LISTEN TODAY TO THE WORLD OF TOMORROW

SPECIAL EDITION

EUROPEAN INVESTOR SUMMIT 2022

THE FUTURE IS YOU

SOCIETE GENERALE
Securities Services

BACK TO THE FUTURE
OF THE INVESTMENT INDUSTRY

After two years of successive lockdowns and long periods of working from home, it is very nice to be able to finally meet you, our clients and partners, in person again for this third edition of the European Investor Summit. For you and for us, **this day marks a most welcome return to near normalcy that many of us hardly dared hope for**.

2022 is already undeniably a peculiar year, with significant health uncertainties, major international geopolitical crises, key electoral stakes, rising inflationary thrusts and understandably disconcerted financial markets. However, if 2021 has taught us anything, it is that **even under the most unusual of circumstances, the investment industry is capable of tremendous resilience and even brazen growth**. In my opinion, this momentum can only be further fuelled by the exchange of ideas between peers, which is essentially the raison d'être of the European Investor Summit.

For this new edition, **renowned experts from our industry and beyond have once again graciously agreed to be speakers** and share their views on our current and future environment. I would like to warmly thank them, as well as the authors of the articles in this magazine, for both their contribution and their commitment to the European Investor Summit.

This magazine is meant to be a reflection of, an illustration of and a complement to the topics covered in the conferences that have made up this event. I hope it will allow those present to **extend the experience of the day and give** those who could not **attend a flavour of what it was like**.

I would also like to express my sincere appreciation to all the participants of the 2022 European Investor Summit, and I hope you have enjoyed the panels and keynote speeches that have punctuated this insightful day. As a reader, I trust you will appreciate and be inspired by the selection of articles in this magazine.

I am already looking forward to the next edition of the European Investor Summit and trust that it will be just as successful, if not more so, than the previous ones.

Yours sincerely,

GILDAS LE TREUT
Co-Head of Coverage, Marketing & Solutions
Societe Generale Securities Services

CONTENT

IN COLLABORATION WITH euroclear MFEX

CLOUDS OF UNCERTAINTY WITH DEFINITE SILVER LININGS

DAVID ABITBOL

Head of **Societe Generale Securities Services**

For this **European Investor Summit**, Societe Generale Securities Services has chosen to include major topics of interest and concern for the investment industry on the agenda. SGSS is thrilled to be sharing the stage with globally recognised experts who have graciously agreed to share their knowledge and shed light on the current challenges and opportunities of a complex environment. After all, as an asset servicer, our role in a changing world is also to **reflect and engage with our clients and partners on topics that are both prominent in our industry and relevant to them**; most notably ESG[1], private markets and digitalisation.

These trending topics were already prevalent pre-COVID and have only gained momentum since. **With the Russian-Ukrainian war and revived inflation arising as tragic new contributories to global uncertainty, it is undeniably worthwhile pondering the future of these current trends**. Will they maintain momentum, accelerate or start to falter?

Firstly, **ESG has been going strong for years now**, fuelled by regulations with a strong impetus from the EU[2], as well being driven by ever growing investor interest. By way of illustration, Bloomberg Intelligence forecasts that ESG assets are on track to exceed $50 trillion by 2025, representing more than a third of the projected $140.5 trillion[3] in total global AuM[4]. However, one might rightfully wonder whether the war in Ukraine will not slow down the bourgeoning energy transition and temper the enthusiasm of even the most fervent ESG advocates. For that matter, one can see a notable change in tone between the last two editions of Larry Fink's letter to BlackRock shareholders. Indeed, whereas 2021's letter emphasised the company's net zero commitment, the letter in 2022 focuses on the deleterious effects of the Russian-Ukrainian crisis on the energy transition and the need for a step-by-step approach «from brown to light brown to light green to green», which will probably be reflected in the future of the firm's investment choices.

Secondly, **private markets AuM are continuing to grow rapidly**, reaching $9.8 trillion as of July 2021[5], seemingly becoming a perennial source of financial performance for investors of all stripes. And experts only see this groundswell continuing, with AuM expanding by $4.2 – $5.5 trillion by 2025 to $13.7 – $15 trillion in worst/best-case scenarios[6]. Nevertheless, signs of a potential turnaround, such as all-time high levels of dry powder or concerns about the availability and sustainability of this asset class, are definitely worth being explored.

Finally, the **digitisation of operational processes, distribution models and assets continues to gain momentum** across the entire financial ecosystem, with the use of advanced technologies such as artificial intelligence, and digital distribution channels becoming more widespread in parallel with the explosion of investor appetite for crypto assets. Evidenced by looking at crypto market capitalisation which has soared from $80 billion to $1.2 trillion between 2016 and the end of May 2022[7]. While apparently these trends may thrive and provide a formidable matrix for the growth and evolution of our industry, some legitimate questions remain, even if only those which address interaction between human and machine or our ability to adapt to these major paradigm shifts.

All in all, I am delighted to have this opportunity to meet with all of you, our clients and partners, at **the 2022 European Investor Summit, which I hope will leave you with plenty of food for thought by focusing debate in the right places**. I am confident that these high-level debates will lead to passionate and inspiring discussions and I look forward to sharing views with you.

(1) Environmental, social and governance. **(2)** European Union. **(3)** Bloomberg Intelligence, ESG 2021 Midyear Outlook, July 2021. **(4)** Assets under Management. **(5)** McKinsey Global Private Markets Review 2022, March 2022. **(6)** Prime time for private markets: The new value creation playbook, PwC, January 2021. **(7)** Coinmarketcap.com, data as of 29 May 2022.

EU SUSTAINABLE FINANCE REGULATION IN CONTEXT

MARTINA MACPHERSON

Visiting Fellow

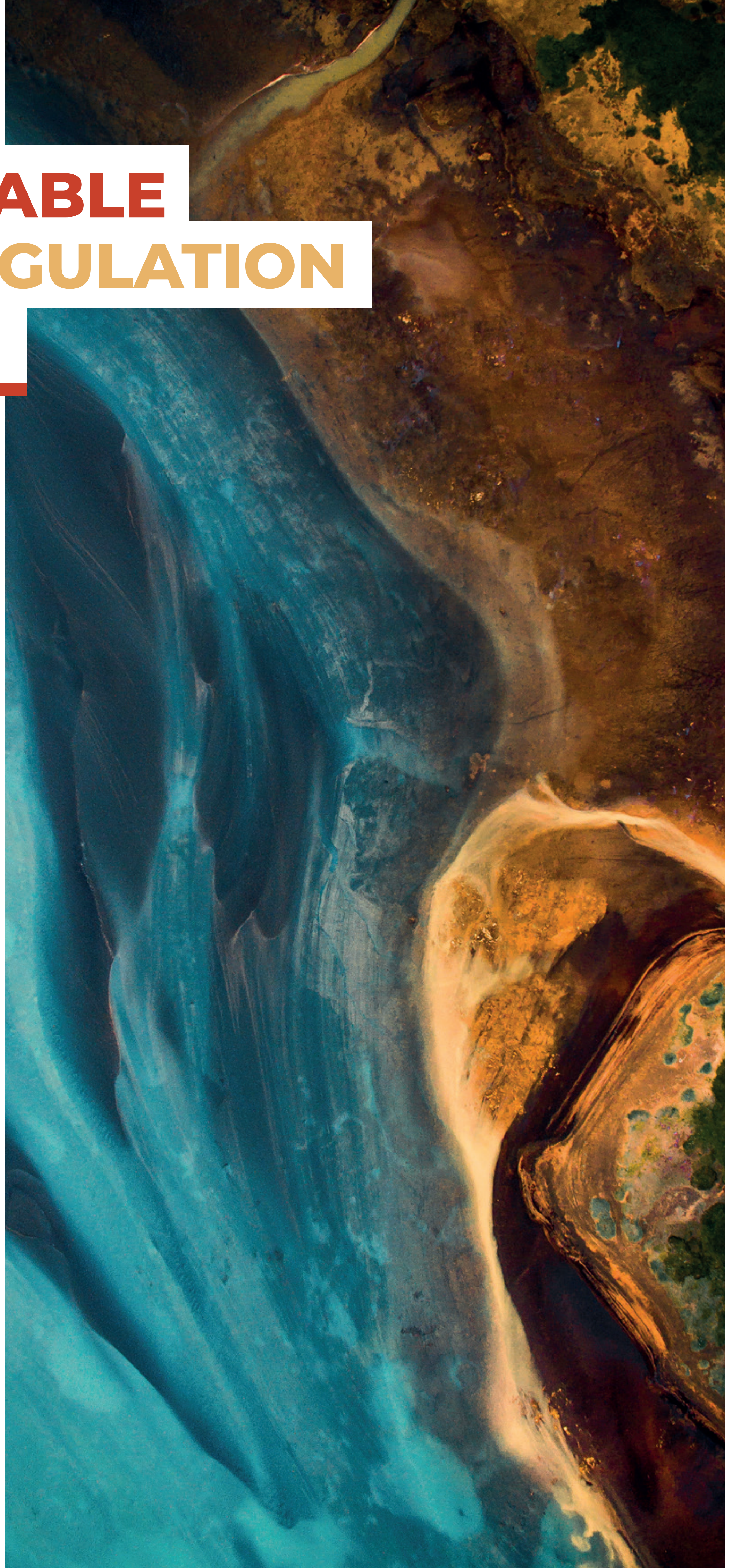
Henley Business School

THE SUSTAINABLE INVESTMENT MARKET IN CONTEXT

Sustainable investing has entered the mainstream, with more than US$35 trillion being allocated towards environmental, social and governance (ESG) approaches, according to the Global Sustainable Investment Alliance (GSIA)'s "Global Sustainable Investment Review" (2020)[1]. The trend is clear: the adoption of ESG funds continues to grow unabated. **Bloomberg Intelligence (2021)[2] estimates that the sustainable investment market may even reach up to US$53 trillion by 2025**.

The increased emphasis on ESG considerations in investments is not limited to the amount of assets that ESG-themed funds managed to attract but also extends to forward - looking considerations of such investments in the context of long-term value creation.

Active ownership, where investors use their rights and position of ownership to influence the behaviour of investee companies[3], underpins this approach and supports investors in engaging for positive change trajectories. Indeed, active ownership is closely aligned with the aims set up in corporate governance and stewardship codes, and it is what shareholder groups are using to pressure companies to further tighten their ESG objectives.



Overall, *the Global Sustainable Investment Alliance* (GSIA) highlights seven main ESG approaches for sustainable investing into which most sustainable investment funds fit. They include ESG integration, negative screening, norms-based screening, positive and best-in-class screening, corporate engagement and shareholder action, sustainable-themed investing and impact and community investing.

REGULATORY DRIVERS AND THE IMPLEMENTATION OF THE EU'S SUSTAINABLE FINANCE ACTION PLAN

Alongside the growing interest in ESG investing, there have been a range of ESG regulatory efforts initiated by regulators around the world, with the *Principles for Responsible Investing* (2021)[4] reporting that there are now more than 750 policy tools and guidance frameworks globally, including 159 new or revised ESG policy instruments.

In Europe, the EU Commission launched the *Green Deal* (2020), a set of policy initiatives with the overarching aim of making the European Union (EU) climate neutral in 2050. The aim is:

- to review each existing European law on its climate merits,
- to introduce new legislation on the circular economy, building renovation, biodiversity, farming and innovation, and
- to make the EU's climate, energy, transport, and taxation policies fit for reducing net greenhouse gas emissions by at least 55% (= *"Fit for 55"*) by 2030, compared to 1990 levels.

EU sustainable finance regulations have been following suit: The EU's *Sustainable Finance Action Plan*, first introduced in 2018, introduced a range of major ambitions for financial markets in alignment with the 2015 Paris Agreement and Agenda 2030 for Sustainable Development: to "reorient capital towards sustainable investment", to "manage financial risks stemming from ESG risks", and to "foster transparency and long-termism in financial and economic activity". A core piece of this regulation is the *EU Sustainable Finance Disclosure Regulation* (EU SFDR, 2019/2088/EU), a set of rules that aim to disclose the sustainability profile of investment products. The regulation introduces 3 key definitions:

(1) "sustainable investment", (2) "sustainability risk" and (3) "sustainability factors", which are defined as follows:

1. *Sustainable investment* is an investment in an economic activity that (i) contributes to either an environmental or a social objective; (ii) does not significantly harm any environmental or social objectives and (iii) where the investee company follows good governance practices.
2. *Sustainability risk* is an environmental, social or governance event or condition that, if it occurs, could cause a material negative impact on the value of an investment.
3. *Principal Adverse Impacts* (PAIs) on sustainability factors are the investment's impact when considering environmental, social and employee, human rights, anti-corruption and anti-bribery matters.

EU SFDR uses a "three-pillar" classification system as laid out by (1) Article 6 ("no"), (2) Article 8 ("light green") and (3) Article 9 ("dark green"). The disclosure of "sustainability risks" and "Principle Adverse Impacts" in line with EU SFDR will be achieved through a list of pre-defined metrics for assessing the environmental, social and governance (ESG) outcomes of an investment process.

EU SFDR goes closely hand in hand with the *EU's Sustainable Finance Action Plan*, as well as with existing sustainable/finance regulations, such as *MiFID II* (clients' sustainability preferences) and the *EU's Green (and in future Social) Taxonomy*, when and where sustainability risk and principle adverse impact assessments and overarching principles such as "do no significant harm" are concerned. **The ambition is centred around creating more harmonisation, standardisation, and better corporate and investor disclosure** standards when and where ESG frameworks, metrics and classifications are concerned. However, **multiple challenges remain**, especially when and where differences in EU versus local disclosure regulation, implementation timelines for all the regulatory components and reporting commitments in alignment with the EU Taxonomy on the corporate versus the investor side are concerned. And there is still an "Aggregate Confusion"[5] when comparing the different ESG research and rating methodologies, which all follow separate approaches in relation to their "scope", "measurements", and "weightings".

Looking at the recent report by the International Organisation of Securities Commissions (IOSCO) report on "ESG Ratings and Data Products Providers" (2021)[6] and the announcement by the European Securities and Markets Authority's (ESMA) aiming to address greenwashing and promoting transparency in ESG ratings[7], **there is hope that all these efforts combined will finally lead to more clarity, comparability, and consistency around ESG convictions, narratives and definitions** across the investment value chain.

(1) Global Sustainable Investment Alliance, Global Sustainable Investment Review, 2020. **(2)** Bloomberg Intelligence, ESG Assets May Hit $53 Trillion by 2025, a Third of Global AUM, 23 Feb. 2021. **(3)** A Practical Guide to Active Ownership in Listed Equities, UN Principles for Responsible Investments, 2018. **(4)** PRI, Regulation Database, Link: https://www.unpri.org/policy/regulation-database. **(5)** MIT Sloan Business School, The Aggregate Confusion, May 2019. **(6)** International Organisation of Securities Commissions, Environmental, Social and Governance (ESG) Ratings and Data Products Providers, Final Report, Nov. 2021. **(7)** European Securities and Markets Authority, Sustainable Finance Roadmap 2022-24, 10 Feb. 2022.

THE ENVIRONMENTAL CHALLENGES OF BLOCKCHAIN

LAURENT MAROCHINI

Head of Innovation

Societe Generale Securities Services Luxembourg

Blockchain, the technology that gave rise to cryptocurrency, is often seen as one of the greatest innovations of the 21st century. Some experts herald it as the Internet of Value because of its new distributed concept.

Most cryptocurrencies are produced by a so-called mining system, a protocol for validating transactions by solving mathematical problems. The «miners», who lend their computing power, are increasingly attracting public scrutiny for their ballooning electricity consumption and carbon footprint. However, the technological developments in the works suggest that this problem could be resolved in the years to come.

ELECTRICITY CONSUMPTION AND CARBON FOOTPRINT: DEVASTATING AND DEMONISED

The main challenge blockchain currently faces is its environmental impact. This challenge was highlighted by a survey of the Luxembourg market conducted in the fourth quarter of 2021 by LHoFT and PWC with the participation of ALFI.

This survey reveals that 31%[1] of respondents consider ESG to be the number one issue. In a world where climate change is a top priority, one of the protocols used, POW (Proof Of Work), is strongly criticised because it is a glutton for energy. This criticism comes in the wake of many (sometimes contradictory) studies and analyses of electrical consumption related to blockchain activity. If Bitcoin were a country, it would rank as the 26th largest consumer of electricity[2]. **It is acknowledged that POW, which underpins the capitalisation of 65% of cryptocurrencies, is a major consumer of energy**. The Cambridge Bitcoin Electricity Consumption Index[3], which provides quantified data about the crypto network, reveals that Bitcoin's energy consumption over a rolling year is estimated at 133 terawatt hours. In addition to the energy consumed, its carbon emissions are also denounced because mining devices often have short lifespans (less than 1.5 years) and are hardly recycled.

PUTTING THE INFORMATION IN CONTEXT

Compared to other business sectors[4], Bitcoin's electricity consumption is still lower than that of the financial industry, for example. Data centres are also among the most energy-intensive activities. **For cryptocurrencies, non-POW protocols such as POS (Proof Of Stake) consume up to 99% less energy**. Ether, the second-biggest cryptocurrency in terms of capitalisation, has begun its migration to the POS protocol. Also, we should point out that almost 70%[5] of the energy currently used to power the cryptocurrency industry is renewable. Finally, some projects have been designed to use the heat generated by mining machines to heat schools, swimming pools and hospitals[6].

REGULATORY DEBATES

Blockchain electricity consumption is also on the agenda of the main regulatory authorities and market infrastructures. MiCA (Markets in Crypto Assets), the European regulatory framework for crypto-assets, has long debated restrictions on these energy-intensive protocols. **Parliament finally voted on 15 March not to ban the use of the POW protocol**. At the same time, some market infrastructures planned ahead and asked to add environmental considerations. For example, in preparing to admit three security tokens to the Securities Official List (SOL) of the Luxembourg Stock Exchange, Societe Generale incorporated these elements into its documentation. This consideration is not limited to regulators and existing infrastructures. The cryptosphere is well aware of the challenge it must tackle; as such, it has issued a charter that targets carbon neutrality for the sector by 2040.

CRYPTO AND BLOCKCHAIN: A POSITIVE SOCIAL IMPACT

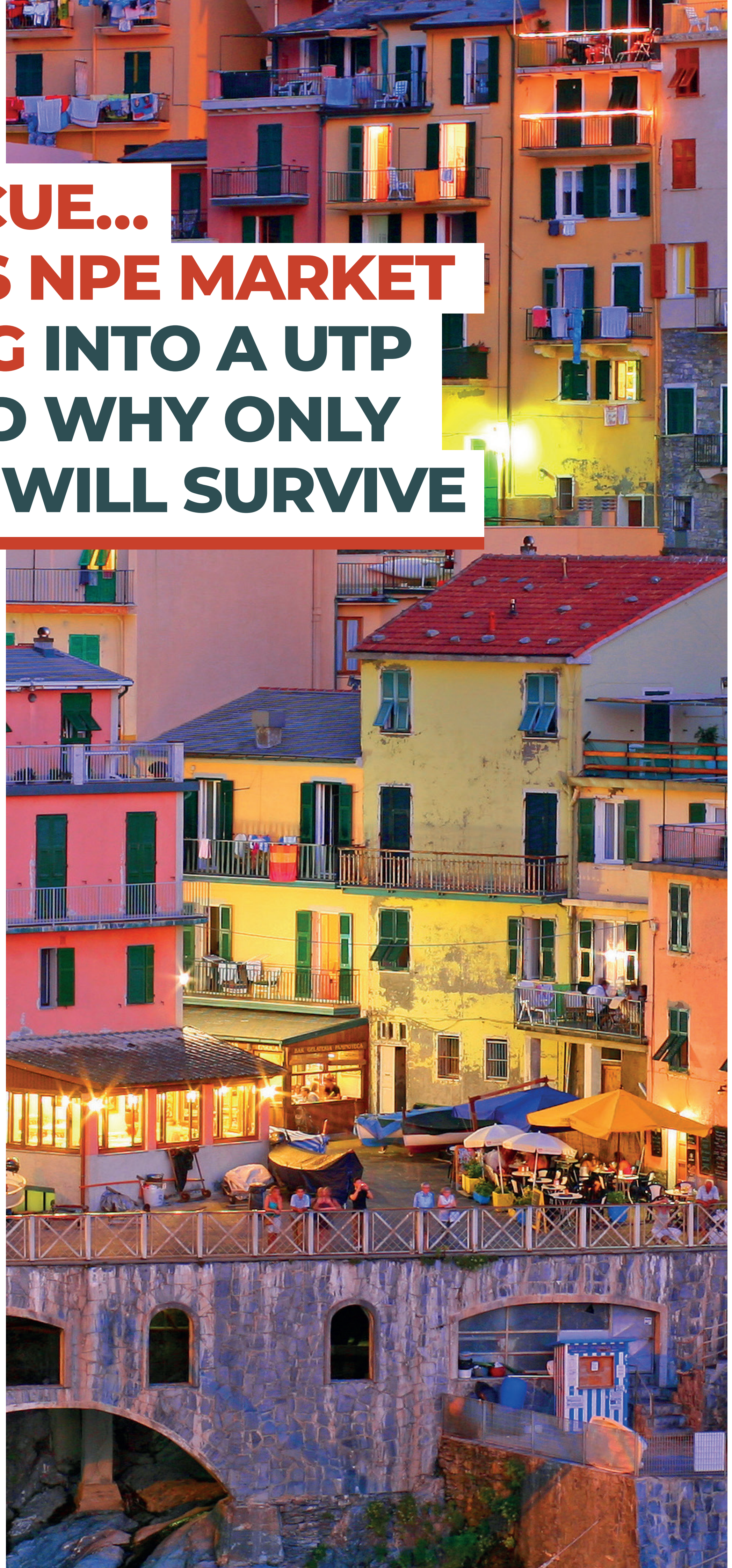
Although bitterly criticised for environmental reasons, the social aspect of cryptocurrency is a different matter entirely. **In a world where more than a billion people do not have bank accounts, cryptocurrencies can be a solution to draw them to payment circuits**. Because the transactions are automated and low-cost, they are contributing to micro-finance. The only requirement is a smartphone with an internet connection. In addition to cryptocurrency, the underlying Blockchain technology has traceability and transparency features that make it possible to develop interesting use cases. Land registries are a prominent example. According to the World Bank, 70%[7] of the world's population does not hold legally registered land. As a result, there have been a multitude of initiatives to address this shortcoming, particularly under the leadership of the United Nations Development Programme.

NOT TO MENTION GOVERNANCE

Governance is also a vital topic in emerging technologies. **Traditionally, corporate governance is centralised with identified roles and responsibilities. The concept is completely different in the context of cryptocurrencies, given their «distributed» nature**. Decisions here are taken by communities and, depending on the method, through votes and in a transparent manner. The votes are stored in so-called smart contracts, which make them tamper-proof and transparent. These decentralised organisations are likely to grow in the years to come, as DLT/crypto projects are launched. The issue of regulation will definitely be raised one day, particularly in terms of responsibility. Cryptocurrencies and the underlying blockchain technology are a wonderful invention, a source of innovation and the impetus to develop ambitious, ground-breaking projects. **The energy consumed to bring it to life is a real challenge in a world where global warming is everyone's business**. The development of new protocols could thus enable the technology to achieve its potential in the coming years, and to enable the whole world to benefit from it.

(1) Crypto-Assets Management Survey - https://lhoft.com/en/crypto-asset-management-report/ **(2)** https://climate.selectra.com/fr/empreinte-carbone/bitcoin (in French only) **(3)** https://ccaf.io/cbeci/index **(4)** https://www.nasdaq.com/articles/a-comparison-of-bitcoins-environmental-impact-with-that-of-gold-and-banking-2021-05-04 **(5)** https://www.lemonde.fr/pixels/article/2021/06/13/les-cryptomonnaies-encore-tres-energivores-a-la-recherche-d-un-avenir-plus-vert_6083959_4408996.html (in French only) **(6)** https://www.journaldunet.com/economie/finance/1505665-le-bitcoin-va-t-il-sauver-la-planete/ (in French only) **(7)** World Bank Group IEG: https://ieg.worldbankgroup.org/blog/why-land-administration-matters-development

TO THE RESCUE... HOW ITALY'S NPE MARKET IS MORPHING INTO A UTP MARKET AND WHY ONLY THE FITTEST WILL SURVIVE



RICCARDO SERRINI

CEO and General Manager

Prelios Group

The Non-Performing Exposure (NPE) Italian market remains the largest and the most active in Europe[1], generating interesting investment opportunities for institutional investors who are active in alternative investments and private markets. We are now witnessing a significant shift from Non-Performing Loans (NPLs) to Unlikely-to-Pay bank loans (UTPs). UTPs are a completely different play than NPLs, and only operators with adequate expertise and advanced technological know-how stand to benefit from the ongoing transformation of the Italian NPE scene. Here is why.

Italian banks have accomplished an incredible deleveraging plan starting in 2015, when the gross amount of NPE picked at €340+ Bn[2]. By the end of 2021 the total NPE was calculated to have reduced to €78 Bn, of which €45 Bn of UTPs and €33 Bn of NPLs[3]. Between 2015 and 2021, deleveraging was focused towards NPLs, and a key role was played by the GACS[4] scheme. In a nutshell, GACS is Italy's public guarantee issued in favour of investment grade senior tranches of public NPL securitisations. Arguably, it was GACS which re-started a rather sleepy public securitisation market. Almost €100 Bn of Gross Book Value (GBV) have been deleveraged through GACS so far[5].

THE INDUSTRIAL TRANSFORMATION OF NPE MANAGERS TO AN INTEGRATED AND SCALABLE PLATFORM APPROACH

The total stock of NPE sold to investors and still seated in Italian banks balance sheet **is worth €400+ Bn**, with exposure to real estate accounting for more than 50% of the stock and with corporate borrowers accounting for more than 80% of the total, mainly small and medium-sized enterprises[6] (SMEs). NPE disposals for about €47 Bn of GBV are expected for 2022[7]. The consequence has been **a deep industrial transformation of the industry in the management of the NPE**, including the real estate as collateral of the distressed loans.

The role of UTPs today warrants particular attention. These days more than 130,000 companies are classified as UTPs and, according to PwC[8], the new NPE flows will primarily be SMEs belonging to the sectors most affected by the crisis. These NPEs will require ad-hoc management by the banks. The changed regulatory context (first of all, the calendar provisioning) and the characteristics of the expected NPE inflows will not allow banks to behave as they did during the previous crisis, accumulating non-performing loans on their books for years and disposing of them with the help of solutions such as GACS.

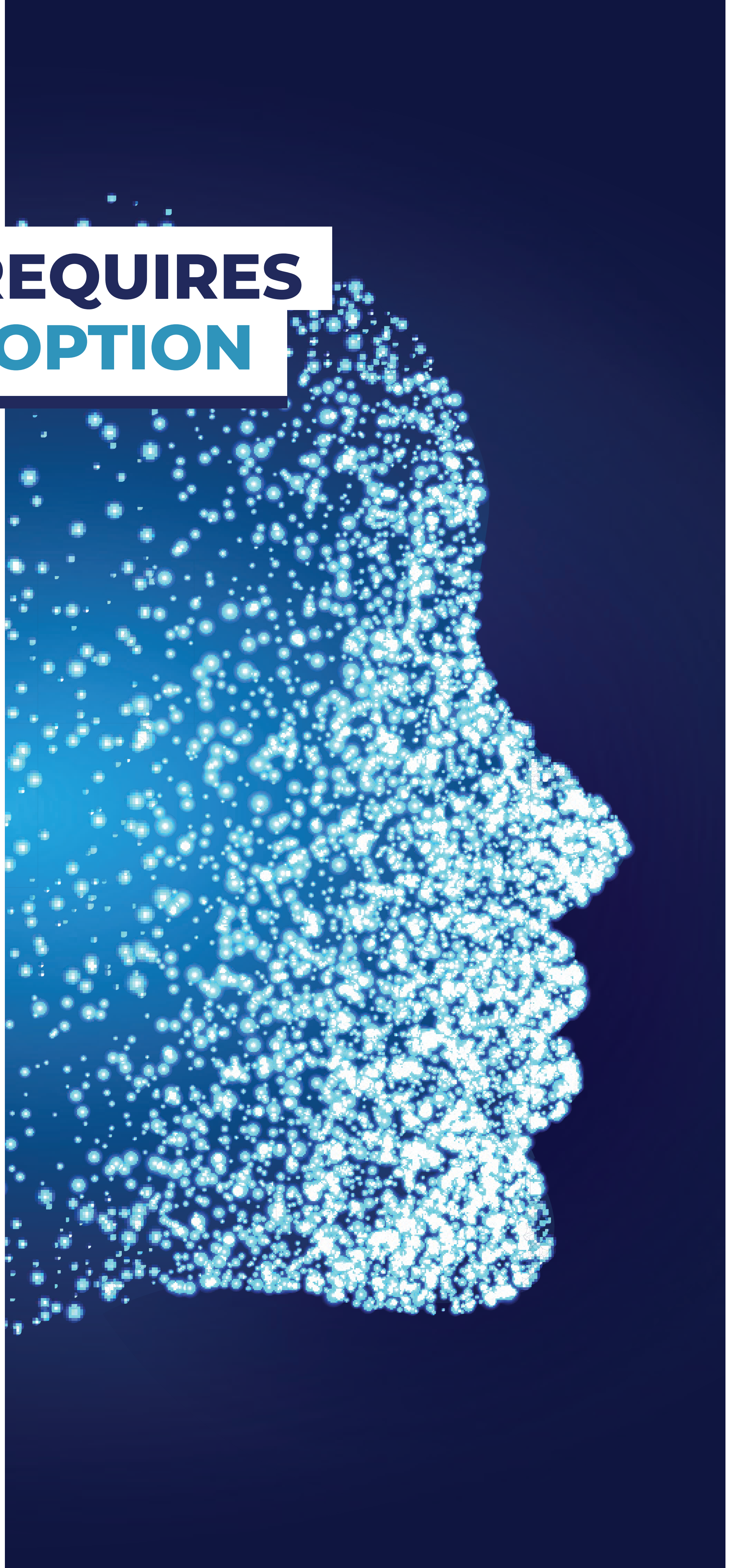
TECHNOLOGY, DATA MANAGEMENT AND EARLY INTERVENTION IN COMPANY CRISES AS KEY DRIVERS FOR FACING THE NEXT NPE WAVE

The existing macroeconomic setting creates **a large market for specialty lenders and direct lending, mainly to support SMEs** which are the backbone of the Italian economy. Invoice trading, factoring and alternative lending are the fields where we can see interesting opportunities of growth. However be mindful that most new flows will be UTPs. As such, they will be "live" loans and will require ad-hoc management by the banks. These exposures will need to be managed and guided not only by a financial institution but, above all, by an industry logic. They must be managed through a mixed perspective of recovery, turnaround and private equity. It is vital to have **proactive credit management once the first sign of a company crisis arises** (preferably starting from Stage 2, which peaked at €220 Bn GBV at the end of 2021[9]) and to support the borrower to overcome the negative phase they are facing. Very few operators possess this combination today. Importantly though: NPL credentials provide no guarantee of success in the UTP space.

Last but not least: the credit management industry is still a human-intensive business. The industry as a whole needs to strongly invest into **digitalisation and data management/ valorisation**. Only operators who take that seriously will be in a position to thrive and deliver substantial value.

(1) White& Case, COVID-19 and the state of the European NPL market, April 2021. **(2)** PwC, The Italian NPL Market, Transformation at Work..., December 2021. **(3)** Banca Ifis, Italian NPL sales fall to €33bn last year, Februray 2022. **(4)** Garanzia sulla Cartolarizzazione delle Sofferenze. **(5)** PwC, The Italian NPL Market, Transformation at Work..., December 2021. **(6)** Ibid. **(7)** Banca Ifis, Italian NPL sales fall to €33bn last year, Februray 2022. **(8)** PwC, The Italian NPL Market, Transformation at Work..., December 2021. **(9)** Ibid.

AI@SCALE REQUIRES TRUST & ADOPTION



JEAN-PHILIPPE DESBIOLLES

Vice-President & Managing Director, Financial Services, AI & Data Leader

IBM Industry Academy

In this early part of 2022, we are spotting an uptick that AI[1] is no longer just part of innovation but about core business transformation. To unleash the impact of cognitive solutions through transformational enterprise-grade initiatives, businesses are reaffirming their interest and their main blocker: AI Adoption.

Adoption and even more appropriation of cognitive computing by humans rely on an appropriate level of understanding regarding what AI is, the ability for every user to trust those advanced systems and, lastly, the will to objectivise when to rely on humans, machines or both.

But first and foremost, let's share and demystify three misconceived ideas and their respective impacts to successfully deploy cognitive enterprise at scale.

(1) Artificial Intelligence

DECONSTRUCT MISCONCEIVED IDEAS ABOUT AI

Data AND Learning

Firstly, do not only be obsessed with data but think learning processes. The challenge of AI is to teach a system something in a given context and purpose. This learning is driven by humans who therefore operate a transfer of knowledge, know-how and interpersonal skills to a so-called «intelligent» system. It is about **Data AND Learning**, which is actually the **real promise of AI**. The more it learns and the more it is used, the better it performs.

Algorithms, mathematics… AND cognitive sciences

Secondly, do not think only in terms of algorithms, statistics, and mathematics, but also in terms of **cognitive sciences**. AI is an eminently human subject. It covers cognitive dimensions through **6 capabilities:** language, voice, vision, complex reasoning, knowledge management and empathy. Big transformational AI & Data projects will require not only data scientists, but also a wide panel of business and industry experts; we need sociologists, semantics specialists, psychologists…. **Multidisciplinary** is a must and you need more than ever to develop a broad spectrum of skills within your teams.

Technology AND Humans

Finally, let's not make it only a technological topic. It is a subject where the priority is change management, in order to ensure the adoption and appropriation of the systems we make available to users. We are facing a new collaboration that requires new skills and new behaviours: Artificial Intelligence is a technology that changes **everything** for **everyone**. It will be able to influence our decision-making process at every stage and in any sector. Often reduced to its technological dimension, artificial intelligence is above all a **human revolution**, not a simple trend.
While cognitive systems have undeniable qualities in terms of hard skills, it is necessary that we value our **human intelligence** (interpersonal skills, empathy, team spirit…) to create a win-win relationship and make the best possible decisions: «AI will be what we make of it»[2]. So, adoption and appropriation are the keys to success, and it is essential to be prepared to surf the wave of AI and not be overwhelmed. To do that, **soft skills** such as critical/horizontal thinking, teamwork and "free will" are essential to interact with these systems in the best possible way: you will know why, when, and how to use it – or not!

(2) Desbiolles, Jean-Philippe. "AI will be what you make of it: The 10 golden rules of AI" Dunod Editions. August 2019. **(3)** Goehring, Brian, Francesca Rossi, and Beth Rudden. "AI ethics in action, an enterprise guide to trustworthy AI." IBM Institute for Business Value. April 2022. **(4)** Goehring, Brian, Francesca Rossi, and Beth Rudden. "AI ethics in action, an enterprise guide to trustworthy AI." IBM Institute for Business Value. April 2022.

OBJECTIVISE THE USE OF AI

The inexorable rise of AI has led us to think in a binary way, either that humans should be at the centre of everything and all the time… or on the contrary to think that machines should now take over, as they are overtaking us in many aspects.

However, the truth requires much more discernment with the challenge of being able to get objectivity and take informed decisions: **Why, When, How to optimise decision making** by minimising cognitive biases, by maximising the intrinsic characteristics of the human and/or the machine. We must now accept the fact that in some cases AI will be privileged, in others the Human will have to decide alone, and finally there will be cases where the Human and Machine have no other choice than to collaborate. But to continue through this approach, the Human would have to trust cognitive system outcomes.

IMPLEMENT TRUST AT THE CORE

Diversity & Inclusion

If we are not **inclusive** and do not ensure **fair diversity** of the group of individuals who are at the beginning of AI training processes and then ensure that those systems learn and improve; we will - by design - continue to create biases. We need to ensure that humans working on the subject reflect diversity in the broad sense of the word: beliefs, race, gender, etc. There is still a long way to go; a lot of work remains to be done. Until this point is reached, we may have developed the best tools and standards, but we will continue to generate bias in AI systems by design.

AI Trusted Framework to operationalise

That's why being able to put in motion the whole enterprise around 3 levers: **Enterprise Governance, AI Engineering, and Culture & Design**, will clearly create a competitive advantage. A recent IBM study revealed that *"75% of executives view ethics as a source of competitive differentiation"*[3]. To do so, companies would have to show they are mitigating bias risks through explainability, robustness and transparency of their cognitive solutions.

The same study shows that *"fewer than 20% of executives strongly agree that their AI ethics actions meet or exceed their stated principles and values"*[4], those values that are core business for them and their clients. All of this must be handled within an **ethical framework** that focuses on topics such as values, beliefs, sense of accountability, well-being… It means that we will explicitly frame what ethics means in a specific context, for a specific company and for individuals. So, let's stop talking about trends and focus on the application of AI in all business processes! Because, yes, we are going to live in an augmented world. Shouldn't the initials AI stand for Augmented Intelligence?

GREENFLATION: WHEN INFLATION MEETS ENERGY TRANSITION

KOKOU AGBO-BLOUA

Global Head of Economics, Cross-Asset and Quant Research

Societe Generale Corporate and Investment Banking

The battle to cool down the planet appears, ironically, to be heating up the economy. This is the essence of 'greenflation': the extra boost given to prices when conventional cost-push inflation – which we are currently experiencing as the world recovers from the pandemic thanks to massive fiscal/monetary stimulus and large excess savings – is supercharged by the costs of the green transition.

ENERGY TRANSITION COMES AT A SUBSTANTIAL COST

Not only is greenflation a non negligeable part of the higher wholesale and consumer prices that, since spring 2021, have been rapidly spreading from commodity and energy costs to electricity bills, food and even rent. It is also proving to be sticky, meaning that inflation as a whole is turning out to be less transitory than first hoped, leading to volatility across bond and equity markets and the need for a decisive tightening of monetary policy.

In hindsight, it was unrealistic to expect a task as enormous and enormously complicated and costly as the energy transition to cause no dislocation. **Consider the vast amount of commodities required to scale up clean energy production**.

"Building a single 100-Megawatt wind farm requires 30,000 tons of iron ore, 50,000 tons of concrete and 900 tons of non-recyclable plastics[1]."

Meanwhile, the lithium-ion battery in most electric vehicles (EVs) requires around 25 pounds of lithium and 30 pounds of cobalt as well as quantities of nickel, copper, graphite, steel and aluminium[2]. According to the International Energy Agency, the number of EVs is set to rise to 200M by 2030, from 18M today. Even that is only a fraction of the roughly 1.2 billion combustion engine vehicles currently on the road – so the demand for batteries will remain huge for years to come[3].

This is, unsurprisingly, fuelling a commodity boom. Yet despite mindboggling increases in prices lately, minerals such as copper, nickel, lithium and cobalt are in short supply. Partly this is due to geopolitical reasons: some rare earth metals, for example, are highly concentrated in just one or two countries. A second factor, however, is that the supply response one would expect from profit-maximising mining and energy companies is not forthcoming, or only very slowly. This can be partly explained by slower investments as their costs of capital increase and pressures from shareholders to reduce emissions mount.

BUILDING A SINGLE 100-MEGAWATT WIND FARM REQUIRES 30,000 TONS OF IRON ORE, 50,000 TONS OF CONCRETE AND 900 TONS OF NON-RECYCLABLE PLASTICS[1].

Moreover, the war in Ukraine is disrupting supply chains and having a significant impact on the price of commodities. Take the recent unprecedented increase in the price of nickel, a key metal for batteries and wind turbines, for example. This crisis is also causing European countries to seriously rethink their energy security strategies. Accelerating the transition to renewables is on the table in most capitals and will likely add to the upward price pressure key energy transition related commodities are seeing.

As countries around the world are setting bold targets for decarbonisation, they **are tightening regulations and even outlawing certain raw materials and fuels altogether – raising the costs of transition**. In Chile and Peru, which supply 40% of the world's copper, mining projects that used to take five years now take ten because of the extra environmental and social impact studies required[4]. As a result, commodity manufacturers are investing less than they otherwise would and are instead handing cash back to shareholders. The consequent lack of new supply is driving up prices. This is greenflation in action and demonstrates that good intentions, such as the top-down imposition of ESG standards, can have unintended consequences.

HOW SHOULD POLICYMAKERS REACT TO GREENFLATION?

If it remains largely confined to energy and commodity prices, they may be able to look through it, as European Central Bank executive board member Isabel Schnabel suggested in a recent speech[5] – in the same way that they exclude volatile food prices from their underlying inflation measures.

However, if greenflation turns out to be persistent, as seems likely, and begins to affect inputs across the economy, such as the level of wages, then **monetary policy will have to tighten in order to reimpose price stability**. Notably, the US Federal Reserve recently switched to signalling at least six interest rate hikes during 2022, the first one of a quarter of a percentage point having been announced on 16 March, while the market expects even more.

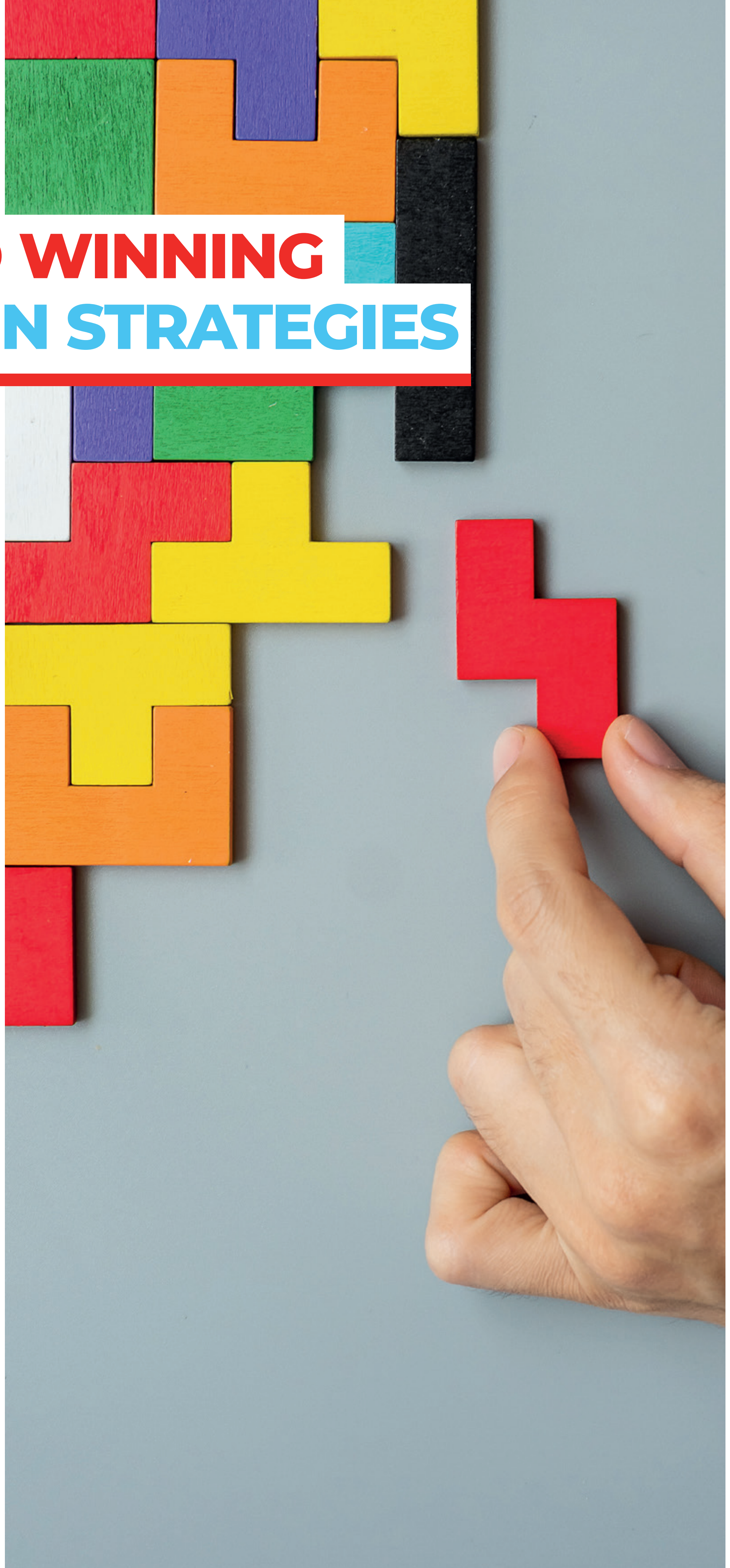
The problem is that raising interest rates could create some tensions between central banks and governments that are under pressure to increase spending to boost recovery from the pandemic, to compensate households, especially poorer ones, for rising prices – and, indeed, to finance the energy transition. This is a recipe for uncoordinated decision making and growing social tensions.

There is no easy solution, since fighting climate change and protecting people's living standards are both essential but prioritising one would appear to set back the other. A potential way through could be to not only focus our attention on decarbonising supply (electricity grids, transport and industries) but to also focus on decarbonising demand. In other words, to reduce the amount of carbon we produce by changing how we travel, eat and live.

This too has enormous social and ethical implications, though some of these might be mitigated through social spending financed via, for example, a (higher) carbon tax. Ultimately, when it comes to the energy transition there is no free lunch – and today's greenflation is just the first example.

(1) Mines, Minerals, and "Green" Energy: A Reality Check, the Manhattan Institute, July 2020. **(2)** Ibid. **(3)** Global EV Outlook 2022, Securing supplies for an electric future, International Energy Agency, May 2022. **(4)** https://www.forbes.com/sites/gradsoflife/2022/03/29/a-commitment-to-diversity-wont-necessarily-move-the-needle-on-change/ **(5)** "Looking through higher energy prices? Monetary policy and the green transition" - American Finance Association 2022 Virtual Annual Meeting.

THE KEYS TO WINNING DISTRIBUTION STRATEGIES



BRIGITTE DAURELLE
CEO
MFEX by Euroclear

INCREASED COMPLEXITY

10 or 15 years ago, asset managers, who needed to connect to a wide range of investors, had to build their own distribution channels. They did this based on performance, track record and relationships with gatekeepers.

Today, a lot of requirements around MiFID II[1], IDD[2], cross-border distribution, taxonomy, ESG[3], PRIIPS[4], AML[5] and KYC[6] have created a much more complex fund distribution industry. For instance, when asset owners want to buy or distribute third-party funds on behalf of their clients, private, retail or institutional, they need to agree to different commercial and regulatory conditions with each asset manager they want to work with. This represents quite the administrative burden for both counterparties without any added value.

Of course, a number of processes have now been intermediated and several specialists have emerged, thereby creating an eco-system for asset managers to distribute their funds. This eco-system is also fostering **the development of fund-commerce platforms, which offer to consolidate processes through outsourcing, digitalisation, automation, and standardisation.**

TARGETED AND CUSTOMISED FUNDS, THROUGH PLATFORMS

With the number of new investment products, ETFs[7] in particular, providing similar investment features and returns at much smaller costs, **investment fund managers need to create a product offer that matches investors' needs and demand, and make distribution more efficient and less costly**.

Fund platforms work with many asset owners and asset managers around the globe, providing economies of scale through the volume of contracts they manage. Platforms give asset managers access to all types of investors either via intermediaries or directly. In this case, the asset manager only signs one contract with the platform to access the network of fund distributors, thereby optimising their revenue streams.

They benefit from a single point of contact, distribution agreement and rebate management process with often a one-stop shop solution that includes enhanced fund distribution, data solutions, and tailor-made solutions. A differentiator for the fund platforms is the flexibility of their services.

DATA: THE NEW GOLD FOR THE FUND DISTRIBUTION BUSINESS

The fund sector is sitting on millions of trillions of units of data, which technology and artificial intelligence (AI) allow us to package in a way that will be useful for fund companies. Technology also allows certain fund platforms to pool data and information between the stakeholders of the distribution chain. Nowadays, providing data analytics, including data flows and data accuracy, all the way to the end-investor level is becoming part of the market's expectations, because it represents a concrete benefit for the industry.

Funds distribution platforms give asset managers access to data and transparency that will allow them to better capture investor behaviours. As a result, they will be able to adapt and optimise their investment and commercial strategy towards investors.

DIGITALISATION: NOT JUST AN ENABLER

Given all the new regulations that have been introduced over the last decade and the related complexity for all stakeholders, asset managers and owners to comply, fund platforms have no choice but to fully automate regulatory tasks (AML/KYC, regulatory reporting for PRIIPS, KIID[8], EMT[9], EET[10]). There are tons of data and documents to be produced, and asset managers rely on fast, accurate, and hence digital processes.

Digitalisation is a no brainer when it comes to reporting and compliance but, as explained above, it will be key in creating value from data.

SIMPLIFYING ESG REPORTING

The proportion of sustainable funds is rising, and we saw ESG ETFs grow by 223%[11] in 2020. There is widespread enthusiasm for accommodating ESG metrics to reflect a 'greening' of the investment world as part of the transition to a more sustainable future.

Asset managers either based in the EU or selling into it are already required to provide disclosures, clearly demonstrating the importance of ESG credentials for funds. All in all, there is a lot of support for full disclosure.

Fund platforms can ease the reporting process for ESG asset managers and asset owners and play a key role in helping the transformation of the investment market.

THE FUTURE OF FUND DISTRIBUTION SERVICES IS BRIGHT…

…at least for fully fledged platforms as they bring real value to the different counterparties, kill some pain points and time-consuming tasks, and also bring in additional services such as business intelligence and regulatory services.

Fund platforms give asset managers and asset owners the time and freedom to focus on their core business: generating value for their customers, offering innovative, sustainable solutions and optimising revenue streams.

We will continue to see new data solutions emerge, using the large amounts of data collected through trades. The ever-stricter regulatory environment will keep on driving the different counterparties towards distribution platforms as long as the latter are able to provide easy solutions to tackle existing and new regulations.

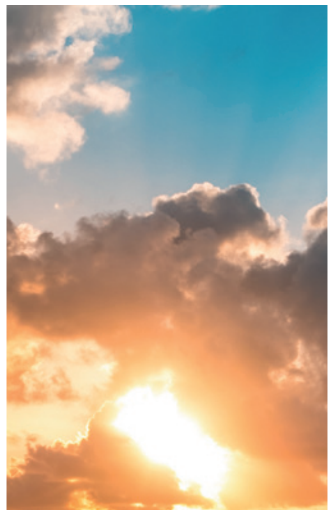
(1) Markets in Financial Instruments Directive (MiFID) II. **(2)** Insurance Distribution Directive (IDD). **(3)** Environmental, Social, and Governance (ESG). **(4)** Packaged Retail Investment and Insurance Products (PRIIPs) regulation. **(5)** Anti-money laundering regulations (AML). **(6)** Know Your Customer (KYC) processes. **(7)** Exchange traded funds (ETF). **(8)** UCITS Key Investor Information Document (UCITS KIID). **(9)** European MiFID Template (EMT). **(10)** European ESG Template. **(11)** Source: Trackinsight.

AUTHORS' BIOGRAPHIES

DAVID ABITBOL

Head of **Societe Generale Securities Services**

David Abitbol was appointed Head of SGSS in January 2019. David has more than 20 years of experience in global markets. He has been Chief Operating Officer for Societe Generale Asia Pacific and Chief Executive of Societe Generale Hong Kong Branch, since March 2014. He joined the bank in 1992 within the Group Finance division as an actuary then took up the role as Head of Financial studies and Funding Operations within the Asset and Liability Management Department. In 1997, he moved to Operations in Societe Generale Corporate & Investment Banking (SG CIB) as Project Director for Interest Rate Derivatives and the Futures and Money Market activities. In 2000, David joined the Capital Market Fixed Income Business Line as Programme Director. Among others, he was the bank's representative for the SwapClear project which established the world's first OTC clearing service with London Clearing House. In 2004, David moved back to Operations where he held various management positions and was eventually Global Head of Operations in SG CIB, in early 2010. David has a Master's Degree in Mathematics and Finance from Paris-Dauphine University and the Strastourg University Degree of Actuary.



GILDAS LE TREUT

Co-Head of Coverage, Marketing & Solutions

Societe Generale Securities Services

Gildas Le Treut is appointed Co-Head of Coverage, Marketing & Solutions in September 2021. He joined SGSS as Head of Sales and Relationship Management in May 2018 after 11 years at ABN Amro Clearing. Since 2007, he has been successively Managing Director of the branch in France (Fortis Bank Nederland), Global Head of Product & Network Management and Global Director of Prime Services. He has developed ABN AMRO Clearing franchise for institutional investors, banks, asset managers and hedge funds. He started his career in 1996 at BNP Paribas Securities Services in the equity clearing team where he occupied various positions before being promoted as Sales & Relationship Manager for Continental Europe. Gildas Le Treut has a Master's degree in Bank & Finance from Sorbonne University.

MARTINA MACPHERSON

Visiting Fellow

Henley Business School

Martina has held several global leadership roles in ESG strategy, product development and innovation, including Senior Vice President, ESG and Engagement Strategy at Moody's, Global Head of ESG Index Products and Research at S&P DJI, Managing Director of Sustainable Investments Partners Ltd. and Vice President of ESG Solutions at MSCI. Prior to this, she worked in ESG product, research and engagement roles at Insight Investment, F&C AM and at Deutsche Bank AG. She is a visiting fellow in sustainable finance at University of Zurich and Henley Business School. Martina has an MBA certificate in finance and business from LSBF / UK, and a master's in administration in Law and Human Sciences from University of Frankfurt in Germany. She is a fellow member of the Institute for Corporate Responsibility and Sustainability (ICRS) UK and an honorary doctoral fellow of the Institute for Certified Risk Management Professionals (ICRMP) UK. Martina is a public speaker in sustainable investing and has co-authored a range of ESG and Fintech books, including "The AI Book" (Wiley, 2020). She has designed, structured, and delivered ESG governance and policy frameworks, due diligence data and risk management systems, and programs in climate risk and ESG strategy, research, investment, index, and analytical products, conventional and alternative ESG data, active ownership & stewardship, and in ESG reporting for corporations and investors.

LAURENT MAROCHINI

Head of Innovation

Societe Generale Securities Services Luxembourg

Laurent Marochini is Head of Innovation at Societe Generale Securities Services in Luxembourg. Since 2018, Laurent is also Blockchain Leader for the Societe Generale Group. Prior to joining SGSS, Laurent held various management positions in the banking sector, in BNP Paribas Securities Services and Credit Suisse Private Banking. He joined Societe Generale in 2006 as a risk manager. Laurent is highly involved in the Fintech ecosystem. He is Co-Chairman of the ALFI (Association Luxembourgeoise des Fonds d'Investissements) Working Group Blockchain & Crypto Currencies and member of the Fintech & Digital Executive Committee, President of the taskforce Blockchain and crypto at the LHoFT (Luxembourg House of Financial Technology), as well as Vice Chairman at ABBL (Association Banques et Banquiers Luxembourgeois) for the Fintech and Innovation Committee. The industry has recognised Laurent as: top 4 Fintech Leader of the year for the Luxembourg by Finance Awards (2017); top 21 Regtech worldwide Leader by Medici (2018); twice awarded second Worldwide Best Innovation Maker of Societe Generale (2015–2016).

RICCARDO SERRINI

CEO and General Manager

Prelios Group

Riccardo Serrini is the Chief Executive Officer of the Prelios Group. He joined the Prelios Group in 2011 and has held several positions for the company including General Manager and Chief Investment Officer of Prelios SGR. Before joining the Prelios Group, Riccardo was Chairman and CEO of ING Real Estate Investment Management SGR and Managing Director of the main investment vehicles. From 2005 to 2008 he was Head of the Real Estate Principal Group at Morgan Stanley, having previously been Global Head of Real Estate Structured Finance at Intesa Sanpaolo. He graduated in Business Administration at the Bocconi University in Milan.

JEAN-PHILIPPE DESBIOLLES

Vice-President & Managing Director, Financial Services, AI & Data Leader

IBM Industry Academy

As a Senior Executive with 22 years of international experience, Jean-Philippe is a transformational leader in Banking and Financial Market. He has a successful track record of driving business reinvention leveraging Digital, Artificial Intelligence (AI), Advanced Analytics, Blockchain, Internet of Things (IoT) and Cloud capabilities. He built the Cognitive and Analytics business in IBM Singapore covering Southeast Asia, led the Banking Industry globally for IBM Watson Group in New-York (AI & Data IBM Business Unit), and drove for 4 years the Cognitive Process Transformation team in France. He personally delivered key strategic and transformational projects for big international financial institutions. His expertise covers three main business domains: digital user experience, enhance knowledge worker and intelligent workflows. He is now the IBM Global AI & Data Leader for Banking and Financial Market (Retail banking, Financial Market & Insurance). He is responsible to position IBM as the trusted transformation partner in client's cognitive journey helping them to shape it, scale up AI & Data everywhere and get user adoption. Jean-Philippe is communicating his convictions around AI, digital transformation, ethics, and technology across many academic programs (Columbia University, INSEAD, Zermatt Summit Foundation, HEC Executive Program…) and conferences (CES Unveiled, Technion, THINK…) and is leading the AI impact on skills/HR workstream for European Commission for 4 years.

KOKOU AGBO-BLOUA

Global Head of Economics, Cross-Asset and Quant Research

Societe Generale Corporate and Investment Banking

Kokou joined SG CIB (Societe Generale Corporate and Investment Banking) in 2014 as Global Head of Engineering for Global Equity Flow (GEF) before taking the leadership of the Flow Strategy & Solutions team within Global Markets Financial Engineering. In June 2020 he was appointed Global Head of Economics, Cross-Asset & Quant Research, in addition to his role as Head of Flow Strategy & Solutions. Previously, he was Head of Equity & Derivative Strategy Europe at BNP Paribas in London where he was responsible for European fundamental equity strategy, derivatives parameters, global cross-asset themes and convertible bonds strategy. Prior to this, he started his career on the trading side as a portfolio manager at Goldman Sachs Principal Strategies (GSPS) and then a derivatives trader at JP Morgan. Born in Togo and educated in China, where he spent 12 years of his life, Kokou Agbo-Bloua graduated with an MSc in Management from HEC School of Management in Paris in 2002 and completed his post-graduate studies in Finance at the Anderson School of Management at UCLA.

BRIGITTE DAURELLE

CEO

MFEX by Euroclear

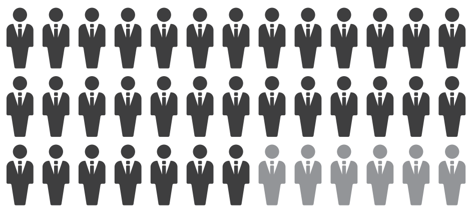
Brigitte Daurelle was appointed CEO of MFEX by Euroclear in October 2021 after leading the Euroclear-MFEX Integration Management Program, ensuring the smooth integration of one of the main B2B fund platforms, into the Euroclear Group. She started at CNP, the leading French life insurer, where she refined the strategic partnership with one of CNP's main distribution networks and boosted its commercial development. As CEO of Euroclear Belgium, Euroclear France & Euroclear Nederland, Brigitte consolidated these three national CSDs (Central Securities Depositaries) onto a single platform, ESES, and connected them to Target 2 Securities. She previously built the Product and Marketing division for Sicovam (later to become Euroclear France). Brigitte has served on five Euroclear boards: non-executive Board member of Euroclear Finland and Euroclear Sweden between 2013 and 2015, and later on the Boards of Euroclear Belgium, Euroclear France & Euroclear Nederland. From 2016 to 2021, she also vice-chaired the European Central Securities Depository Association (ECSDA), which represents 41 institutions across 36 European countries, promoting constructive dialogue between stakeholders aiming at contributing to an efficient and risk-averse infrastructure for European financial markets. Brigitte currently sits on the board of directors SFIL, a public bank for development, in which she chairs the Accounts Committee. She contributed to the creation of Liquidshare, a European Fintech leveraging the blockchain technology, and has served 3 years on its board of directors.

SOCIETE GENERALE SECURITIES SERVICES

Societe Generale's diversified bank model is based on complementary businesses around the world. The Group's expertise in securities services offers clients core banking services and the security of a global custodian.

SGSS provides a toolbox of solutions and innovative, value-added securities services that allow clients to meet the burden of regulatory change and concentrate on their core business. SG Markets, the Group's online BtoB platform, provides a variety of digital tools to manage, control and steer their operations.

4,000
EMPLOYEES



4,375 BN EUR ASSETS UNDER CUSTODY	**676** BN EUR ASSETS UNDER ADMINISTRATION

Source: SGSS internal report - data as of 31/03/2022

For more information, please visit **https://www.securities-services.societegenerale.com/**

MFEX by Euroclear is a new market utility that provides a single point of access to tap into a full, end-to-end solution for fund managers & distributors - globally.

It combines the strengths of Euroclear - one of the world's largest providers of domestic and cross-border settlement and related services for bond, equity, ETF and mutual fund transactions – with MFEX - one of the main B2B fund platforms.

Euroclear is a proven, resilient capital market infrastructure committed to delivering risk-mitigation, automation and efficiency at scale for its global client franchise. The group also includes Euroclear Bank – which is rated AA by Fitch Ratings and Standard & Poor's – as well as Euroclear Belgium, Euroclear Finland, Euroclear France, Euroclear Nederland, Euroclear Sweden, Euroclear UK & International.

960
DISTRIBUTION AGREEMENTS AND ACCESS TO

+2500
FUND COMPANIES AND DISTRIBUTORS

3.1
TRILLION IN FUNDS UNDER ADMINISTRATION

+2000
DISTRIBUTORS. ALL ASSET TYPES FROM 52 DOMICILES INCLUDING HEDGE FUNDS AND ETFS

ESG
COMPLIANT PROVIDERS AND INFRASTRUCTURE

Source: www.mfex.com - data as of 31/03/2022

For more information, please visit **www.mfex.com** or **www.euroclear.com**

PIONEERING SUSTAINABLE GROWTH TOGETHER
Our bankers and industry specialists deliver innovative sustainable finance solutions that support your growth and create positive impact.
THE FUTURE IS YOU
SOCIETE GENERALE
Advisory – Investment Banking – Financing – Markets – Transaction Banking
Insurance – Securities Services – Equipment Finance – Fleet Management
Societe Generale is a French credit institution (bank) authorised and supervised by the European Central Bank (ECB) and the Autorité de Contrôle Prudentiel et de Résolution (the French Prudential Control and Resolution Authority) (ACPR) and regulated by the Autorité des Marchés Financiers (the French financial markets regulator) (AMF). Societe Generale London Branch is authorised by the Prudential Regulation Authority with deemed variation of permission and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details of the Temporary Permissions Regime, which allows EEA-based firms to operate in the UK for a limited period while seeking full authorisation, are available on the Financial Conduct Authority's website. © Getty Images – November 2021.