issues, in the broader context of integration of ESG criteria. Driven by institutional investors, SRI approaches have led to the development of ESG analysis methodologies for corporate equity products or as part of approaches dedicated to specific asset classes like infrastructure.

  For example, the GRESB Infrastructures approach provides an ESG evaluation of corporate operations or infrastructure funds. With 9,800 billion euros invested in the economy at the European level, insurers are also a major potential player in green and sustainable finance. They are already among the players currently contributing most to the increase in SRI assets or assets subject to ESG criteria. A number of them have made individual or collective commitments aimed at decarbonising their portfolios, disclosing their carbon footprint, and joining to dedicated platforms.

- **Green bonds**
  Beyond the integration of ESG factors into existing processes, new opportunities have appeared with the development since 2007–2008 of products specifically dedicated to green finance, in particular the gradual emergence of the market for green bonds, debt instruments earmarked exclusively for finance projects generating environmental benefits. From a market initially dominated by multilateral development banks and public investment banks’ issuances, green bonds are now gradually being issued by corporations, accompanied by the private financial sector for the origination, underwriting, and investment of these products. Although it still represents only a very small share of the global bonds market, the green bonds
market is growing with a 31% increase in issuances in 2015, still dominated by supranational issuers but with growing issues by corporations and commercial banks. Its development has been accompanied by the definition of standards intended to ensure the credibility and transparency of processes associated with issuing green bonds. The benchmark approach, the Green Bonds Principles (GBP), is the result of the initiative conducted by four private banks (Bank of America-Merrill Lynch, Citi, Credit Agricole CIB, and JPMorgan Chase & Co). Initially published in January 2014, then amended in 2015 and 2016, the GBPs provide issuers with guidelines on the elements required to issue a green bond, help investors obtain information to assess the environmental impact of their investments, and facilitate the structuring of transactions by arranging banks through the promotion of market standards. The GBPs are currently supported by 123 members active on the green bonds market throughout the world (59 banks, 35 investors, and 29 issuers) as well as 77 organisations called “observers”.

NEW CRITERIA FOR DIFFERENTIATING BETWEEN FINANCIAL MARKETPLACES

The integration of environmental constraints and the development of green finance pose a number of challenges that need to be addressed by both the public sector and the private sector. While the adaptation of policies, regulatory frameworks, and market practices seems essential, with a number of issues presented in Part II of this report, there are a number of needs and opportunities to be seized for the financial sector to develop responses:

- in the understanding of necessary investments (appropriate sectors and activities, geographic regions, characteristics, etc.);
- in the development of new tools and new financial products targeting an environmental or social goal;
- in the development of standards and methodologies ensuring the integrity, traceability, and measurement of impact of funding.

The emergence of these new trends has thus led to a different way of assessing the potential and positioning of the various global financial marketplaces, with new criteria identified as particularly important during the interviews:

- The availability, management, and analysis of extra-financial data: the spread of extra-financial reporting practices at the company and project level, the detail and actual added value of this information, the ability of market players to compile such information and make it intelligible and comparable for investors in view of a given environmental or social objective;

- Sustainability expertise, methods, and tools to structure and evaluate financing products earmarked for sustainable development (for example, green bonds) and also to support companies, project managers, and investors in their green finance projects, from origination to impact reporting and verification;

- The volumes of financing available that can be earmarked for green and sustainable finance as well as the presence of true long-term investors (pension funds and insurers in particular) committed to sustainable development, in order to have a true capacity to influence the market and the reallocation of capital;

- The presence of a complete ecosystem linking all of the above areas of expertise together across the entire value chain, with appropriate regulations and policies, well-developed research, effective appropriation of the issues by financial players, and the ability to support issuers seeking financing dedicated to sustainable assets. Many interviews pointed to the importance of strengthening cooperation with new players, particularly from academia and civil society, as well as new methods of partnerships and working (public, private, expert, etc.) in order for a green finance ecosystem to be functional.

STRUCTURING GREEN AND SUSTAINABLE FINANCE, A FUTURE CHALLENGE FOR THE EUROPEAN FINANCIAL MARKETPLACES

In the previously described context, characterised by the urgency of sustainable investment needs, uncertainty about the guidelines for the financial system as a whole, international competition, and the evolution towards green and sustainable investments is increasingly appearing to be a major issue for the future and for the repositioning of the various global financial marketplaces.

A “ROBUST, SUBSTANTIAL” FRENCH FINANCIAL SECTOR

Independently of the development of specific strengths in green and sustainable finance, the Paris financial marketplace has a robust, substantial financial system
able to be guided and positioned on the green and sustainable finance market. According to the IMF (2012), cited by I4CE (2015), “France’s financial system is large, sophisticated, and integrated both vertically and internationally”.

Paris EUROPLACE notes the following strengths in particular:
- Five French banks in the European top 20;
- A highly developed asset management centre with more than 600 asset management companies (including 4 among the world’s top 20) totalling 3,600 billion euros in assets under management;
- The presence of major international companies and a number 3 ranking in the world for France in terms of corporate bond issues;
- A powerful insurance industry making France the number 2 insurance market in Europe and the world’s number 4 market with €1,300 billion invested in companies;
- The presence of 500 international financial establishments and institutions.

The Paris financial marketplace therefore has sufficient potential to position itself as a major green and sustainable finance hub.

The interviews led to the idea of working more with other European financial marketplaces to develop synergies and complementarities, which may be the subject of dedicated work.

This context combined with a particularly dynamic French green finance ecosystem ranks the Paris financial marketplace among the top to showcase its strengths in green and sustainable finance (see Part 3 of this report).

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The positioning of financial players on the emerging market of green and sustainable finance means taking into account a number of challenges: some related to the immaturity of the market and others related to its intrinsic specificities. While the financial sector has been characterised since the 1970s by growing harmonisation of procedures and accounting standards to favour the liquidity and fungibility of capital markets, the characteristics of green and sustainable finance do not fit into this dynamic. The integration of environmental and social factors into these market frameworks is a new, little-explored area for both players and regulators.
A NEW, COMPLEX MARKET WITH SPECIFIC CHALLENGES

THE CHALLENGES OF GREEN FINANCE

The G20 Green Finance Study Group (GFSG) groups the challenges of green finance into five categories, that are briefly summarised and completed with additional interview comments thereafter:

- **Externalities**
The internalisation of positive externalities (reduced environmental impacts, improved well-being of populations) and negative externalities (pollution, danger to the health of users, etc.) in the economic reasoning of market players by assigning a suitable price is a must for guiding investment decisions towards green and sustainable projects. The lack of an appropriate price of externalities, for carbon for example, leads to situations of under-investment in green or sustainable assets (more expensive) in favour of assets with low environmental and social added value.

- **Lack of clarity in green finance**
An obstacle to directing investments is the lack of clarity about what constitutes a green or sustainable asset. This makes it difficult for investors, banks, and companies to guide their decisions as well as their accounting and performance measurement tools. In many countries and markets, the definitions in this area remain mixed and incomplete. As indicated in the GFSG report, a single definition would run the risk of not reflecting the variety of contexts and priorities of the different markets and countries, while too many definitions – if, for example, each financial firm defines green assets by itself – would make the comparison of data between institutions and markets virtually impossible.

- **Information gaps and asymmetry**
The lack of communication of environmental and social information appropriate for investing in projects increases information research costs and reduces the attractiveness of green investments. "Companies do not know what to report or how to report it". However, France is ahead in some areas as demonstrated in Part 3 of this report.

Moreover, disseminating information as such is not necessarily sufficient, and the lack of a signal for investors to validate the consistency and reliability of green assets constitutes a barrier to investment. The lack of sharing of available information between players (for example, between the environmental regulator and financial institutions) is also a factor contributing to asymmetry.

In addition, because of the multiple nature of environmental and social issues, the measurement indicators, both macroeconomic (human development index or green GDP) and microeconomic (extra-financial evaluation of companies), retain many imperfections, and remain large areas of research: giving an economic value to biodiversity, sustainability reporting, etc. The major challenge in this area remains the definition of specific metrics. While it is impossible to aggregate water, biodiversity, and carbon issues, for each of these issues, it is possible to have suitable metrics.

- **Inadequate analytical capabilities**
The understanding of the financial implications associated with environmental risks is still at an early stage in its development. The ability of banks and financial institutions to identify and quantify the resulting credit risks or market risks still needs to be developed. This is especially true given that the financial models (quantitative management, benchmarked management, index-linked management) have become widespread as management and decision-making instruments and that, at this stage, the integration of environmental and social factors, often difficult to quantify, is complex. However, these well-identified methodological difficulties should not prevent the gradual integration of environmental and social issues, increasingly better documented, first of all for those related to climate risk, which will have a significant influence on decisions in the sphere of the real economy.

- **Maturity mismatch**
One of the characteristics of green finance is the difficulty in mobilising true long-term financing, which is a problem shared with other markets, such as infrastructure. As a result, there is a risk of chronic under-investment in green projects, the maturities of which are often long. Between long-term projects and the expectations...
of investors and savers in search of short-term and medium-term liquidity, the issue of maturity mismatches is essential. Long-term project financing for green infrastructure, which relies especially on bank loans, is particularly constrained by the relative short maturity of their liabilities. Simultaneously, long-term investors are waiting for long-term investments that make economic sense, as is the case particularly for green infrastructure, the amount of which estimated by the new climate economy is approximately 6 trillion dollars per year globally in the next 15 years.

A MARKET REQUIRING A SIGNIFICANT LEVEL OF SUPPORT FROM REGULATORS AND MARKET PLAYERS

The specific challenges posed by the development of green finance are prompting many countries to tackle the issues of standards, governance, and incentives.

► Standards
To direct the right information and the right signals to financial players and facilitate the direction of capital towards green and sustainable finance, standardisation is essential on three levels:

i. The definition of “green” or “sustainable”, through taxonomies such as those established by the Climate Bonds Initiatives, or initiatives to award labels to assets for which the earmarking of investments is desirable;

ii. The standardisation of processes to guarantee the environmental (and social) quality of financing products, with, for example, the standardisation of “use of proceeds” for green bonds;

iii. The disclosure of information, voluntary or through ESG reporting regulations, and the measurement of impact, through specific metrics, such as the carbon impact in the energy/climate field.

On this last point, the work currently in progress within the FSB’s TCFD for the disclosure of financial information regarding carbon and the European Commission’s for the disclosure of non-financial information are ways to gradually promote the production and structuring of information necessary for investors.

Among the communicated information, the improvement of risk assessments is often considered by the authorities as the essential, pivotal lever for encouraging a reallocation of capital.

For green and sustainable finance, like for other markets, the definition of these standards also raises an issue of governance through the division of roles between the market and regulators in the field. Up until now, the trend observed both in France and internationally has consisted in adopting a supervision-oriented approach with flexible requirements and, prioritising an initial development of standards by market players, proactive approaches, and the dissemination of best practices in order to give players time to adapt and test different methodologies.

While the improvement of information is an essential first step, it is not enough to deal with all the challenges posed by sustainable development financing, which may also require more direct interventions.

► Supporting demand for financing and the development of sustainable projects
As explained by I4CE (I4CE 2015)\(^1\), since 2008 the markets have been characterised by significant volumes of liquidity, a search for yield conducive to more risk-taking and the search for longer maturities. All of these trends could have been potentially conducive to an increase in levels of financing directed towards low-carbon projects. However, this increase has not been observed. According to some experts, this demonstrates that the low-carbon project pipeline is not sufficient and that priority must be given to implementing demand policies. The emphasis has remained on structuring climate policies ensuring the emergence of a carbon price and the development of sufficient flows of robust investment projects, particularly at the initiative of the public sector. The public sector still remain a major player with a strong ripple effect, both on the side of suppliers and service providers and on the side of private project supervisors.

The improvement of the risk/return ratio of climate projects compared with carbon-intensive projects and the internalisation of positive and negative externalities in projects are therefore vital prerequisites to making them fundable and financially attractive.

► Green and sustainable financing supply incentives
Given that direct support for the development of projects is not necessarily enough to generate a significant flow of development and financing, the other component of public intervention to compensate for the market’s weaknesses directly targets the mobilisation of capital through the establishment of incentives. These financing supply incentives must

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necessarily round out and interface with the financing demand incentives and not substitute for them. Various resources depending on the public regulator can be used by countries, with different levels of success, to respond to the issue of internalisation of externalities and favour the orientation of investments towards, for example, financing renewal energies and infrastructure. Subsidies, tax abatements and incentives, prudential ratios, and emissions trading systems are some of the different tools being tested by countries.

In general, the trade-off between support for projects and demand for financing, on the one hand, and support for the supply of green and sustainable financing, on the other hand, must be made at the regulator level on the basis of an overall, consistent vision so as to mitigate market failures without generating bubbles or inappropriate public spending.

**MARKET SUPPORT THAT SHOULD NOT GENERATE NEW RISKS**

In order to develop satisfactorily, the green and sustainable finance market must therefore be carefully managed by regulators and market bodies to avoid multiple pitfalls that might hinder its development.

- **Risks that may call for the establishment of regulations by market players or regulators:**
  - A risk of greenwashing: in the absence of sufficiently defined and demanding standards regarding environmental impact and processes, green financing products could ultimately generate distrust from investors if they doubt their integrity and could eventually cause a dilution of the market;
  - A risk of non-alignment of interests and insufficient incentives for real development of the market beyond the niche level: even under conditions where the market’s integrity would be guaranteed, its development could remain insufficient if access to green financing remains more expensive for the issuer (due to transaction costs) or less profitable for an investor than conventional financing;

- **Risks if intervention is too fast or excessive:**
  - Transition risks that could destabilise the overall financial sector in case of an overly fast transition by the regulation and the reallocation of capital towards the low-carbon economy. This systemic risk must be balanced with the need to break away from a carbon-intensive model whose assets will be even more at risk in the future;
  - **Risks of a bubble** in case of incentives that are overly strong or improperly adjusted over time in favour of green investments, as it has been the case for the development of certain renewable energies;
  - **Risks of rising transaction costs** in case of particularly burdensome standardisation of processes and reporting.

**INTERNATIONAL DEVELOPMENT MARKED BY TENSION BETWEEN INTEGRITY, MARKET DEPTH, AND THE RISK OF A BUBBLE**

**REGULATIONS FAVOURABLE TO DEFINING STANDARDS AND TOOLS, LESS CONDUCIVE TO INCENTIVES**

To address these issues, different approaches to green finance regulation have appeared on the international level.

- **Standards regarding the disclosure of information and the integrity of processes being structured**
  - Different national, European, and international regulations and standardisations historically arising from responsible investment practices help to define standards for disclosure of information for the financial sector (and sometimes other stakeholders). Particularly noteworthy at the European level is the European Commission’s publication at the end of 2016 of guidelines relating to the establishment by the Member States of the Directive on disclosure of non-financial information by certain large undertakings and groups20. The most recent initiative is that of the Task Force on Climate-related Financial Disclosure (TCFD) put in place by the FSB to provide the necessary information in terms of strategy and carbon risk management at the level of companies and portfolio analyses.

The standardisation of processes to ensure that the financing is properly earmarked for environmental benefits is also in progress. In this respect, green bonds have received special attention in terms of standardisation. The benchmark approach in this area is the approach taken by the Green Bonds Principles (GBP), mentioned previously.

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However, the standardisation and definition of “green” is still in the beginning stages, with taxonomies like those of the Climate Bonds Initiative defining investment categories, incorporated by the French regulations through the specifications of the TEEC label (energy and ecological transition for climate).

The challenge of large-scale commitment by the financial sector

The challenge of volumes
Despite an early commitment from part of the financial sector in favour of green finance, the market’s low maturity level in addressing the above challenges still makes it difficult for the financial sector to identify green investment opportunities that have an acceptable and attractive risk/return ratio. Its growth therefore remains limited today. As the G20’s synthesis report notes, “while some progress has been made in green finance, only a small fraction of bank lending is explicitly classified as green according to national definitions. Less than 1% of global bonds are labelled green and less than 1% of the holdings by global institutional investors are green infrastructure assets. The potential for scaling up green finance is substantial.”

The challenge of financial innovation beyond green bonds
Beyond the questions of volumes, innovation in green and sustainable finance could be strengthened. With today’s market dominated primarily by green bonds issued by large issuers (public investment banks, large corporations, local authorities), the definition of new products geared towards green financing (green loans, green equity, green project bonds, etc.) and sustainable financing, the resolution of challenges like long-term investment (green infrastructure investment trusts / yieldcos), as well as their signalling to the market as green investment products (creation of dedicated asset classes or labelling) are very important areas of development.

The temptation at the international level to develop market growth without guaranteeing its quality and additionality

The tension between the commitments made to develop green finance on the one hand, and market conditions that are still in the maturing process on the other, is generating new challenges, particularly visible on the green bonds market, as noted by the think tank I4CE in its study, to “unlock the potential of green bonds.” At this

22 The G20 GFSG’s synthesis report notes the interest in “yieldcos” to address the problem of investors’ preference for the present in the face of long-term investment needs: “Green infrastructure investment trusts are investment trusts that manage income-generating green infrastructure assets. They offer regular yields (normally in the form of dividends) and a liquid method of investing in infrastructure projects. A yieldco is a similar investment vehicle to a green infrastructure investment trust that is often used to manage income-generating renewable energy assets. Yieldcos have come to prominence in the US over the past few years as a liquid means to generate exposure to renewable energy assets.”
23 I4CE (2016), Igor Shishlov, Romain Morel, Ian Cochran; Beyond transparency: unlocking the full potential of green bonds; June 2016
stage, there is still progress to be made to guarantee the use of funds collected by the issuance of green bonds and the environmental integrity of assets, by improving the quality of their ex-ante and ex-post evaluation.

**The challenge of integrity**
A first challenge is maintaining the integrity of the market in the face of the temptation, under given profitability conditions, to develop the volume of green financing without also developing the quality of the market through appropriate standards (in particular, definition of “green” and what should be financed, definition of verification processes and measures). Such a development of green finance, first of all for the green bonds market, poses reputation and liability risks that could eventually weigh on the very viability of the market by more or less quickly eroding investors’ confidence.

**The challenge of additionality**
A second challenge is additionality: green financing using earmarked products, like green bonds, currently generates transaction costs in such a way that the main issuers that actually use them are often large issuers that “can afford it” and also have easier access to capital. For issuers and investors, using green bonds allows them to secure financing for green projects and their climate strategy. For companies, the main advantages are diversification of their base of investors (particularly with the arrival of new investors, including SRI investors), better communication, consistency between their mode of financing and their core business, and the development of internal synergies. However, in the current form, the development of green bonds does not seem to be stimulating a marked increase in green investments for issuers whose access to capital elsewhere is not as easy.

**3 The challenge of contributing to the structuring of international market standards**
As this complex market environment is being constructed, the various financial marketplaces are organising to position themselves in the energy transition and sustainable development financing sector.

**The launch of an international dynamic with numerous marketplace initiatives**
Announced during 2016, the initiatives of the financial marketplaces of London in active collaboration with China and Luxembourg, have set in motion a very strong dynamic and visibility for green finance.

**The City of London launched its Green Finance Initiative in January 2016.** The approach, supported by UNEP Inquiry, the mayor of London, the Treasury, and leaders of the British financial sector, focuses on developing green bonds for sustainable infrastructure projects. Its goals identified during the launch are to:
- improve the waves of projects generating green bonds in the United Kingdom and promote the development of a strategy for low-carbon infrastructure;
- step up transparency and accreditation standards to bolster the confidence of market players in green products;
- inform and attract stakeholders on the market’s potential.

**China has made green growth the priority of its presidency of the G20 and has also positioned itself for the development of green finance with the establishment of a dedicated Green Finance Task Force supported by UNEP Inquiry** and the establishment of the Green Finance Study Group, co-chaired with the United Kingdom, as part of the G20.

**The organisation of international events by these various marketplaces, like the Green Bond Principles Annual General Meeting in London in 2016, the Hangzhou G20 in China with a favourable reception of the Green Finance Study Group’s report, and the International Finance Forum in Shanghai alongside the G20 Summit, and the positions taken by leaders and political personalities have also helped improve the visibility of these initiatives and the players of these financial marketplaces.**

**More recently, Luxembourg also gave support to the general dynamic in favour of green finance with the launch of a label for climate financing to be awarded to investment funds financing measures for mitigation and adaptation to climate change and the launch of the Luxembourg Green Exchange (LGX), the world’s first platform for green finance instruments.**

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24 Sources: The Treasurer, https://www.treasurers.org/node/315443;
A DYNAMIC OF STRUCTURING OF INTERNATIONAL STANDARDS AND REGULATIONS

The dynamism of these marketplaces can be seen particularly in the abilities to influence the production of market norms, with players present at different levels of the production chain of standards, norms, and regulations.

Government action

The action taken by the London marketplace in particular as well as the Paris marketplace, together with China’s action as part of its G20 presidency, has guided the debates of the Green Finance Study Group. This dynamic has been reinforced by the position very favourable to the development of green finance taken by the Bank of England through its governor Mark Carney, the standard bearer of these topics at the international level. Various initiatives under consideration in terms of standardisation and the establishment of arbitration bodies and other measures to promote green finance in the London marketplace are also being studied, in a context made more complex by the establishment of Brexit.

China has also carried out work at the government level with the establishment in 2014 of a Green Finance Task Force initiated by the Research Bureau of the People’s Bank of China and UNEP Inquiry. This Commission brought together regulators and financial policy experts as well as experts from the private sector, academia, and think tanks and a few international experts. This commission’s final report lists 14 recommendations divided into four areas to establish China’s green financial system\(^{26}\) (see details in the appendix):

- Specialized investment vehicles to support green investment (green banking system (1), green funds (2), green development banks (3));
- Fiscal and financial support (discounted green loans (4), green bonds (5), green IPO (6));
- Financial infrastructure (emissions trading (7), green rating (8), stock index (9), environmental cost analysis (10), green investor networks (11));
- Legal infrastructure (compulsory green insurance (12), lender liability (13), mandatory disclosure (14)).

Actions of marketplaces and professional associations

In addition to establishing standards, many professional associations that have gained a degree of recognition in the development of green bonds also have their headquarters in London, such as the Climate Bonds Initiative. The Green Bonds Principles initiative also has a location in London, in addition to a location in Paris, their official headquarters being within the ICMA in Zurich.

The relay of civil society

This influence is relayed at the civil society level, with strong activism by advocacy groups, including certain environmental NGOs, as well as Anglo-American think thanks and professional associations. These bodies are organised to support the evolution of the financial sector towards more sustainable development financing, by ensuring the integrity of approaches, particularly with regular representation of these organisations in the various international forums and with regulatory bodies, particularly in Brussels, and by the regular publication of reports, positions, and communication media. These actions on the part of civil society are also supported by quality research.

IMPORTANT GREEN FINANCE SECTORS FORMING OUTSIDE EUROPE

In the light of the new differentiation criteria previously set out, the financial marketplaces are gaining increasingly better positioning abroad.

In terms of expertise

While the publication of sustainability data continues to be a subject where France has a lead (see Part III), the interviews pointed out a growing maturity of the Anglo-American financial marketplaces in terms of production, structuring of data, and sustainability analyses of issuers. Mainly managed until recently by CSR rating agencies, this activity has now taken on a new dimension with the arrival on this market segment of mainly Anglo-American traditional credit rating agencies, such as Moody’s and S&P, with very large data processing capabilities and footing in the market. Specialised think tanks like Carbon Tracker, specialising in carbon and climate risk analysis on capital markets, are also based in London.

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In terms of volumes

France ranked number 2 in the world in issues of green bonds in 2015\(^2\), behind the US. In an international setting marked by pressure to increase green financing volumes, the integrity and quality of green financing towards assets with a real environmental impact is a major development issue for highly qualitative approaches like those initiated by many players of the Paris marketplace.

In general, while the Paris marketplace wishes to reinforce its strengths and capitalise on its internationally recognised specialised expertise, this highly competitive environment poses a challenge. In addition to the actions already undertaken for several years, efforts must be made to reinforce the resources dedicated to green and sustainable finance at the Paris marketplace level and the culture of cooperation between its members.

GLOBAL GREEN BONDS MARKETS SINCE 2012
[in millions of euros]

PART III.
STRENGTHS AND ADVANTAGES OF THE PARIS FINANCIAL MARKETPLACE AND THE FRENCH ECOSYSTEM IN TERMS OF GREEN AND SUSTAINABLE FINANCE

As shown by the study by I4CE with UNEP Inquiry “France’s Financial (Eco)system”, various elements of which are presented below, France’s financial ecosystem is identified, in France and abroad, as particularly robust, mature, and conducive to the emergence of green and sustainable finance. I4CE mentions a virtuous ecosystem in which public and private initiatives mutually strengthen each other. The developed regulatory expertise and tools are advantages for the Paris marketplace, with a trend towards growth of dedicated financing. The interviews confirmed this very positive vision of the Paris marketplace and the quality of the approach of many players in the light of international practices. They also helped identify other sources of expertise that could be further highlighted to develop new tools for financing sustainable development.

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28 UNEP Inquiry and I4CE (2015), France’s financial (eco)system, improving the integration of sustainability factors, November 2015
29 UNEP Inquiry (2016), How Paris became the capital of climate finance, April 2016
A LONG-ESTABLISHED, UNIQUE, AND VIRTUOUS PUBLIC-PRIVATE DIALOGUE

Since the early 2000s, the French authorities have worked with companies to examine the relationship between regulations, the disclosure of ESG information, and the development of sustainable financial products. This conceptualisation effort accelerated between 2012 and 2014 with work dedicated to sustainable development financing in connection with the subjects of extra-financial reporting and France’s preparation for the Presidency of the COP21 in terms of climate issues.

THE POSITIVE RIPPLE EFFECT OF FRENCH REGULATIONS

Provisions relating to ESG reporting
As presented by I4CE, the source of this dynamic, the French regulations on nonfinancial reporting for corporations and their financing institutions have played a pioneering role for more than 15 years. Initiated since the end of the 1990s, three key dates marked this evolution:

- In 2001, the law on New Economic Regulations (NRE) formalised the Environmental, Social, and Governance (ESG) reporting requirements on the basis of pre-existing practices;
- In 2010, the Grenelle II law extended the non-financial reporting requirements to companies with more than 500 employees in their content and their scope, with the integration of asset managers (articles 224 and 225);
- In 2015, the energy and ecological transition for green growth law (TEEC) introduced new requirements for companies and other financial players to assess their contribution to the energy transition.

These regulations are most often the result of “Grenelle”-type negotiation and consultation processes that bring together a large number of players, including corporations, in the development of regulations and help raise the awareness of different hierarchical levels ahead of the implementation of laws. The financial sector was also included by the State ahead of the TEEC law through the mid-2014 banking and financial conference.

These regulatory provisions have thus rooted the public disclosure of non-financial information for investors in the practices of a large number of companies. The implementation methods have generally been characterised by a certain degree of flexibility in order to allow players to have time to incorporate the constraint and allow the top players to establish best practices. This has encouraged the development of a multi-player ecosystem aware of the need to consider ESG issues and the establishment of appropriate expertise.

Provisions relating to the promotion of the SRI supply
In addition to non-financial reporting practices, various regulatory provisions relating to employee savings have promoted the development of SRI and solidarity funds. Examples include:

- the Fabius law of 2001 for the development of employee savings, which requires companies to offer a solidarity fund to their employees when they put in place a voluntary employee savings partnership plan (PPESV), renamed “Perco” (collective retirement savings plan) two years later;
- on 1 January 2010, pursuant to the law on the modernisation of the economy of 4 August 2008, this obligation is extended to corporate savings plans (PEE).

These provisions have prompted all ranges of FCPE (employee mutual funds) that accept blocked sums in a PEE or a Perco to incorporate a 90/10 FCPE (S for “solidarity”), i.e., a fraction of its assets (5% to 10% depending on the case) is invested in social utility projects, and the rest is managed according to an SRI process.50

THE DEVELOPMENT OF AN ECOSYSTEM OF MAJOR PLAYERS

In this environment encouraging corporations to communicate their vision and the status of their sustainability practices, an ecosystem of players has gradually committed to integrate ESG criteria and develop the SRI sector, a precursor to the development of green and sustainable finance.

Public and institutional drivers of ESG integration and SRI
One of the primary drivers of the development of SRI in France has been the dynamic initiated by public institutional investors and their increasingly systematic integration of ESG criteria. The adoption in 2005–2006 of SRI strategies by the two public pension managers, ERAFP and FRR, caused a quick ripple effect with other institutional investors.

In this respect, the responsible investment market is currently dominated in France by institutional investors, who hold almost 90% of assets under management, with some exclusions (normative or sectoral).

In addition, the development of SRI strategies by public financial institutions, such as the European Investment Bank (EIB) at the European level and Caisse des Dépôts at the National level, has been a major factor for the dissemination of best practices integrating ESG factors in investment decisions.

Dynamic commercial players
The needs generated by the regulation to structure and analyse non-financial information have promoted the emergence of new activities across the entire investment value chain:
- corporations or services dedicated to consulting in reporting and management of sustainable development (Vigeo-Eiris, Beyond Ratings, Utopies, general consultancy firms developing dedicated activities);
- expertise in environmental and social accounting, particularly for carbon (Carbone 4);
- environmental and social data verification activities (for example, within large accounting firms EY, KPMG, PWC, and Deloitte);
- development of dedicated ESG research teams within a very large number of banks and financial intermediaries;
- development of SRI strategies among asset managers or even the creation of managers specialising in the field (see list in the appendix).

Involvement of professional associations
Numerous think tanks dedicated to the themes of corporate social responsibility (CSR), responsible investment, and sustainable development in general have also emerged in France:
- for companies: CSR Observatory (ORSE), the Club of Sustainable Development directors (C3D) as well as various working groups and committees within MEDEF (the French Business Confederation) and AFEP (French Association of private companies);
- for banks, investors, and asset managers: various dedicated committees within professional federations (French Asset Management Association (AFGI), French Private Equity Investors Association (AFIC), French Association of Institutional Investors (AF2I), French Banking Federation (FBF), French Insurance Federation (FFA), French Association of Financial Analysts (SFAF), Finance Club of CSR Observatory (ORSE), and the French SIF (FIR), together with the EUROSIF (European Sustainable Investment Forum));
- in the financial marketplace’s bodies: the sustainable finance committee of Paris EUROPLACE, the SRI committee of the AMF, etc.

Think tanks and dedicated media
This ecosystem relies on thinks tanks and particularly dynamic dedicated media that help establish connections between regulators, the private financial sector, companies, and academic research:
- The numerous think tanks dedicated to sustainable development, such as I4CE (Institute for Climate Economics), Institut du Développement Durable et des Relations Internationales (IDDRI), The Shift Project (TSP), and Novethic, help ensure the production of financial and sustainable development topics;
- Lastly, specialised media, such as Novethic, AEF, and the environmental press, ensure that information essential to the vitality of this ecosystem is covered.

The integration of ESG and SRI, drivers of climate finance
The dynamic of this ecosystem has led to significant growth in SRI financing volumes. Novethic accounted for a total of 746 billion euros in assets under management in France in 2015 taking into account all management strategies incorporating SRI criteria, excepted strategies limited to exclusions). This figure shows 29% growth in volumes measured in 2014, driven mainly (55%) by the growth of investment practices of insurers. This figures also includes various approaches, two of which are growing strongly: (1) financial valuation (+55%), which systematically incorporates ESG criteria into the financial analysis of issuers, demonstrating an increasing integration of environment and social factors into traditional investment approaches; and (2) management with environmental and social themes (search for companies that offer solutions to an environmental or social issue), whose assets under management quintupled under the impact of the climate commitments that marked 2015. This last trend reflects a search for more impact investments. The link between development of SRI and development of climate investments was more specifically highlighted by Novethic in a study on financial players, as the climate topic is the most visible SRI issue and the most discussed within the financial community.

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THE LAUNCH OF A DYNAMIC OF GREEN INVESTMENTS BY THE FRENCH ECOSYSTEM, EXPECTED TO CONTINUE

A DYNAMIC INITIATED BY PUBLIC FINANCIAL INSTITUTIONS

Public financial institutions like Caisse des Dépôts and Banque Publique d’Investissement (Bpifrance) have played an important role in implementing the first financings and initiating the development of a market and of the necessary skills. In 2015, the Caisse des Dépôts group announced a strategy dedicated to climate change and the energy and ecological transition, with a financing commitment of 15 billion euros for the group by 2017 (which included Bpifrance), announcements to decarbonise its portfolios of infrastructure and buildings, a shareholder commitment approach in support of the energy and ecological transition, assessment and reporting of financed GHG emissions. The law creating Bpifrance also includes an annual disclosure requirement to present how its financed activities contribute to the energy and ecological transition.

2015 was also a record year in climate investment by the European Investment Bank (EIB) in France. With a little more than 8.7 billion euros in new financing in 2015, the EIB dedicated nearly half of its actions (46%) to climate issues. This climate performance far exceeds the goal (25%) set by the EIB at the European Union level, placing France in the lead, with the United Kingdom, of European countries benefiting from climate investments.

2015 was also marked by the launch of the Investment Plan for Europe (Juncker Plan) with emblematic financing in the climate action sector, such as the first third-party financing companies for the energy renovation of private dwellings in the Ile-de-France and Picardie regions, shares in the first investment fund entirely dedicated to the Third Industrial Revolution in the Nord-Pas de Calais region (€20m), and Capenergie 3, an investment fund devoted to the development of renewable energies (€50m).

French investments geared towards the international market have also been driven by public financial institutions through the Agence Française de Développement (AFD), which committed more than 2.9 billion euros in climate financing in 2015, which corresponds to a contribution in the financing of 82 development projects having co-benefits in the fight against climate change. All of AFD’s target regions are concerned by its climate/development strategy with €611m in sub-Saharan Africa (35% of AFD’s activity in the region), €633m in Latin America (77% of the region’s activity), €640m in the Mediterranean region (64% of activity in the region), €761m in Asia (63% of the region’s activity). Today, Proparco accounts for 26% of activity having a “climate” co-benefit.

SIGNIFICANT MOBILISATION OF CLIMATE FINANCING, WHICH COULD FURTHER MOBILISE THE PRIVATE SECTOR

France accounts for a substantial, growing volume of investments directed towards financing the energy and ecological transition, with 36 billion euros mobilised in 2013, which represents 1 to 1.5% of France’s annual GDP directed towards “climate” investments between 2011 and 2014 according to I4CE. The study identifies that private players provided 85% of the financing intended for renewable energies (not including feed-in tariffs), but overall, the role of the public sector remains very important with, in 2013, 51% of total financing flows depending on public action, either through the “greening” of traditional uses of green finance or through incentives to redirect private finance to the energy transition and a low-carbon economy (for an estimated total of 3.9 billion euros in 2013 by I4CE).

With annual requirements estimated between 40 and 60 billion euros per year for the French level alone, the role of the private sector will be essential for maintaining the dynamic and ensuring a link with the public financing already mobilised.

THE DYNAMIC OF COMMITMENT OF THE COP21

The preparation for the COP21 in Paris led to an unprecedented mobilisation of the French financial sector in favour of the energy transition and a low-carbon economy with various announcements by French banks, insurance companies, management companies, and institutional investors aiming to:

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33 I4CE (2015)
35 AFD (2016), Bilan 2015 de l’activité du Groupe AFD dans le domaine de la lutte contre le changement climatique
37 See details in the appendix
reduce their investments in industries related to coal, 
• develop investments in renewable energies, 
• launch green infrastructure funds and investment funds for projects related to the energy transition, 
• reduce the carbon footprint of portfolios, particularly within the framework of the two initiatives of the Montreal Pledge and the Portfolio Decarbonization Coalition for asset managers and the “2020 Carbon Initiative” on the private equity side38.

This mobilisation was marked by the organisation of Climate Finance Day in May 2015 at UNESCO by Paris EUROPLACE and at the initiative of Caisse des Dépôts and the European Investment Bank. This event brought together representatives of the international financial sector for the first time in Paris around the question of “How to shift the trillions”: what can be done to massively redirect capital and investment flows towards a low-carbon economy? A number of players including Axa and Bank of America were among the first to make commitments regarding green financing and exiting coal. The Climate Finance Day was also the opportunity to mobilise highly diversified players – bankers, insurers, investors, international organisations, NGOs – of both northern and southern countries to present the innovative tools and solutions implemented by pioneering players to respond to these issues.

This first Climate Finance Day demonstrated the mobilisation and collective commitment of players of the Paris marketplace through the signing, on this occasion, of a joint declaration of associations and federations on climate change, supplemented by the publication of a new collective commitment announced one year later, in June 2016, during the London Business and Climate Summit39.

After the COP21, the dynamic of the Paris marketplace has been maintained with efforts to implement the climate commitments and expand them to new commitments to finance the Sustainable Development Goals. One example is the involvement of Société Générale and Mirova in the “Positive Impact Finance” programme led by the United Nations Environment Programme Finance Initiative (UNEP FI) with other leading financial institutions. This programme invites banks and other players of the financial sector to give more global consideration to their role within the economy, society, and the environment in the broad sense and offers a “roadmap” for establishing a new paradigm based on notions of impact and market: Positive Impact Finance.

38 See list of signatories in the appendix
39 These two collective declarations of players of the Paris marketplace were signed by Association française de l’assurance (AFA), Association française de gestion financière (AFG), Association française des investisseurs pour la croissance (AFIC), Association française des investisseurs institutionnels (AF2I), Fédération bancaire française (FBF), Forum pour l’Investissement Responsable (FIR), Observatoire de la responsabilité sociétale des entreprises (ORSE), Paris EUROPLACE, and Société française des analystes financiers (SFAF)
3 AN ECOSYSTEM WELL EQUIPPED TO ESTABLISH ITS POSITIONING

The maturity of the French ecosystem on sustainable development topics and the dynamic of the COP21 combine with a number of significant advantages, whether it involves the development of new know-how, innovative regulations, or long-term skills that constitute additional development opportunities.

PIONEERING DEVELOPMENTS IN GREEN FINANCE

The Paris marketplace has quickly stood out by developing recognised expertise in green finance, particularly in the following areas.

► Strong involvement of French players in the emergence of a green bonds market

As part of developing the green bonds market, French players have been particularly present in relation to other countries, practically at each step in the market’s value chain.

French issuers have stood out with early issuances of green bonds associated with large amounts: the Ile-de-France region (2012, first local public authority issuance for 350 million euros, renewed in 2014 with an issuance of 600 million euros), EDF (issuance for 1.4 billion euros), ENGIE (issuance of 2.5 billion euros, 2014), and Agence Française de Développement (AFD - first climate bond for 1 billion euros).

Contributing to the launch of this dynamic, early areas of expertise dedicated to green bonds have developed among underwriters (Crédit Agricole CIB, Société Générale CIB, Natixis), verification bodies (Vigeo-Eiris), and asset managers (Axa IM, Amundi, Humanis, Mirova).

Several of these players were also behind the creation of the Green Bonds Principles (GBP), and some also sit on the board of directors of the GBP (BNP Paribas, CACIB, EDF, ENGIE, Mirova, Unibail).

► Solid expertise in environmental and carbon assessment and accounting

Various initiatives have led the Paris marketplace to develop its expertise in carbon accounting.

Anticipating new regulations in 2007–2008, Caisse d’Epargne was one of the first banks in France to quantify “scope 3” of its portfolio with the help of NGOs and ADEME, opening up the debate on the topic within the financial world. Other initiatives followed with the development by Crédit Agricole and gradually other financial institutions of methodologies to assess the impact of their portfolios, sometimes including the measurement of scope 3. Various publications have analysed these methodologies, for example in 2013 by the 2° Investing Initiative.

Also noteworthy is the publication by Observatoire de la responsabilité sociétale des entreprises (Orse), in collaboration with ADEME and the association Bilan Carbone, of a methodological guide relating to the banking sector. This guide was produced by Carbone 4, which started developing a dedicated technical and commercial approach for specialised consulting in carbon strategy as of 2007.

► The development of impact products

A number of French players have initiated the development of new financing products intended to finance impact projects:

■ in the climate field, the Tera Neva initiative (led by the EIB, BNP Paribas, and Vigeo) launched in November 2015 is a sustainable investment solution allowing investors to align their financial and energy transition goals. This initiative is supported by a group of institutional investors who have invested a total of €m euros in Tera Neva: ACMN VIE, Aviva France, BNP Paribas Cardif, CARAC, CNP Assurances, ERAFP, Generali, Groupama, HSBC Assurances, Natixis Assurances, PREVOIR, and SURAVENIR;

■ supporting the implementation of the SDGs: in 2016, the Solactive Sustainable Development Goals Index was developed, an equity investment index listing companies identified as “making a significant contribution to the advancement of the United Nations’ Sustainable Development Goals (SDGs)” on the basis of a Vigeo-Eiris methodology, granted under an exclusive licence to BNP Paribas;

■ In the natural capital sector, several French players were behind innovative funds based in Paris, which have a pioneering dimension at the global level on the subject. These include funds such as

40 Paris EUROPLACE (2015)
41 2°ii – 2° Investing Initiative (2013). From financed emissions to long-term investing metrics- State-of-the-art review of GHG emissions accounting for the financial sector
Livelihoods 3F (Danone) and Moringa (Edmond de Rothschild);

- the LDN Fund project (Land Degradation Neutrality), conducted in partnership with the United Nations Convention to Combat Desertification (UNCCD), through its operational component – the Global Mechanism – and Mirova, aims to construct a large global fund dedicated to financing projects for restoration and sustainable management of land, particularly in the farming and forestry sectors.

THE ADOPTION OF INNOVATIVE REGULATORY PROVISIONS

With the holding of the COP21 in Paris, 2015 was the opportunity to adopt innovative tools supported at the level of public authorities, intended to further strengthen the publication of suitable information, so as to enable investors to make informed choices in favour of sustainable development.

Article 173 - French Energy Transition Act

Article 173 (VI) of the French Energy and Ecological Transition Act is intended for the financial sector. It defines a set of particularly innovative measures requiring financial players to report on how they incorporate ESG factors, particularly climate considerations, into their investment and risk management strategy. In the context of the COP21, this provision drew attention to France at the international level by incorporating into the implementation decree the recommendation to disclose and explain investors’ contribution to the international and national commitments to combat climate change.

The V of this article also defines the conditions in which the implementation of the decree can be adjusted for smaller entities and the methods of disclosing and updating such information.

Article 173 (V and VI) is therefore part of this logic of appropriation from part of the financial sector of sustainability issues, particularly with regard to climate change.

SRI and TEEC labels

Initiated in France in 2009 by Novethic, the establishment of labels to allow investors, particularly individuals, to quickly distinguish financing products meeting sustainable investment criteria was reinforced in 2015 with the creation of two labels supported by the public authorities.

- The SRI label is part of a plan to promote products meeting a number of ESG criteria. SRI-labelled funds now represent 4 billion euros in assets under management for a dozen labelled funds. Around fifty funds are expected to have the label by the end of 2016.

- The TEEC label is granted to funds whose assets directly contribute to the implementation of the “Energy and Ecological transition Act”. This label is constructed with a focus on impact and on the basis of a positive taxonomy of assets inspired by the Climate Bonds Initiative, contributing to the energy and ecological transition. Today it has been granted to nine funds from six management companies (Acofi Gestion, Humanis Gestion d’actifs, Sycomore, RGREEN Invest, Demeter, and Mirova) totalling a volume of nearly €1.2billion in assets under management.43.

The creation of these two labels is a unique initiative in Europe and in the world. They respond to a desire of regulators and a large number of players of the Paris marketplace who, by acquiring such tools, have established the conditions necessary to make sustainable savings available to a wide audience. Their objective is to increase the visibility of SRI products and products financing the energy and ecological transition for investors and eventually for savers. The labels provide simple, reliable information about the level of commitment of the funds in question, whether with regard to respecting ESG best practices for SRI funds or directly financing a positive impact for TEEC funds, so that they can take informed decisions.

Support of the French authorities at the international level

In connection with the general dynamic that led to the success of the COP21, the French authorities also played a vital role in ensuring the consideration of green finance issues at the international level as part of the G20 discussions and for the mandate set to the FSB in particular, as well as at the European level. More recently, France also co-sponsored the UN Secretary General’s launch of a working platform with the financial sector to ensure the financing of the SDGs.

The State’s commitment to issue the first sovereign green bond

In line with the pioneering issuances of green bonds by large public issuers among public investment and development banks (EIB and AFD) as well as local authorities (Île-de-France region, Nord-Pas-de-Calais region), the French State made a commitment in September 2016 to issue the first sovereign green bonds starting in 2017, subject to market conditions, thus opening up new prospects for the French green bonds market.

FRENCH EXPERTISE PARTICULARLY FAVOURABLE TO NEW DEVELOPMENTS IN GREEN AND SUSTAINABLE FINANCE

In the light of the evaluation criteria previously identified (Part I), the Paris marketplace has a number of attractive features that still have little association with the dynamic of green and sustainable finance. This could enable Paris to strengthen its positioning.

Project and infrastructure financing

As pointed out by the Paris EUROPLACE report on the infrastructure market, the Paris marketplace has a tradition of excellence in both financing and constructing infrastructure. Whether it involves transport, social infrastructure, energy production and distribution, or urban facilities related to the protection of the environment, the growing infrastructure needs are overlapping with the current needs related to the energy transition and the fight against climate change. The financing of infrastructure has also permitted the development of expertise in the analysis and monitoring of the non-financial components of financed projects. These expertise are consistent with the development of green or sustainable financing, with regard to new requirements relating to the use of proceeds, and the impact analysis of financing. The Juncker plan’s momentum at the European level and the needs of emerging and developing countries, particularly with regard climate change, are opening up the prospect of new growth opportunities.

Potential for green development for private equity

Another significant growth opportunity in terms of green and sustainable finance is private equity. The AFIC (French Private Equity Investors’ Association) began discussions on the topic with initial commitments during the COP21 to assess the carbon emissions of portfolios. This initiative could be further developed with the integration into this approach of how the invested companies themselves take carbon and climate factors into account.

Recognised French expertise in data management and carbon and environmental accounting

One point repeatedly emphasised in the interviews was the French expertise in statistics, econometrics, and, more globally, data crunching, which could be further mobilised to provide responses to the issues of defining and assessing appropriate indicators to measure performance, risks, and opportunities in non-financial matters.

In direct line with the development of environmental and social disclosure requirements, the development of the French expertise in environmental accounting, particularly carbon, has been regularly cited as a strong asset to be developed by the Paris marketplace. The firm Carbone 4 has developed carbon accounting methodologies for companies, for projects and infrastructure in connection with the AFD, as well as for equity and bond portfolios (Carbon Impact Analytics methodology), real estate, and private equity. The “carbon footprint assessment” accounting standard also contributed to the recent normalisation work within the ISO. A marketplace approach is also being constructed around a methodology for assessing the impacts of climate change on financial portfolios.

Well-equipped research in sustainable development

Lastly, the French ecosystem has a number of research institutes and think tanks recognised in environmental sciences, economic and social sciences, and sustainable development, which could make a very positive contribution to supporting discussions for the implementation of innovative modes of financing. In particular, the interviews brought up the following examples (non-exhaustive) regarding academic and applied research that represent advantages for the Paris marketplace:

• Institut Louis Bachelier (ILB) and the various research chairs that it coordinates around sustainable development subjects, particularly the Climate Economy Chair and the Energy and Prosperity Chair. The Climate Economy Chair is structured around three research programmes:

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45 See list of signatories in the appendix
46 http://www.chaireeconomieduclimat.org/
47 http://www.chair-energy-prosperity.org/
carbon price and market, living carbon (agriculture and forest), and energy efficiency and building. Created more recently in 2015 to inform the decisions of public and private players in managing the energy transition, the Energy and Prosperity Chair focuses its research on the impacts of the energy transition on economies (growth, employment, debt), business sectors (transport, construction, energy production, finance), and the associated modes of financing. Its work has also focused on innovative financing dedicated to the energy transition and on climate risks;

- **INRA** (National Institute for Agricultural Research), the top agronomic research institution in Europe and number 2 in agricultural sciences in the world, conducts research in the fields of food, agriculture, and the environment to address issues of competitiveness, management of territories, health, sustainable development, and bioeconomics;

- **I4CE** (Institute for Climate Economics) decrypts and analyses for public and private decision-makers the economic issues of policies related to the climate, in France and worldwide: industry, energy, finance, territories, agriculture, and forests. The institute has already produced various key publications concerning green finance, the French ecosystem, and the development of the green bonds market;

- **IDDRI** (Institute for Sustainable Development and International Relations) whose role was particularly active in the provision of reference information in preparation for the COP21 climate negotiations;

- **in general, research and academic teaching institutions**, whether general or specialising in finance (Paris-Dauphine, Paris School of Economics, etc.), engineering schools (INSEAD, Polytechnique), as well as the recognised internationally French grandes écoles (elite universities) could also be significant opportunities for research but also for training in green and sustainable finance with the creation of dedicated modules.

**THE PRESENCE OF INTERNATIONAL PLAYERS IN PARIS**

Lastly, the interviews recalled the importance of the presence of various international organisations based in Paris, some of which have taken up the issues of green and sustainable finance in connection with the French ecosystem: the Organisation for Economic Co-operation and Development (OECD), which develops extensive work on these subjects, more recently with the launch of a Centre on Green Finance and Investment, the International Energy Agency (IEA), the Council of Europe Development Bank, a part of the UNEP, the European Securities and Markets Authority (ESMA), and the International Court of Arbitration of the International Chamber of Commerce are also international organisations interested in the issues of sustainable development financing and able to play a role or develop skills in synergies with the French ecosystem.
The Paris Green and Sustainable Finance Initiative
Various areas of work were identified during the interviews. They mainly concern the lifting of certain barriers and the reinforcement of synergies between players of the Paris marketplace in order to be able to best capitalise on the assets previously set out.
1 MOBILISING THE FRENCH ECOSYSTEM

A number of areas have been identified to intensify the already strong mobilisation of the French financial ecosystem in favour of green and sustainable finance.

STRENGTHENING SUPPLY AND DEMAND FOR GREEN AND SUSTAINABLE INVESTMENTS

Establishing true long-term savings

A first major area of work is the mobilisation of sufficient demand for long-term investments among institutional investors (supplementary pension funds, insurers). In particular, the interviews emphasised the fact that, in a context of abundant savings, such savings remain under-allocated to the disadvantage of long-term financing and that the taxation of savings is driving investments in liquid, risk-free products, particularly life insurance funds, themselves financing the public debt. In addition to these market conditions favourable to the search for liquidity and short-term investments, the governance systems for French institutional investors impose rather short maturities (3 to 5 years) and relatively specific portfolio structures. The result is the near-absence of true French pension funds. This aspect was identified as a potential source of development of the demand for green financing in view of the “natural compatibility” between, on the one hand, institutions that have very long liabilities and a mandate of financing the economy and, on the other hand, the long maturity of the issues and the financing needs associated with climate change and sustainable development. This issue was cited repeatedly as a structuring element to promote the orientation of individual savings towards long-term investment products. One of the areas of work identified during the interviews would be the reinforcement of “patient capital” and the ability to invest in the long term, by starting discussions about encouraging long-term savings in France. This issue was also emphasised by insurers seeking long-term counterparties to their commitments, particularly in retirement insurance.

The issue of prudential regulations

Prudential regulations are not capital mobilisation tools as such. However, they were identified as an important area of work for the Paris marketplace and more globally at the European level. Risks evaluation could facilitate identification and taking into account of non-financial risks in the evaluation of assets, first and foremost regarding climate-associated risks. A differentiation of green assets with regard to prudential treatment would thus be a precursor of greater mobilisation of capital for the energy transition according to players of the banking sector. In September 2016, the Fédération Bancaire Française (FBF) launched a proposal for a “green supporting factor”. It aims to promote “the adapted prudential treatment” of energy transition financing and investments, through a lower capital mobilisation requirement for financing and investments in these assets. The quality of these assets could be guaranteed, for example, through eligibility based on the terminology of the Climate Bond Initiative or its French version, the “energy and ecological transition for climate” (TEEC) label.

MOBILISING ALL THE PLAYERS

Another identified area of work is the definition of the energy transition and sustainable development as a strategic priority for leaders of the financial sector and banks. Some positions taken, for example by Axa through its successive chairmen and Crédit Agricole, have paved the way among French leaders.

This need for high-level commitment could also rely on greater consistency and collaboration in the approaches promoted by French players in SRI and, more widely, in green and sustainable investment. Over the years, the diversity of French approaches to responsible investment has allowed rich, varied views and philosophies of investment to develop. Today they could be the subject of common green and sustainable finance approaches, particularly in order to promote collective actions to advocate for and facilitate, a mainstream development of green and sustainable finance.

Lastly, the interviews emphasised the fact that the mobilisation of the French financial sector in support of more green and sustainable investments could also be favoured by closer, more frequent collaboration with civil society, which could play its legitimate role of “safeguard” constructively in order to ensure the integrity of green and sustainable finance approaches and encourage the progress of both issuers and investors.

HIGHLIGHTING THE ADVANCED PROVISIONS OF FRENCH REGULATIONS

The improvement and development of the numerous very innovative, cutting-edge French regulatory provisions listed in Part III have also appeared as an...
area of work for the next steps. The consistency of the incentive system in the supply and demand for green and sustainable finance could be strengthened. Following on from the initial announcements of the ministries, the TEEC and SRI labels, although still little known, could be the subject of an ambitious roadmap with the public authorities in order to exploit their full potential for mobilisation of green financing and target an ambition of wide distribution, in Europe and internationally, and establish their distribution and explanation among individual savers. Their scope could also be expanded to:
- private equity, infrastructure, or real estate for the SRI label,
- other geographical regions for the TEEC label.

The consistency of the incentives and objectives of regulators could be reinforced by making the evolution of the financing system towards sustainable development financing a national, European, and international priority of the French agenda.

STRENGTHENING THE FINANCIAL MARKETPLACE’S RESOURCES IN FAVOUR OF GREEN AND SUSTAINABLE FINANCE

The need to reinforce synergies between the players of green and sustainable finance is reflected in the areas of improvement of the organisation and resources of the Paris marketplace.

DEVELOPING A COLLABORATIVE CULTURE

An important area of work is reinforcing the approach and the collaborative culture of French financial players, which could involve bolstering the resources and short-term benefits associated with the integration of their actions into a marketplace logic.

In view of the richness and the number of sustainable development think tanks, the Paris marketplace could play a greater role of coordination to construct a vision and goals for the development of green and sustainable finance within the French and European financial ecosystem.

PROMOTING THE EXPERTISE AND RICHNESS OF THE FRENCH ECOSYSTEM

The success of the COP21 has given France visibility through its public initiatives, its regulation particularly with the international interest brought about by article 173, as well as the individual commitments made by French private players. The recent positions taken by the Minister of the Environment, Energy, and the Sea, Ségolène Royal, made it possible to begin to position Paris on the international political scene in green and sustainable finance. This dynamic could be further intensified by closer collaboration between public authorities, Ministries concerned and the Paris Green and Sustainable Finance Initiative in order to coordinate the promotion and development of French green and sustainable finance, particularly as part of international political and economic negotiations.

Internationally, the public dynamic could be further relayed in a collective action by the players of the Paris marketplace. Thanks to their expertise, they have gained an excellent reputation and are represented within numerous international green finance structuring bodies (PRI, Green Bonds Principles, Climate Bonds initiative, Global Compact, CDP, TCFD, etc.). This capacity for projection, often carried out individually (with the exception of EUROSIF, where the French FIR represents its members), could fit into a collective approach to drive a structured, consistent French marketplace position.

DEDICATING MORE FINANCIAL MARKETPLACE RESOURCES TO GREEN AND SUSTAINABLE FINANCE

The establishment of such an approach to representation and development requires appropriate resources to be made available. The existing organisation of the Paris marketplace has allowed the approach to be successfully launched. More substantial human and financial dedicated resources will make it possible to ensure the development of the Paris Green and Sustainable Finance Initiative in order to allow its members to benefit even more concretely from the advantages of an approach to coordination and collective management of their strengths and visions.

FULLY EXPLOITING THE PARIS FINANCIAL MARKETPLACE’S ECOSYSTEM

The deployment of the Paris Green and Sustainable Finance Initiative would lead to the development of discussions and new approaches to maximise the potential of the marketplace.
IDENTIFYING THE NEEDS AND AREAS OF WORK TO DEVELOP GREEN AND SUSTAINABLE FINANCE

The following areas have been identified as important to incorporate into a collaborative green and sustainable finance approach within the Paris marketplace:

► Research and innovation

Research and innovation were mentioned in almost all of the interviews as an essential mobilisation point in order to define the main research needs and resources and to coordinate the approach to subjects between academic research, think tanks, and professionals, particularly to adequately mobilise appropriate financing at a sufficient level in view of the rich potential identified in Part III of this report.

► The development of new dedicated tools and expertise

The structuring of new tools and expertise developed by the marketplace, whether it involves new products, data, and methodologies developed by the players, or resulting from any partnerships with other financial marketplaces, also appears among the priority areas of work.

► The monitoring of market trends and the European and international agenda for green and sustainable finance

The identification of barriers, opportunities, and market trends, the regulatory watch of green finance issues, as well as the preparation of the European and international agenda constructed jointly with the public authorities have also been identified as important areas for collaboration.

ORGANISING THE JOINT CONSTRUCTION OF A LONG-TERM STRATEGY FOR GREEN AND SUSTAINABLE FINANCE

The structuring of a strong approach would allow the economic players most directly involved in transactions to pool their vision with a view to dialogue with existing professional associations and the public authorities. The areas of progress are essentially related to collaboration, regulation, and the international agenda.

The interviews brought up the following topics in particular:

- Public/private relationships to construct new financing tools, particularly for infrastructure and intended for developing countries, together with institutions like Caisse des dépôts, the EIB, and AFD;
- Establishment of French and European standards for green bonds;
- Establishment of incentives for the development of green financing products (support for the development of green bonds and labels, evolution of prudential rules, and the “green supporting factor” proposed by the FBF);
- Discussions to lift the barriers to the emergence of long-term savings.

49 The green supporting factor proposed by the Fédération Bancaire Française consists in a prudential treatment adapted to energy transition financing and investments. It goes in the direction of the FBF’s proposals on financing the energy transition and, in particular, on the need to intensify the collaboration between the private sector and regulators to lower the relative cost of energy transition investments, which remains a major challenge.
Differentiate the Paris marketplace by the quality of its products and its expertise in green and sustainable finance

1. **STRENGTHENING THE EXPERTISE AND SUPPLY OF THE PARIS MARKETPLACE BY SUPPORTING RESEARCH AND INNOVATION**

   
   - **Starting in 2017,** launch an initial call for projects for the establishment of a global green financial marketplaces index ranking, with the goal of distinguishing the contribution of these marketplaces to financing the energy and ecological transition.

2. **Establish a permanent working group dedicated to green and sustainable finance research and innovation within the Paris Green and Sustainable Finance Initiative, together with Institut Louis Bachelier (ILB) and the FINANCE INNOVATION competitiveness cluster, in order to identify the main needs of the Paris marketplace, the players likely to address them, and the financing resources.** This working group could bring together professionals of the financial sector, members of the Paris Green and Sustainable Finance Initiative, think tanks, research institutes, academics, representatives of financial institutions and international organisations, and civil society.

3. **Position green and sustainable finance as a strategic priority of the FINANCE INNOVATION competitiveness cluster,** in order to enable the establishment of dedicated calls for projects and the emergence of innovative solutions with high added value on these topics.

4. **Create,** using the Climate Bonds Initiative as a model, a “Carbon Disclosure Initiative” intended to encourage the construction of investment portfolios positively contributing to the financing of the energy transition, the development of standards, as well as the production of public policy recommendations regarding carbon accounting. This approach would allow the marketplace to quickly ensure monitoring of:
   - the implementation of article 173 VI and the evaluation of standards;
   - the results of the FSB’s Task force on Climate-related Financial Disclosure (TCFD);
   - the methodological recommendations, in coordination with the discussions conducted, for example, within the Carbon Disclosure Project.

5. **Launch discussions on the development of new mechanisms for financing green infrastructure in both developed countries and developing countries,** together with the infrastructure working group of Paris EUROPLACE and French and European public investors.

6. **Launch discussions to organise the construction of new green and sustainable finance products:** Green Project Bonds, Green Equities, Social Bonds.
PROPOSALS

Strengthen synergies and public/private joint construction, sources of the French green and sustainable finance ecosystem’s vitality

7 Establish within the Paris Green and Sustainable Finance Initiative a permanent working group dedicated to defining standards and best practices, in coordination with the public authorities, first of all for the following discussions topics:
   - Green bonds, together with the European players and the Green Bonds Principles;
   - implementation of article 173 VI and preparation for its evaluation in 2018, together with the Ministry of the Environment, Energy, and the Sea and the General Directorate of the Treasury.

8 Develop, within the Paris Green and Sustainable Finance Initiative, recommendations intended for the public authorities and market players on barriers to the development of green and sustainable finance. The following topics, raised during the interviews, could be taken into account: collaboration, information, incentives (labels, green bonds), prudential regulations (green supporting factor), access to capital markets, establishment of long-term savings, etc.

9 Organise, within the Paris Green and Sustainable Finance Initiative, a continuous dialogue between the Paris marketplace and the public authorities, like the cooperation established for the development of the “Euro PP” market, in order to best prepare the French position at the European and international level, in particular for the monitoring of G20 and EU topics (Capital Markets Union – green finance), subject to the conditions of confidentiality and independence of the regulators. This dialogue is intended to provide technical and analytical added value to regulators in terms of best practices, standards, development, and quality of green and sustainable finance.
III. Organise the European and international standing of Paris as a green and sustainable financial marketplace.

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<th>ENSURING THE VISIBILITY OF THE PARIS GREEN AND SUSTAINABLE FINANCE INITIATIVE</th>
<th>GIVING THE PARIS MARKETPLACE THE MEANS TO DEVELOP GREEN AND SUSTAINABLE FINANCE</th>
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<td><strong>10</strong> ▶ Launch a dedicated brand for the Paris Green and Sustainable Finance Initiative supported by a communication strategy, annual deployment goals, and specific communication tools (logo, website, promotional brochures, videos, etc.). The organisation of an annual Climate Finance Day under this brand and by Paris EUROPLACE, in partnership with the financial marketplace of the country where the COP takes place each year, could be one of the initial actions for deployment of the brand.</td>
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<td><strong>11</strong> ▶ Organise the representation of the Paris Green and Sustainable Finance Initiative with European and international bodies as well as in the key professional associations of green and sustainable finance, either directly or through delegation to members of the initiative, by organising the coordination of feedback, monitoring, and sharing of information with members of the initiative.</td>
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<td><strong>12</strong> ▶ Establish an annual high-level presidency of the Paris Green and Sustainable Finance Initiative committee.</td>
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<td><strong>13</strong> ▶ Expand participation to new members, particularly to corporations, to components of the financial sector that are not yet represented, to civil society, international organisations and research organisations, in order to bring together all the stakeholders and ensure the transparency of the Paris Green and Sustainable Finance Initiative.</td>
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<td><strong>14</strong> ▶ Launch discussions in 2017 to develop synergies and enhance complementarities with other European marketplaces and financial institutions.</td>
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<td><strong>15</strong> ▶ Lastly, to meet the goals developed in all of the preceding proposals, establish a dedicated budget for the Paris Green and Sustainable Finance Initiative, covered by dedicated resources contributed by the members of the initiative.</td>
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This report was drafted by Laurene CHENEVAT, SRI analyst within the Research team of MIROVA, Responsible Investing with the support of Anne-Claire ROUX, Head of Sustainable Finance of Paris EUROPLACE. We offer special thanks to Hervé GUEZ, director of research at MIROVA, for his contributions and support.

Comments are welcome and may be sent to laurene.chenevat@mirova.com and ac.roux@paris-europlace.com

LIST OF INTERVIEWS CONDUCTED

- Orith AZOULAV, Head of SRI research, Natixis AM
- Corso BAVAGNONI, Head of the economy financing department - Sébastien RASPILLER, Deputy director of financing of companies and financial markets - Jean BOISSINOT, Bureau chief of the financial sector economic analysis division - Directorate General of the Treasury, Ministry of the Economy, Finance, and Public Accounts
- Xavier BONNET, Head of SEEIDD, Department of economies, evaluation, and integration of sustainable development, MEDDE/CGDD/SEEIDD
- Abdeljellili BOUZIDI, economist, consultant, independent researcher - Pascal CANFIN, Managing Director for France, WWF
- Anne CHASSAGNETTE, Director of environmental and societal responsibility, ENGIE
- Yves CHEVALIER, Member of the executive board; FRR - Olivier ROUSSEAU, Member of the executive board, FRR
- Tanguy CLAQUIN, Head of Sustainable Banking, Crédit Agricole CIB
- Isabelle COMBAREL, Investment director and Head of ESG, Swen Capital Partner
- Jérôme COURCIER, CSR manager, Crédit Agricole
- Laure DELAHOUSSE, Director of development of players and specialised management, AFG
- Philippe DESFOSSES, Managing Director, ERAFP - Pauline LEJAY, SRI Manager, ERAFP
- Blaise DUAULT, Chairman of the ESG Committee of the AFIC, Director of compliance and public affairs, PAI Partners
- Morgan DESPRES, Head of the financial regulation research and coordination department, Financial stability division, Banque de France
- Pierre DUCRET, Climate Advisor, Caisse des dépôts group and Chairman of I4CE - Maria SCOLAN, Climate project director, Caisse des dépôts group
- Stan DUPRE, Founder and director, 2°Investing initiative - Thomas BRASCHI, France Director; 2°Investing initiative
- Massimo FIORENTINO, Senior manager, Meridiam
- Pierre FORESTIER, Head of the climate change division - Ophélie RISLER, Climate change department - Djalal KHIMDJE, Director of the corporate, banking, and local authorities department - Thibaut MAKAROWSKY, Financial department, AFD
- Alain GRANDJEAN, Partner, Carbone 4
- Anne-Catherine HUSSON-TRAORE, Managing Director, Novethic
- Dorothée de KERMADEC, Director of risks, compliance, and sustainable development, CNP Assurances - Michael COHEN, Director of investments, CNP Assurances
- Chris KNOWLES, Head of Climate Change & Environment Division, European Investment Bank (EIB) - Cyril ARNOULD, Head of The Global Energy Efficiency and Renewable Energy Fund, European Investment Bank (EIB)
- Philippe KUNTER, Director of sustainable development and CSR, Bpifrance - Catherine MAILLE, Manager of sustainable development and CSR, Bpifrance
- Michel LAVIALE, Member of the CSR committee and Chairman of the working group on extra-financial performance of organisations, MEDEF, Chairman of Club Finance, ORSE - Patricia LAUDAUD, Manager of Club Finance, ORSE
- Benoît LEGUET, Managing Director, I4CE
- Alexandre MARTY, Investor Relations, EDF
- Jean-Michel MEPUIS, Director of sustainable development, Société Générale - Denis CHILDS, Head of Positive Impact Finance and Environmental & Social Advisory, Société Générale CIB
- Nicole NOTAT, Chairman, Vigeo-Eiris
- Marie-Pierre PEILLON, Director of research, Groupama AM
- Virginie PELLETIER, Head of Sustainability, BNPP CIB - Severin FISCHER, Head of Environmental Affairs, BNP Paribas
- Nicolas PFAFF, Senior Director, Market Practice and Regulatory Policy, ICMA, Secretary to the Green Bond Principles
- Nhay PHAN, Managing Director, Paris Branch, Bank of China
- Thierry PHILIPPONAT, Chairman of FFR and Director of Institut Friedland
- Aldo ROMANI - Managerial adviser and Deputy Head of Funding, Capital Markets Department, European Investment Bank (EIB) - Monica SCATASTA, Head of Environment, Climate and Social Policy, European Investment Bank (EIB) - Nancy SAICH, Investment Bank’s senior advisor on climate action and environment, European Investment Bank (EIB)
- Laurent SAINT-MARTIN, Head of listings France, Euronext
- Frédéric SAMAMA, Deputy Global Head of Institutional Clients, Amundi and Thierry BOGATY, Head of Amundi SRI Expertise, Amundi (transmission of written responses)
- Pierre SORBETS, Vice-Chairman Public Sector, HSBC France Global Banking - Marine de BAZELAIRE, Director of sustainable development, HSBC
- Jean TRICOU, Director of Investment banking, Fédération Bancaire Française (FBF) et Pascale CHABRILLAT, Advisor in charge of international affairs, Fédération Bancaire Française (FBF)
- Sylvain VANSTON, Manager, Sustainability and Public Affairs, AXa
- Nicholas VANTREESSE, Manager of Sustainable Development, La Banque Postale - Najib SASSENOU, Director of SRI and sustainable development, La Banque Postale AM
APPENDIX 1


SPECIALIZED INVESTMENT INSTITUTIONS

1. Green Banks - Sponsor the creation of the China Ecological Development Bank and encourage the creation of local green banks.
2. Green Funds - Promote the development of green industry funds through public-private partnership arrangements.
3. Green the Development Banks - Adopt environmental policies for overseas development institutions.

FISCAL AND FINANCIAL POLICY SUPPORT

4. Discounted Green Loans - Improve the system for providing discounted interest rates on green loans.
5. Green Bonds - Develop the green bonds market by issuing industry guidelines, permitting and encouraging banks and enterprises to issue green bonds and providing incentives.
6. Green IPO - Improve the mechanism through which environmental performance is communicated and recognized in equity markets.

FINANCIAL INFRASTRUCTURE

7. Carbon Markets - Accelerate the formation of markets for emission trading.
8. Green Ratings - Establish a green rating system to bring down the financing costs for green enterprises and projects.
9. Green Stock Indices - Promote the creation and use of green stock indices that orient the capital market to green industry.
10. Environmental Cost Analysis - Create a public nonprofit environmental cost analysis system and database.
11. Green Investor Network - Create a green investor network to foster the expertise and capabilities of institutional investors in investing in green industries.

LEGAL INFRASTRUCTURE

13. Lender Liability - Identify and clarify environmental liabilities of banks.
14. Compulsory Disclosure - Establish mandatory environmental disclosure requirements for listed companies.

APPENDIX 2

List of French asset holders and managers involved in SRI, questioned as part of the 2015 NOVETHIC STUDY OF SRI FIGURES

ASSET HOLDERS:

AGIRC-ARRCO - Agrica - BNP Paribas Cardif - Caisse des Dépôts - CNP Assurances - Crédit Agricole Assurances - Etablissement de Retraite Additionnelle de la Fonction Publique (ERAFP) - Fonds de Réserve pour les Retraites - Institution de Retraite Complémentaire des Agents Non Titulaires de l’État et des Collectivités publiques (IRCANTEC) – MAIF

ASSET MANAGERS:


* For the Novethic study, only assets of French investors were considered

Source : Novethic 2015
APPENDIX 3

Signatories from the Paris financial marketplace to the
MONTREAL CARBON PLEDGE

Amundi AM; AXA Group; BNP Paribas Investment
Partners; BNP Paribas Cardif; Bpifrance; Caisse
des Dépôts (CDC); Candriam Investors Group;
CNP Assurances; Edmond de Rothschild Asset
Management; ERAFP; Fonds de Réserve pour les
Retraites (FRR); Humanis; Investisseurs et Partenaires;
Ircantec; La Banque Postale AM; Mirova; Sycomore

APPENDIX 4

Signatories of the
2020 CARBON INITIATIVE

Acces capital Partners; Aviva capital; Alterequity; Apax
Partners; Ardian; Azulis Capital; Demeter Partners;
Eurazeo, Keensight capital; LBO France; Naxicap
partners; Nixen; Omnes capital; PAI Partners; 21
Centrale Partners; Swen capital Partners
## APPENDIX 5

Details of some of the commitments made by
PLAYERS OF THE PARIS FINANCIAL MARKETPLACE DURING THE COP21

<table>
<thead>
<tr>
<th>CARBON FOOTPRINT REDUCTION</th>
<th>GREEN INVESTMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INSURANCE COMPANY</strong></td>
<td></td>
</tr>
<tr>
<td>Axa</td>
<td>Disinvestment of companies most exposed to activities related to coal (more than 500 million euros) and introduction of ESG criteria (environmental, social, and governance) in all “general fund” portfolios.</td>
</tr>
<tr>
<td><strong>BANKS</strong></td>
<td></td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>Stopping the financing of coal extraction. Strengthening the carbon risk management system.</td>
</tr>
<tr>
<td>BPCE Group</td>
<td>Stopping the financing of coal-fired power plants and thermal coal mines</td>
</tr>
<tr>
<td>Crédit Agricole</td>
<td>Stopping the financing of plants or extension of coal-fired plants in high-income countries, as defined by the World Bank</td>
</tr>
<tr>
<td>Société Générale</td>
<td>Stopping the financing of coal mine development projects and coal-fired power plant projects in high-income OECD countries.</td>
</tr>
<tr>
<td><strong>COMPANIES</strong></td>
<td></td>
</tr>
<tr>
<td>Amundi</td>
<td>Measuring the carbon footprint of portfolios and creating a low-carbon index fund</td>
</tr>
<tr>
<td>Natixis/Mirova</td>
<td>Publishing the first carbon footprint of Mirova’s investments in listed equities, representing €2.8bn in assets under management, or 47% of its assets under management.</td>
</tr>
<tr>
<td><strong>COMPANIES</strong></td>
<td></td>
</tr>
<tr>
<td>EDF</td>
<td>Closing of 2,850 MW in coal-fired power plants initiated over the 2013-2016 period.</td>
</tr>
<tr>
<td>ENGIE</td>
<td>Stopping new development projects in coal.</td>
</tr>
</tbody>
</table>

On the private equity side, five companies representing 70 billion euros in assets under management (Apax Partners, Ardian, Eurazeo, LBO France, and PAI Partners) created the “2020 Carbon Initiative” and made a commitment to disclose and reduce the carbon footprint of their holdings by 2020.

Source: Paris EUROPLACE
### APPENDIX 6

#### Reminder of the Sustainable Development Goals

**THE UN’S 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT**

<table>
<thead>
<tr>
<th>#</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>End poverty in all its forms everywhere</td>
</tr>
<tr>
<td>2.</td>
<td>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</td>
</tr>
<tr>
<td>3.</td>
<td>Ensure healthy lives and promote well-being for all at all ages</td>
</tr>
<tr>
<td>4.</td>
<td>Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</td>
</tr>
<tr>
<td>5.</td>
<td>Achieve gender equality and empower all women and girls</td>
</tr>
<tr>
<td>6.</td>
<td>Ensure availability and sustainable management of water and sanitation for all</td>
</tr>
<tr>
<td>7.</td>
<td>Ensure access to affordable, reliable, sustainable and modern energy for all</td>
</tr>
<tr>
<td>8.</td>
<td>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td>
</tr>
<tr>
<td>9.</td>
<td>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</td>
</tr>
<tr>
<td>10.</td>
<td>Reduce inequality within and among countries</td>
</tr>
<tr>
<td>11.</td>
<td>Make cities and human settlements inclusive, safe, resilient and sustainable</td>
</tr>
<tr>
<td>12.</td>
<td>Ensure sustainable consumption and production patterns</td>
</tr>
<tr>
<td>13.</td>
<td>Take urgent action to combat climate change and its impacts</td>
</tr>
<tr>
<td>14.</td>
<td>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</td>
</tr>
<tr>
<td>15.</td>
<td>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</td>
</tr>
<tr>
<td>16.</td>
<td>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</td>
</tr>
<tr>
<td>17.</td>
<td>Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development the global partnership for sustainable development</td>
</tr>
</tbody>
</table>
