

The world is standing on the verge of a sustainable finance revolution. Powerful political, economic, and social forces, accelerated by rapid technological innovation, will redefine relationships between government, business, finance and the individual. The investment universe is about to be transformed, perhaps more swiftly and fundamentally than some might think. "It's easy to imagine in 2050, people looking back at leaders, business leaders, governments, etc. in 2020 and asking the question, 'what were those people thinking? How could they not have seen the seriousness of this?'", says Brent Beardsley, Head of Personal Investor in Europe at Vanguard Asset Management. International commitments to tackle climate change, with most leading economies pledging to reach net zero carbon or greenhouse emissions by 2050 (2060 in the case of China), are already feeding through into regulatory changes for the financial services industry. But the relationships between governments, asset managers, financial advisers and individual investors are far more complex than simple top - down directives.

Political action on climate change has in part been driven by growing public pressure. The Covid-19 pandemic has also raised awareness of global interdependence and highlighted inequalities, not least in terms of

wealth and access to financial services. Ultimately it will be individuals, with increasingly sophisticated technology serving to decentralise finance, who will help drive the world around them through their investment choices. The most striking shift towards sustainable investment so far has come in Europe, which accounts for more than 80% of recognised ESG investment. According to Morningstar, in 2020 sustainable open-end and ETFs available to European investors attracted net inflows of €233billion (\$278bn at current exchange rates). In just the



Brent Beardsley Head of Personal Investor, Europe - Vanguard Asset Management

4th quarter, sustainable funds pulled in nearly €100billion in net new money, that's 45% of all net flows into European funds. By contrast, Japan accounted for only 2% of ESG investment.

The Swiss digital banking and

software company Avalog is the global leader in wealth management - nearly \$5trn of assets are managed on its platforms. The company's co-CEO Martin Greweldinger believes this rapid increase in European ESG investments can't simply be attributed to EU legislation. "I think the entire movement around decentralised finance is really pushing, speeding up current asset managers, the current financial institutions to invest more and speed up the trend. I think without that we would not see the same speed of investments going into it, because otherwise it would be a slower, quite a more regulatory-driven process." Vanguard's Brent Beardsley also highlights the increasing influence of younger investors, and in particular the under-40s: "We're at the beginning of a very large generational wealth transfer that's happening. And we see in our own data that younger investors tend to be much more attuned and aware to this and think about this ESG investing in the broader mix of what they're trying to accomplish with their assets."

That's not to say the regulatory changes aren't playing a significant part, and again the lead is being taken in Europe. EU directives on non-financial and sustainable disclosures have already increased investment transparency and from the final quarter of this year financial advisers will be required to take into account a client's sustainability preferences when suggesting investments. Further measures are to follow in 2022.

And yet. Individual preferences, regulatory frameworks, complex investment analysis - all rest on access to accurate data. And as the stream of non-financial data becomes a flood, increasingly sophisticated analytic tools and globally agreed metrics and classifications, taxonomy, are going to be needed to ensure this data is reliable, comprehensive, comparable and, in most cases, real-time. Value chains will need to be scrutinised, disparate processes, organisations and products understood and evaluated. Attempts to greenwash, to exaggerate compliance with ESG standards, will need to be exposed.

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And then this information will need to reach investors beyond the rich and ultra-rich. After all, from the perspective of individual investors and social and economic equity, global disparities can only be widened if sections of the population



Martin Greweldinger Group CPO, Avaloq

are denied the information or means to access the most sustainable investments for their long - term security, by cost or any other barrier. Despite the enormous challenges, Avalog's Martin Greweldinger believes it can be done.

"The comparison factor is really important. And what will happen is that it I think ten, fifteen years ago you would not have had a global asset market database, across all the globe where everything is in real time and can be published. I think these backbones you see at large asset managers, like they are also large data providers. And they will have the drive and the investment in that area

to be ready with the market infrastructure. When a common legislation as I think you will see, it will take not as long as certain accounting standards have taken to be implemented into technology systems."

Greweldinger was among FinTech leaders grappling with these ethical, regulatory and technological complexities at the Fin/Sum 2021 gathering in Tokyo this March. His optimism was shared by Tatsuya Takeda, General Manager, Corporate Sustainability Department of the Sumitomo Mitsui Financial Group, He believes innovations in non-financial data analysis will be driven in part by those it's intended to serve: "Young people, when they become older and become the core purchasers, consumers, they will have more stringent and critical views on the products and services that they're buying. So, of course, there may be indices developed and in terms of data, there will be more data available, indices available and there will be more and various information available over the internet. Well, it has happened already in the past 30 years, but only 30 years.

Things that were not imaginable are realised today, and in ESG, and sustainably related information will reach individuals in the future, in the near future. So individuals will have

access. So that would be a form of democratisation in a way and also at the same time the mindset of the people will change. Therefore, companies doing greenwash will be rooted out and they will die." Could this democratization then go even further, extending global governance of the sector beyond traditional regulators such as the EU? Tatsuya Takeda believes it could: "Is it governance that we want to strengthen or is it autonomous connection amongst individuals to form communities, have groupings and then the groups being connected to other groups. So it's not really a centralised kind of a network but rather, people connecting with each other while exerting governance although being distributed in nature, still governance being there. So it's like blockchain. So maybe that kind of implementing of governance might become a reality in the future, at least as a possibility." Of course the impact of a sustainable

finance revolution will be judged far beyond giving greater agency and opportunities to investors. Just as climate change highlighted the importance of ESG criteria, so a successful sustainable finance revolution must effectively, efficiently drive investment to those companies and institutions helping to create a more sustainable world. That in part includes tapping more traditional sources of capital. With low interest rates, investing may be the new saving, but in certain parts



General Manager, Corporate Sustainability Dept. Sumitomo Mitsui Financial Group

of the world, including Japan, people and companies still seem perfectly happy to accumulate cash [Atsushi, could you check the detail and source of Iwata - san's statistic about cash balances of 1,900tr Yen?]. Consequently, Sumitomo Mitsui is just one of many banking groups around the world now offering green deposit accounts, funds lent specifically to companies meeting defined ESG criteria. Again, measuring performance against these criteria will rely on internationally agreed taxonomy and increasingly sophisticated data gathering and analysis. Vanguard's Brent Beardsley believes this expanding ecosystem of







Explainable or white box AI, AI with the transparency to enable an advisor or investor to see not just the answer but how it was derived, should also support better ESG-related assessments and decision - making at both individual and institutional levels.

Avalog co - CEO Martin Greweldinger says such AI will augment, rather than replace, human advisors, freeing them from routine tasks to concentrate on the most specialized aspects of their work. This, together with the creation of a single data universe, will help take wealth management far beyond its traditional boundaries:

"I think, five years ago, we sat down from a strategic point of view and said where's the market pivoting to and... how's the world changing? We said, we need to be able to provide our services in digital services to our customers so that they can reach more investors. And with that, when we really embarked on a mission to put an entire investment platform, portfolio management platform, coordinates advisor everything else onto a cloud based off frame where we really trying to bring the price down for our customers, so that they



Daichi Iwata Senior Director, NEC

can lower the price of advice for their end investors. That is the goal. That's a vision of us. Our vision is to be the orchestrator of the financial ecosystem and to democratise wealth management."

Of course such evolving innovations will require extensive, long-term R&D investment. In 2020 Avalog was acquired by NEC, a world leader in biometric technology, cybersecurity, verification and blockchain. NEC's Senior Director, Daichi Iwata, says the two companies believe their shared vision will enable them to build on Avalog's industry - leading portfolio of core banking software, wealth management tools and data analytics expertise to help drive a sustainable finance revolution. "I think we're at a juncture where the world is about to change dramatically .... I think the regulators will take action first and then companies will

disclose more and there will be more information in the market, and in the past large institutions had to analyse them but actually technology can help give trust in the data and then that data can be provided to the citizens and then decision-making by individuals might create a big wave. It has to happen; we should promote that to happen."







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