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RESEARCH INTO WEALTH MANAGEMENT, CAPITAL MARKETS AND BANKING

RESILIENCE AND RESPONSIBILITY: WATCHWORDS FOR FINANCE IN 2021

This year has brought a torrent of unusually innovative and high-quality projects and reports from the best brains in finance, in the academic world, and in governments worldwide, to support the global response to the crises posed by the pandemic. This welcome brainpower is also probing wider practitioner issues driven by the omnipresent climate crisis, by challenges and opportunities around biodiversity (and the other sustainable development goals) and the need for greater responsibility all round in finance. On the latter, money laundering (and related crimes involving terrorist financing and human trafficking and the like) remain a blot on the financial landscape. A recent report from the Centre for European Policy Studies, summarised from page 59, points to ways in which the financial sector can work with regulators and enforcement to help turn this vile tide.

On the following page, we welcome a new £10m green finance centre at Oxford University – the Centre for Greening Finance & Investment (CGFI) – with which the CISI is delighted to be involved. This is a national centre to accelerate the adoption and use of climate and environmental data and analytics by financial institutions internationally.

The ultimate vision of CGFI is for financial institutions to be able to access and use "consistent, timely, and appropriate climate and environmental data and analytics" for any point on planet Earth historically, in the present, and projected into the future, for every major sector, and for the complete spectrum of material climate and environmental factors.

Specifically, the project aims to deliver "quality-assured, relevant, well-described, scientifically robust, and openly accessible" climate and environmental data and analytics to all financial institutions, suitable for a wide range of use cases. It has plans for "open, interoperable data, and information e-infrastructure" that will provide an easy-to-use platform for practitioners to access, build off and integrate climate and environmental data and analytics, from CGFI and others, and combine with their proprietary data and analytics. Impressive ambitions, and the clout to achieve that.

The project is led by Dr Ben Caldecott (pictured), one of the world's leading thinkers in this field, and well-known in financial circles, aided by deputy director Dr Nicola Ranger (pictured), head of climate and environmental risk research at the Oxford Sustainable Finance Programme of the Smith School of Enterprise and the Environment, University of Oxford. She is also a senior consultant for the World Bank.

Under this class team, the centre will co-develop flagship use cases with financial institutions that demonstrate the benefits of integrating climate and environmental analytics and produce open risk frameworks, indicators, and analytics, underpinned by the best available science and robust translational research. It will create a focal point for UK and international outreach and for stakeholders to engage and access CGFI services, training, data, and capabilities. And excitingly, it aims to mainstream 'spatial finance' – the integration of geospatial data and analysis into financial theory and practice – which will be one of the key priorities for CGFI. As we saw in a recent (May 2021) programme on CISI TV, (see *cisi.org/space*), space is now the finance frontier. Watch these pages.

// SPACE IS NOW THE FINANCE FRONTIER //

Meanwhile, here on Earth, the Association for Financial Markets Europe (AFME) has produced a timely and fascinating report on the European regulatory landscape for sustainable finance disclosures, as well as the voluntary frameworks, to help the sector navigate its interrelated components by analysing them through different lenses. We will be bringing up-to-the-minute analyses of what matters here to CISI members through our dedicated TV channel. A key foundation of understanding direction of travel in this field is understanding the recent history and thus likely trajectory. The AFME chart on pages 66–67 is an important roadmap for our TV series on the US$100tn-plus challenge facing those starting their careers in finance now – and for the rest of us.

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UK LAUNCHES NEW £10M RESEARCH CENTRE TO SPUR A GREENER GLOBAL FINANCIAL SYSTEM

BRINGING FINANCE, POLICY, SCIENCE, AND TECHNOLOGY TOGETHER IN THE GREAT CHALLENGE OF THE 2020s

The CISI is participating in a new £10m national green finance research centre that will advise lenders, investors, and insurers, enabling them to make environmentally sustainable decisions, and to support a greener global economy. Access to scientifically robust data and analytics is currently patchy and unreliable. Armed with better information, underpinned by innovative UK science, financial institutions globally will be much better placed to make decisions that contribute to a more sustainable planet.

The UK Centre for Greening Finance and Investment (CGFI), launched in February 2021, will transform the finance sector's ability to invest differently to promote climate and environmental action. It demonstrates how UK science and finance can work together to help the global economy transition to net zero carbon. Innovation hubs in Leeds and London, with experts in Oxford, Bristol and Reading will commercialise new products based on input from the financial sector.

This will help financial institutions shift money away from risky activities that harm the environment, such as coal-fired power and deforestation, and towards activities that are less harmful, such as renewable power and sustainable agriculture. The CGFI is funded by UK Research and Innovation (UKRI) and led by the University of Oxford, and with the direct engagement of four leading professional bodies, spanning the banking and investment spectrum – the CISI, Chartered Banker Institute, CFA Institute, and the Institute and Faculty of Actuaries.

New physical hubs in Leeds and London will support companies and start-ups to commercialise products that can green global finance, including tools that measure storm and flood risk to properties, or the pollution created by companies and the liabilities that result. The CGFI will work with finance professionals, such as CISI members, to ensure that every professional financial decision takes climate change into account.

Other institutions will form part of the centre, including the universities of Bristol, Leeds, Reading, and Imperial College, as well as The Alan Turing Institute, the Satellite Applications Catapult, and the Science and Technology Facilities Council. In summer 2021, a full range of financial institution and corporate partnerships will be announced.

Work began in April, ahead of this year's COP26 UN climate summit in Glasgow. The CGFI will deliver on commitments made in the UK government's 2019 Green Finance Strategy, and the announcement signals the UK's commitment to using its global finance sector to support the transition to a net zero carbon and nature positive future.

Dr Ben Caldecott, director and principal investigator of the CGFI and the Lombard Odier Associate Professor of Sustainable Finance at the University of Oxford, says of the project: "CGFI will allow financial institutions to access scientifically robust climate and environmental data for any point on planet Earth now and projected into the future, and for every major sector of the global economy. Doing so will create public goods and unlock

CORE TEAM

University of Oxford · The Alan Turing Institute · University of Bristol · Imperial College London · University of Leeds · University of Reading · Catapult Satellite Applications · Spatial Finance Initiative · UKRI Science and Technology Facilities Council

CROSS-CUTTING PARTNERS

UKRI UK Research and Innovation · UKRI Natural Environment Research Council · UKRI Innovate UK · National Centre for Atmospheric Science · Met Office · UNEP Finance Initiative · CDP · UN Climate Change Conference UK 2021 · Department for Work & Pensions · One Planet Sovereign Wealth Funds · Icebreaker One · oasis · IIGCC · CDC Investment works · UK Finance · Department for Business, Energy & Industrial Strategy · Commonwealth Climate and Law Initiative · World Bank Group · Coalition for Climate Resilient Investment · Flood Re · Insurance Development Forum · Climate Bonds · A4S Accounting for Sustainability · ECMWF · Green Finance Institute

PROFESSIONAL BODIES

Chartered Banker · Institute and Faculty of Actuaries · CISI · CFA Society United Kingdom

INNOVATION HUBS

Grantham Institute · Ri · NEXUS

Head-hunting

I'm sitting at my desk one day, sorting CV's into random order,
when the phone rings and a man's voice says
I'm a head-hunter, can you talk?
I say, that's odd, I'm a head-hunter too.
I know, the voice says, actually I'm a head-hunter's head-hunter.
Oh, I say.
And I'm working for a client who's also a head-hunter
and who wants to recruit an experienced head-hunter.
That's interesting, I say, who is your client?
I can't tell you that, the voice says, it's confidential.
Ah, I say.
So I'm wondering if you might be interested.
That's hard to say, I say, can you tell me why your client
wants to recruit an experienced head-hunter, or is that confidential too?
No, the voice says, that's not confidential,
my client wants to recruit an experienced head-hunter
to replace a head-hunter who has gone to work for a different head-hunter.
I see, I say.
So are you interested?
I'm not sure, I say.
Because if not, I was wondering if you knew any other experienced head-hunters
who might be interested.
Let me see if I've got this clear, I say,
are you, a head-hunter's head-hunter, asking me, a head-hunter,
whether I know an experienced head-hunter
who might be interested in leaving their current head-hunter
to work for your confidential client head-hunter
where they will replace a head-hunter
who has gone to work for a different head-hunter?
Yes, he says.
No, I say.

Nigel Pantling, Chartered FCSI, is our Poet in Residence. He is a former soldier and senior civil servant turned senior merchant banker – see nigelpantling.com – and the author of a number of poetry volumes, most recently *It's not personal*, published by Smith/Doorstop and available from *poetrybusiness.co.uk*.

innovation. The UK is perfectly placed to transform the availability of climate and environmental data in finance. We have world-leading capabilities in all the various areas that need to come together to solve the problem.

"The market for ESG data, of which climate and environmental data is a large part, is expected to reach US$1bn in 2021 and grow annually by 20%. It is our view that this is a significant underestimate of future growth potential. The CGFI will support enterprises providing climate and environmental analytics and realise the opportunity for UK plc of being a world leader in commercialising products that can green global finance."

ABOUT THE CGFI

Funding for the CGFI was allocated through the Climate and Environmental Risk Analytics for Resilient Finance programme launched by the Natural Environment Research Council and Innovate UK in February 2020. The CGFI is the UK national centre established to accelerate the adoption and use of climate and environmental data and analytics by financial institutions. It will unlock opportunities for the UK to lead internationally in greening finance and financing green.

To achieve this vision, the CGFI consortium brings together a world-leading, multidisciplinary team. The senior leadership team are all globally recognised experts in their respective fields with a track record of delivering high-impact research, tools, analytics, and information relevant to a range of financial institution needs. Five major UK universities plus a range of partner institutions reflect its strategy to bring together diverse expertise, across climate and environmental risks, disciplines, financial institutions, and geographies, required both to meet the needs of financial institutions now and to create the strong, broad foundation necessary to scale-up the envisioned world-leading national centre for the long term.

This broad base of expertise includes climate, earth systems and environmental science, geography, computing, data science, mathematics, water, engineering, systems science, statistics, economics, business, innovation, decision science, and finance.

ABOUT UKRI

UK Research and Innovation works in partnership with universities, research organisations, businesses, charities, and government to create the best possible environment for research and innovation to flourish. It aims to maximise the contribution of each of its component parts, working individually and collectively.

Now the UK has left the EU, UKRI continues to support the research and innovation communities with information and updates on access to grants and mobility. UKRI operates across the whole of the UK with a combined budget of more than £8bn, bringing together the seven research councils, Innovate UK, and Research England.

ABOUT THE UNIVERSITY OF OXFORD

Oxford University has been placed number one in the Times Higher Education World University Rankings for the fifth year running, and at the heart of this success is its ground-breaking research and innovation. Oxford is world-famous for research excellence and home to some of the most talented people globally. Its work helps the lives of millions, solving real-world problems through a huge network of partnerships and collaborations. The breadth and interdisciplinary nature of its research sparks imaginative and inventive insights and solutions.

To learn more about the CISI's work with this project, or to get involved, please email george.littlejohn@cisi.org

FAULT LINES IN EUROPEAN ANTI-MONEY LAUNDERING NEED URGENT FIXING

KAREL LANNOO AND **RICHARD PARLOUR** ASSESS HOW EUROPE'S FINANCIAL SECTOR IS RESPONDING TO THE URGENT CHALLENGES POSED BY MAJOR FINANCIAL CRIME

Karel Lannoo

Richard Parlour

After 30 years of hard fighting against money laundering, it remains rampant, along with its various partners in crime, such as terrorist financing and human trafficking. A January 2021 report, *Anti-money laundering in the EU: time to get serious*, by the Centre for European Policy Studies (CEPS), one of the world's leading think tanks, and the European Credit Research Institute (ECRI), based on an inquiry chaired by Eero Heinäluoma, Member of the European Parliament and former Finnish Minister of Finance, shone a bright light on some of the key failings, in both government and finance. Rapporteur Karel Lannoo, CEO of CEPS, and his co-rapporteur, Richard Parlour of Financial Markets Law International, a regular contributor to CISI on financial crime, in this work drawn from the main report, address some of the key challenges facing our sector.

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Money laundering has become a serious concern among financial institutions. Although action to combat it has been taking place for about 30 years, it is only more recently, and partly as a result of some high-profile cases, that it has become a top priority. Anti-money laundering (AML) should be part of basic risk management in all governments and financial institutions. It should be reflected in the governance structure with integrated, proactive, aggressive and interoperable defences, as well as externally, in the supervisory structure. In practice, recent cases demonstrate that there are serious fault lines in compliance.

European authorities have recently stepped up their actions against money laundering, with the most well-known cases involving Nordic banks, in dealings through entities in the Baltics with Russia. US authorities have been active for a longer time, using a somewhat different focus, with an enormous fine levied against the French bank BNP Paribas in 2014, for example.

The way banks respond to these cases differs significantly from organisation to organisation. It is only recently that public reaction has led to pressure on banks to become more proactive in publicising their AML policies. This may be a good step towards finding the right approach in policymaking, but not if it reveals an organisation's defences to the criminal fraternity. At the same time, it should be noted that the public furore has focused on the banks' role as gatekeepers, and the impact on underlying criminality has been almost entirely absent from media coverage. A sense of balance, cooperation between the various organisations fighting money laundering, be they public or private, needs to be restored.

The most well-known recent case is undoubtedly Danske Bank, given the total amount that passed through the bank's books, about €200bn in transaction flows between 2007 and 2015. The scheme concerned the transactions of 15,000 non-resident clients originating from the Estonian branch of the bank, which was brought to light by a whistleblower. This raised questions about the role of the Danish Financial Supervisory Authority (FSA) and the functioning of the supervisory college of the bank in the Nordics. But the bank is the only one that disclosed total flows in relation to non-resident customers, and it is therefore difficult to compare this case with others. Other banks have, and only in some instances, published actual money laundering or transactions that violated sanctions, numbers that are by their nature much smaller. The chair and CEO ultimately left the bank.

In a report on the case, the Danish FSA proposed the following as remedies:

1) better and more effective lines of defence in banks
2) duty to disclose and criminal liability, as well as improved protection of whistleblowers; and
3) tougher consequences when bank management fails to live up to its responsibilities.

As to the European dimension, the European Banking Authority (EBA) board examined the case, but it concluded there was no breach of EU law by the Danish FSA in applying the AML directive and in not properly supervising the bank. EBA did so believing partly that an action against the regulator was not the correct instrument in a case that had happened five years earlier. This raised some concerns since the bank, and indirectly also the Danish FSA, reacted too little and too late in response to the whistleblower's complaint. The EU Commission did not accept the EBA's decision but has not acted further thus far.

The attention paid to the case, however, demonstrates that the debate focuses on the symptoms rather than the causes. The criminal gangs concerned, and the impact of the money laundering scheme on society and commerce, have largely been absent from discussion. It does need to be recognised that banks and other obliged entities can only do so much against laundering operations as gatekeepers. Bank staff are not trained investigators or detectives, and they are not law enforcement officers; they perform a vital function for society in

> // €200bn PASSED THROUGH DANSKE BANK'S NON-RESIDENT PORTFOLIO IN THE ESTONIAN BRANCH BETWEEN 2007 AND 2015 //

TABLE 1: RECENT HIGH-PROFILE CASES IN AML IN THE EU BANKING SECTOR

	Year	Case	Impact	Fines	Sources*
Swedbank	2020	Failure to apply AML procedures in Baltic subsidiaries on about €37bn of transactions between 2014 and 2019	New CEO and management team	€360m fine by Swedish FSA for failure to apply AML rules	Report and detailed explanation on company's website
ING	2018	Failure to apply AML procedures (total amount not disclosed)	No discharge of board members for 2018 accounts. CFO steps down.	Settlement of €775m with Dutch authorities	
ABLV Latvia	2018	Unclear: involved in more than €1bn in criminal money laundering	European Central Bank withdraws licence; bank liquidated	Unclear whether case led to lawsuits	AML policy on company's website
Danske Bank	2018	Failure to apply AML procedures on about €200bn in transactions through its non-resident accounts from 2007 to 2015 in the Estonian branch	CEO, chair and several managers and employees left the bank. Estonia operations were terminated. Improved procedures.	Ongoing, preliminary charge by Danish authorities; lawsuits by private investors as well	Report by Danish FSA and report by the bank. Detailed explanation on company's website
BNP Paribas	2014	Transactions with countries blacklisted by US	US authorities required certain senior staff to step down	Settlement with US authorities of €9bn	Report by the French Assemblée Nationale

Source: Anti-money laundering in the EU: Time to get serious
** Links to all reports and websites are included in the original report, available at cisi.org/rofmJun21*

oiling the wheels of the global economy. In the early days of AML, law enforcement was better resourced and supported, politically, financially and technologically. It penetrated criminal gangs and followed the money trail. The banks provided evidence of the transactions necessary to convict. News of the busting of large criminal networks was made public.

More recently, governments' strategy seems to have changed from one of requiring banks and other obliged entities to sift the electronic and other records for evidence of criminality, to being held to blame when money laundering operations are uncovered. This change in strategy is unhelpful. There is little or no impact on underlying criminality, save for encouraging its growth. The cost savings for governments in terms of reduction of the size of financial crime police units is more than outweighed by the massive increases in compliance costs for the financial sector, reducing access to financial markets for honest borrowers (witness the rise of alternative financing methods as a reaction to more cautious bank lending), and the economies of member states lose out in balance and in the long term. Banks have been forced to pay massive fines. Although transparency is seen as key in fighting criminal pursuits that lead to money laundering and corruption, there is no transparency offered by regulators or governments as to how the revenue generated by fines has been used. Curiously, all governments simultaneously claim there is no money available to support financial law enforcement. This strategy must change, not only to protect the populace against terrorist bombings, cyber criminals, drug overdoses and the like, but also to support action against environmental crimes, as well as for the sake of enhancing economic growth.

The table above demonstrates the large differences among individual cases, and the responses by the banks, shareholders and the authorities. In some cases there are fines, in other cases settlements for undisclosed violations. In still other cases, decisions are yet awaited. This points again to the difficulty of having a streamlined, EU-wide (let alone global) approach, in the face of very different legal systems. The cases mentioned, but also others given less attention, have led to a sea change in AML risk management within the banks concerned, which is analysed in the following section.

// A 2019 EUROPEAN COMMISSION REPORT SEES WEAKNESS IN AML LINES OF DEFENCE //

A CONFUSED AML RISK MANAGEMENT FRAMEWORK

EU rules require credit institutions to have governance arrangements in place to ensure sound and effective risk management. Internal control mechanisms should prevent failures, such as money laundering, in the compliance framework. But the cases highlighted above, as well as others, point to huge deficiencies in putting these frameworks into place. This was analysed in a 2019 European Commission report.[1] It sees weaknesses in the different lines of defence that a bank is recommended by regulators to have in place to counter money laundering.

These lines of defence consist of:
1) The front office: recognising or reporting suspicious customers and types of transactions.
2) Risk management and compliance: ensuring that the front office, at all levels, is duly informed and clear procedures are in place. Units are properly staffed to respond and comply with the rules. They follow the procedure of submitting suspicious transaction reports to the local FIUs. Senior management is informed and acts in cases of failure.

[1] *https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52019DC0373*

3) Internal risk audit: a unit that controls (1) and (2) independently from management, with a direct reporting line to the audit committee and executives. The internal audit should allow for the raising of a case by a whistleblower, who should be protected in so doing.

For large banking groups, which are thought to be the primary targets for money laundering, though no proper research has been conducted on this, the challenge is to have these policies consistently applied at corporate level, in the EU and third countries, in branches and subsidiaries, and in correspondent banking relationships. The variety of organisational models of banks, the degree of integration of control systems in often merged cross-border entities, and diverse administrative requirements and languages make this problematic for compliance departments to monitor. Large banks are often collections of smaller entities that have been bought out or merged, with little attempt to create a truly single identity or culture, and often with a plethora of legacy systems.

To improve the organisational strength of such entities, regulators need to be more assiduous in ensuring there is a plan, resources and the will to consummate bank mergers so that they can operate more efficiently and protect themselves better against financial crime. Sadly, this need is usually overlooked. Such policies often clash with commercial and customer onboarding objectives, or create conflict among bank staff. In the case of Danske Bank, for example, the laundering happened at the Estonian branch, where employees actively covered up violations, which were insufficiently held in check by headquarters. The information technology system of the branch was not integrated with the rest of the group. The branch fell under the watch of the Danish FSA for prudential matters, but under the Estonian authorities for AML. It seems that the lessons from earlier egregious collapses resulting from unrestrained nefarious and speculative activity, the BCCI and Barings Bank cases of the 1990s, were forgotten.

The role of external auditors and government authorities

An external audit must ensure that accounts reflect a fair and proper view of the company. Auditors need to check that internal controls are taking place, i.e. that the KYC rules are applied, and that the business is a going concern. Irregularities need to be reported to the authorities. The complexities described above, with different legal frameworks and responsible authorities, render the task of auditors more difficult. EU law harmonised the conditions for statutory audit (regulation EU 537/2014) but left many options to the member states, such as for the provision of non-audit services by auditors. The regulation created a thin structure for EU-wide cooperation, the Committee of European Auditing Oversight Bodies (CEAOB), which is managed by the European Commission. This confusing picture has received scant attention, but further harmonisation will be required to help prevent more cases of money laundering.

// FURTHER HARMONISATION OF EU BODIES IS REQUIRED TO PREVENT MORE CASES OF MONEY LAUNDERING //

At the next stage, there is the role of the government authorities: the supervisory and law enforcement authorities, and the Financial Intelligence Units (FIUs) and tax authorities.

1) Prudential and conduct supervisory authorities: AML supervision is a task for prudential authorities in most member states, as it is part of the core risk management tasks of a financial institution. Moreover, it can have financial stability implications. Some countries have a specially dedicated entity. The newly formed EBA AML Standing Committee brings together these different bodies, 57 in total, including those of the EEA countries.
2) The FIUs process suspicious transaction and suspicious activity reports, as well as cash transaction reports in certain countries, and pass these on to law enforcement for action.
3) Tax authorities can act to pursue tax evasion and counter tax avoidance.
4) Law enforcement authorities are charged with assimilating the intelligence, assembling evidence and prosecuting cases.

Each of these lines is organised differently across the EU, let alone in the rest of the world, which makes consistent application of AML/CFT (countering terrorist financing) challenging. Cross-border cases demand strong cooperation among these entities, which is time-consuming, but no AML supervisor appears until recently in charge of supervising groups (although it is explicitly mentioned in the Fourth AML Directive, and now the task of EBA). Certain international networks, such as the Egmont Group and Moneyval, have come to support these needs to some degree, but this has yet to translate into any significant impact on underlying criminality.

The European Commission detected unease among prudential supervision authorities in using their far-reaching powers against money laundering, "as the prudential framework only exceptionally refers explicitly to such concerns" (EC 2019 report, p. 11[2]). The Single Supervisory Mechanism (SSM) is seen as an additional layer for coordination, but not considered an AML/CFT authority, according to recital 28 of the SSM regulation. The first head of the SSM executive board, Danielle Nouy, often reiterated that AML/CFT supervision is not the SSM's business.

An additional problem is that home-country control, the basis of prudential supervision in the EU, does not apply in relation to AML, where the host country is in charge, as was clear in the Danske Bank case. AML issues were not consistently factored into the review of the credit institutions' prudential framework, it appears, while they may have far-reaching consequences. This also applies at corporate headquarters, where AML/CFT issues are not prominent, according to the EU Commission's 2019 report. The

[2] https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52019DC0373

Richard Parlour talks about key recommendations from the report on CISI TV. Watch at *cisi.org/aml* and gain 65 minutes' CPD.

differences in the supervisory architecture for prudential and AML purposes renders cooperation more difficult. The same applies with regard to law enforcement authorities. Hence, the EU is faced with an AML governance spaghetti, in the context of growing cross-border activity and more centralised prudential supervision.

Concerning enforcement, judicial systems and penalties differ widely in the EU, a situation that will not change soon since member states zealously guard these powers.

NEW TECHNOLOGIES AND AML

Over the past five to ten years there has been a drive to create uniformity in vendor systems deployed by the financial sector, with consistent standards, scenario planning and functions. In the same period, there have also been significant developments through enhanced computer power and artificial intelligence, use of blockchain and other technologies, which create opportunities to streamline analysis and reporting, and target risk resources, moving away from traditional, rules-based monitoring to identifying behaviours, network analysis and clustering of risk attributes. As such, there is opportunity for EU financial institutions and non-financial firms to enhance their surveillance mechanisms and focus on effectiveness.

In certain respects, technology has improved both the identification of financial crime and delivery of more actionable information.[3] Data collection and analytical tools have become more powerful, and technology is advancing. The application of blockchain technology to transactions, for example, could allow for better control of them. There is a need for progress across three key dimensions, however:

- **Data:** The issue is not so much the lack of data (certain databases for use in AML are in bad shape, however) but whether the right data are collected, their quality, the processing power and analytical capability, in order to assess it and use it more effectively. There is a need for more in-depth and relevant data that can be updated dynamically.

- **Analytics:** With better data, AI and machine learning could be used to develop better models of analysis that allow the carrying out of more complete risk assessments. This will have to be an iterative process, rolling out the best analytical models that provide a view spanning a number of different risks and combining and aggregating data across all sectors and regions. There are many data analysis techniques, though, and the end result will only be as good as the algorithm concerned.

- **Communication:** The crux of the matter is understanding how to get the right information in a timely manner to the appropriate people to get the correct decision, including providing insight, data and intelligence to law enforcement. That would require an operating model and a framework that are more agile and complex than the ones in use today. One of the problems with technology is that once a good system is up and running, it may hinder effectiveness or reduce the attractiveness of developing further advanced technology to manage financial crime risks. New technologies may, for example, result in a reduction in the number of suspicious activity reports being filed, appearing to present a decline in potential suspicious activity and raw data that will need to be explained to the authorities. AI systems could effectively lock large numbers of innocent people out of financial markets if not implemented and executed correctly. It could also act as a brake on innovation, not just of financial products but of law enforcement and supervision techniques. In the future, transaction monitoring could be integrated into dynamic risk assessment and could use new, more effective and faster technology as support tools for decision-making. This dynamic risk assessment may be based on four pillars, as outlined below. Analysis via each of them will result in a probability of 'suspicious' activity taking place. At the heart of the issue, however, is that suspicion is a human concept, and it is very difficult to teach a computer to be suspicious, as opposed to highlighting unusual transactions in relation to set parameters. Human intelligence must not be left out of any AML assessment system, following four pillars:

> // AI SYSTEMS COULD LOCK LARGE NUMBERS OF INNOCENT PEOPLE OUT OF FINANCIAL MARKETS //

- Subject matter expertise: Considers what is already known about suspicious activities.
- Outlier detection: Considers behaviours that are different in comparison with the average profile for a specific segment of customers.
- Anomaly detection: Looks at sudden changes in the behaviour of customers over time.
- Network analysis: Shows linkages and interconnectivity between different players in the system. A policy environment is needed that supports

[3] *This section is based upon a contribution of HSBC to the task force and on the response of a task force member.*

these technologies. That includes better regulation, particularly on AI, and knowledge sharing that encourages innovative thinking and response. It should facilitate the detection of suspicious transactions and new fraud patterns across regions, instruments and techniques. More cooperation within the private sector is therefore needed, as much as is possible, and between the public and private sectors, within the limits of national constitutions, the EU Treaty provisions and the respect of fundamental rights.

There has been progress through joint private-sector initiatives, such as Transaction Monitoring Netherlands (see box below). In public/private partnerships (PPPs), there is the Joint Money Laundering Intelligence Task Force (JMLIT) in the United Kingdom, the Swedish Anti-Money Laundering Intelligence Initiative (SAMLIT), and other initiatives in Denmark, Finland and the Netherlands (AMLC), as well as evolving work by Europol to direct financial institutions to identify and provide information that is of use to law enforcement. The same has happened in the United States, with the recent announcement by the US FIU Financial Crimes Enforcement Network that it will examine AML effectiveness and outcomes, in order to refocus on higher-value AML activities. It aims to increase information sharing and public/private partnerships and to leverage new technologies and risk management techniques – and thus increase the efficiency and effectiveness of the US AML regime. These initiatives can be expected to continue to develop, along with (i) automated reporting to support the FIU's own data investigation and (ii) efforts to cut down on resource-intensive manual processes that do not generate meaningful results or actionable intelligence.

A firm is able effectively to manage and identify client or external entity risk and exposure on a local, regional and global scale. Areas of emphasis should include flexibility on the application of non-risk-driven uniform processes, such as collection of adverse media and politically exposed persons (PEP) data and use of transaction monitoring in businesses or client types. This flexibility may enable private-sector bodies to focus their resources on areas of priority for the public sector.

However, information shared within PPPs requires appropriate legal protection, and respecting a clear division of competences between private and public sectors. A well-defined safe harbour should be provided for institutions when disclosing information in a controlled manner and for the broader public interest of preventing financial crime. The private sector has no guarantee or legal certainty that they will be exonerated of liability in cases where national and EU law have been violated. This is where bank secrecy, GDPR and EU competition policy considerations come into play. For the last of these three, exchange of data is allowed if it contributes to the public good and if it is confined to the stated purpose, but a framework is needed to guard against collusion, which can bolster the larger players in the field. It can also raise conflict of interest and governance issues.

// A FRAMEWORK IS NEEDED TO GUARD AGAINST COLLUSION //

Ethical considerations should also be taken into account. To retain the trust of the customer, there is a need to be transparent, address bias and explain publicly what is to be done. Care needs to be taken so as not to stifle innovation, to avoid instilling anti-competitive behaviours, to eschew creating market access barriers or encouraging financial exclusion. In this context, the work of the European Commission High-Level Expert Group on Artificial Intelligence needs to be advanced. Authorities also must recognise that criminal organisations are developing their own AI, to improve their own money laundering techniques, and that needs to be monitored and countered.

For more detailed and updated analysis of the fight against money laundering and terrorist financing, see regular programmes led by Richard Parlour and others on CISI TV, live and on demand. The final version of the main report is available at cisi.org/rofmJun21

TRANSACTION MONITORING NETHERLANDS

Five Dutch banks (ABN AMRO, ING, Rabobank, Triodos Bank and de Volksbank) have decided to establish Transaction Monitoring Netherlands (TMNL) in the collective fight against money laundering and the financing of terrorism. The TMNL initiative will be an addition to the banks' individual transaction monitoring activities. TMNL will focus on identifying unusual patterns in payments traffic that individual banks cannot identify. The five banks have studied whether collective transaction monitoring is technically and legally feasible under the aegis of the Dutch Banking Association, as well as the question of whether TMNL can add material value in the fight against money laundering. Research showed that collective transaction monitoring will allow for better and more effective detection of criminal money flows and networks in addition to what banks can achieve individually with their own transaction data. It also showed that combining transaction data will provide new (inter-bank) information that will be useful in the fight against financial crime. In addition to the banks fulfilling their own responsibility as gatekeepers, effectively dealing with money laundering and the financing of terrorism requires a national (linkage to official agencies and others) approach. The banks are therefore working closely with government partners such as the ministries of finance, justice and security, the Fiscal Information and Intelligence Service (FIOD), the financial intelligence unit (FIU) and the police. The aim is to collectively significantly increase the return from identification to detection, prosecution and conviction of criminality.

HOW TO PAY FOR GOING GREEN: BILL GATES AND THE 'GREEN PREMIUM'

GATES AND THE RACE TO FIND A TECH SOLUTION TO PROVIDING CLEAN AFFORDABLE ELECTRICITY (AND EDUCATION AND HEALTHCARE) TO THE WORLD'S POOREST

John Adams, long-time adviser on China to the CISI, and Bob Colins reflect on Bill Gates' views on climate change. John is a director of AMCD and of HR China & Financial, which specialises in green recruitment and training, and Bob is technical adviser at AMCD.

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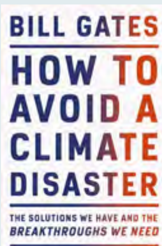


We came to the newly published Bill Gates book on climate change with some concerns, but came away disarmed by his commitment and openness. Our basic criticism of *How to avoid climate disaster* is best set out by the author himself: "I own big houses and fly in private planes, so who am I to lecture anyone on the environment?" Also, Gates' advocacy of untried technical solutions, with perhaps unforeseeable consequences, such as distributing heat reflecting fine particles in the upper atmosphere ('geo-engineering'), is suspect. But his heart and money seem to be in the right place. This book is a good primer for the main issues.

Gates has a folksy style, rendered somewhat quaint by the US use of Fahrenheit, the long-abandoned Queen Anne 1707 US 'gallons' and of non-metric short tons. Most of the book is aimed at the US public. But at least Gates the billionaire is engaged and committed here on earth – and unlike his fellow billionaire and neighbour, Elon Musk, he is not involved in pointless energy-hungry bitcoin mining or putting people in his electric vehicles on the Dead Planet of Mars.

Gates makes no bones about being committed to finding a tech solution to providing clean affordable electricity (and education and healthcare) to the world's poorest. This is an admirable aspiration, but will require a 50% increase in the world's electricity generation to reach even the current per capita level of consumption in China. To reach the per capita level of the US would require a fourfold increase in world generation capacity.

This is before climate change kicks in, and possessing air conditioning becomes a life-or-death matter rather than a luxury. According to Gates, by 2050, air conditioning worldwide will consume as much electricity as India and China together. Let us pray it is not generated from coal-fired sources.

Gates affirms categorically that decarbonisation by 2030 is not now feasible. We may however still make bad but easy choices, such as going for gas-fired electric power stations, with lower emission levels than coal, but longer running lives. His aim is to go after zero carbon now. His corollary is simple: only nuclear reactors can supply the clean energy we need. This latter option is both favoured and funded by Gates' TerraPower. But after Three Mile Island (1979), Chernobyl (1986) and Fukushima (2011), a nuclear power strategy, he recognises, will be difficult to sell.

Gates' nuclear research suggests that AI can reduce human operating error and improve safety. Nuclear waste can also be reduced, and the plants buried underground against attack. But this is all in computer simulations, since no Gates plants have yet been built, though a prototype is in development. In its favour, Gates shows that the carbon footprint of constructing nuclear power stations (cement, steel, glass etc) is less than a coal-fired station, and lower by a factor of five or six than hydro or solar power. Decommissioning costs are of course still high and unpredictable. Apart from his being able to bear the cost, it somehow requires real vision and audacity on Gates' part to own a nuclear reactor.

// ONLY NUCLEAR REACTORS CAN SUPPLY THE CLEAN ENERGY WE NEED //

Gates had one telling financial blindspot: an omission, and rather an odd one for a billionaire. There is almost no discussion in his book of the power of investors to change the type of projects we choose to fund with our money. Gates is dismissive of this approach, which he categories as "the easy stuff – divesting securities". Sustainable and green finance do not seem to feature in his landscape, though curiously he does state that he divested his own holdings in gas and oil companies in 2019.

However, divestment is in fact a major international theme at the moment with fund managers, ranging from Larry Fink's colossal BlackRock to the much smaller Scottish Widows pension fund, which has just issued a three-year divestment policy for greenhouse gas polluters. Rather disappointingly, Gates' list of 'to do things' for individuals at the end of his book does not include checking with the manager of your pension fund to see if it meets green and sustainable criteria. This is probably the most powerful thing you as an individual can do, at least in financial terms.

Nonetheless, part of Gates' financial solution is to mobilise capital for research to cut what he calls the Green Premium – the extra fuel costs that going green will bring. For the average US electricity consumer, he calculates a green solution would be a modest US$216 increase in payment per year (say £165). One suspects, however, that the problem for the US may be not financial but political, given that a fair number of Americans are in denial over climate change in general, and in particular believe that frozen wind turbines caused the Texas power outages in February 2021. (They had in fact switched off automatically as they sensed a grid failure.)

In this regard, Gates is running a project (Breakthrough Energy) to link up local US electricity networks in regional

grids – lack of which seems to have been the major cause of the outages in Texas and other nearby states. The problem again seems to be political rather than technical – one of Texas opting out of federal regulations. This lack of coordination in the US may come as a surprise to integrated networks such as the EU and China. China has even set up an organisation (GEIDCO) to examine the possibility of a world electricity grid, through global grid integration.

Given these divergences, the US may have real trouble in asserting its leadership credentials on climate issues, despite President Biden immediately rejoining the UN Paris Agreement on national climate change targets after being sworn in as president in January. The UN COP26 meeting in Glasgow in November 2021 could be a major test for the US – if it is not postponed again.

The problem of paying the cost of the Green Premium becomes even more acute when it is applied to fuel for cargo ships – currently paying US$1.29 per US gallon, but rising to perhaps a high of US$9.05 for green fuel. An expensive way to bring container ships full of consumer goodies from China. The situation is similar for aviation fuel: a gallon of conventional jet fuel is US$2.22, while bio jet fuel is US$5.35. There is another problem with the Green Premium: as the price of fuel falls, the Green Premium cost increases. This raises the interesting question of what will happen if oil prices fall heavily over the next decade, as vehicles switch to electricity and oil becomes a 'stranded asset' (another key financial term absent from this book).

// WHAT WILL HAPPEN IF OIL PRICES FALL HEAVILY? //

In this regard there will be international banning of petrol ('gas') and diesel cars after a certain date – 2030 in the UK, with a similar date proposed for all of the EU. In the US, only California proposes to do this, from 2035 ... again a state rather than a federal decision, and in stark contrast to China, which will ban all its oil-fuelled vehicles from 2035.

Gates realises that cutting the Green Premium will prove almost impossible to fund commercially. His answer is for an application of scale – commissioning larger fleets of electric vehicles (Shenzhen in China, he notes, has a fleet of 16,000 buses), persuading governments to fund research, and pricing carbon realistically through trading emission allowances.

But we are not even out of the Covid-19 woods yet, and the promised spring-back of the world economy has yet to be sustained. Many countries seem to be being driven by economic considerations to pursue a 'business as usual' carbon-based growth strategy, and climate change measures may consequently be postponed still further. Only a third of the Paris Agreement signatories had submitted new emission targets for their 'Nationally Determined Contributions' at the required end 2020 deadline. The US, China and India (together 50% of the world's total greenhouse gases) were all notably absent.

Bill Gates is of the opinion that the process of adopting clean power is primarily about getting the technological capabilities and cost reduction in place – he is clearly not naive in this regard. Then and only then will governments be willing to add in a bit of fiscal encouragement, and non-philanthropic investors vote with their funding. The latter can certainly be enablers but are always going to be primarily followers (of the money) rather than leaders. Where technologists like Gates lead, bankers hopefully will follow. Gates is good on China (where 28% of greenhouse gases originate) but in a depressing fashion. China, he notes, has managed to cut the cost of building new coal-fired power stations by 75%. If it now exports this cheap solution to other Asian states, or along the Silk Road, it will be, as Gates states, 'a disaster for the climate'. Similarly, China is now producing as much cement every three years as the US consumed in the whole of the twentieth century. China is also now the world's largest producer of steel and gold, two other highly polluting industries.

// WHERE TECHNOLOGISTS LIKE GATES LEAD, BANKERS HOPEFULLY WILL FOLLOW //

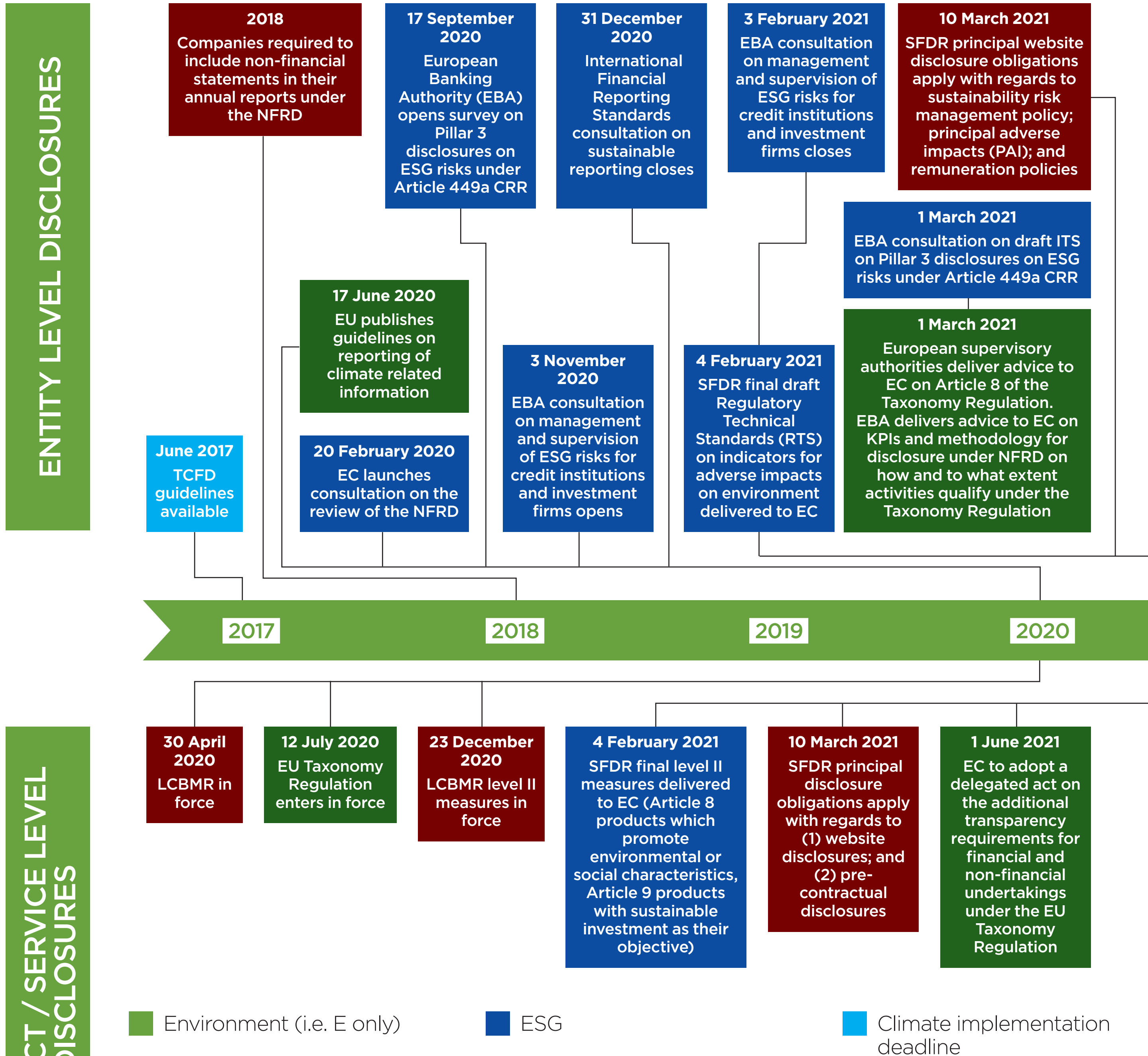
China's appetite is not restricted to consumption of industrial commodities. It has, as Gates notes, developed a taste for meat, particularly poultry and pork. These animals consume agricultural feedstock (such as soya and corn) at a ratio of 2–3 times the calories we get from eating their flesh. We are creating a net food deficit, with important implications for world agriculture and nutrition.

It is also patently clear that not everyone, particularly in the US, shares what Mark Carney calls 'The Tragedy of the Horizon' – a sense of urgency to act before it is too late. Agreement on addressing air pollution has been easy – smog and smarting eyes are literally in your face, now and undeniable. A climate change event horizon in 2030 is much less so.

In finance, we still have a decade or two before the City of London, Pudong financial centre in Shanghai and New York's Wall Street are annually flooded by rising sea levels. But as tidal rivers, the Thames, Huangpu and Hudson will eventually all back up, breaching the Bund and the Embankment, flooding the subway systems. We continue to live on expensive climate credit. If we do not act now, sure as Fate our children (Bill Gates' son features in the book) will inherit not our fortunes but our ruinous climate debts.

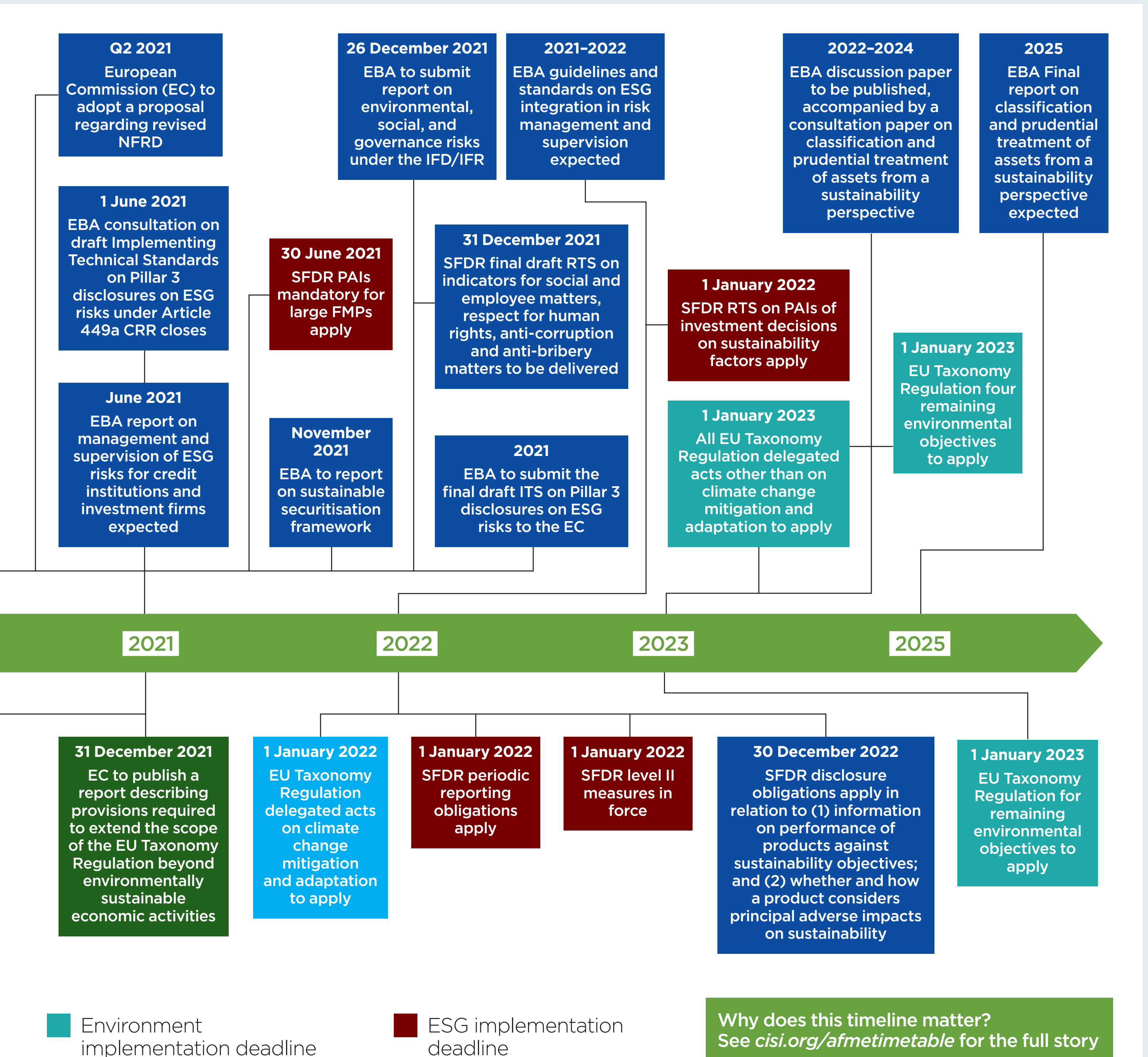
How to avoid Climate Disaster
by Bill Gates (Allen Lane, 2021)

ESG DISCLOSURES TIMELINE BY ASSOCIATION FOR FINANCIAL MARKETS IN EUROPE



Source: Diagram courtesy of AFME and Latham & Watkins

From the AFME report: "The sustainability initiatives considered by the report include: the Non-Financial Regulation (**Taxonomy**); Sustainable Finance Disclosure Regulation (**SFDR**); Low Carbon Benchmark Regulation reporting and climate risk; changes proposed to Pillar 3 disclosures under the Capital Requirements Directive



Reporting Directive (**NFRD**); guidelines of the Task Force on Climate-related Financial Disclosures (**TCFD**); Taxonomy (**LCBMR**); ECB Guidelines on climate-related environmental risks and European Commission guidelines on non-financial (**CRD**), Capital Requirements Regulation (**CRR**), Investment Firms Directive (**IFD**), and Investment Firms Regulation (**IFR**)."