Frankfurt Roundtable (18th June 2018)

Embracing the reality of climate change: Implications for "future wise" investors in Europe

Organizational affiliations are shown for identification purposes only as participants were speaking in their personal capacity.

Prof. Stefan Rahmstorf (Potsdam University)

Conclusion - The finance sector has a crucial role to play (Slide 19):
- Global warming is unequivocal (happening and human related) and ongoing.
- The impacts are already significant and set to worsen.
- The risks are greater than the consensus-based IPCC process suggests.
- Keeping warming to well below 2°C now requires really urgent action.
- Governments still aren't doing enough: national contributions promised in Paris were not enough to actually match the Paris agreement and many countries aren't meeting even these promises.

Global warming isn't news! The first publication that used global warming in the title was in 1975. There has been a 40% increase in CO2 and humans have caused this (slide 2).

During the Holocene, temperature has been in a narrow band that humans are well suited to. Now 5000 years of gradual cooling is being dramatically reversed by human activity – hence some suggest we are now in a new period, the "Anthropocene" (slide 4).

The way this is changing the earth is already very significant (e.g. 3/4 of the Artic sea ice volume has been lost; significant and unprecedented sea level rise during the 20th century)

Weather is now showing clear signs of change – important to take range of evidence together (slides 5-11):
- Hot outliers have increased significantly: 3 standard deviation outliers practically never occurred before 1980s.
- Rainfall analysis shows statistically significant increases since 1990s with flash floods now quite common.
- Droughts threaten food security and political stability: in Syria drought contributed to population movement which contributed to civic unrest and that led to civil war, with its impact far beyond. And a large part of the Mediterranean is predicted to turn into a desert even if the 2°C target is met.
- Tropical storms – most of the strongest storms ever have occurred within the last five years.

Tipping elements in the climate system are critical but not a major focus for the IPCC (slide 13):
- Major challenge is that we don't know for sure when tipping points will be reached.
- What we do know is they become more likely above 2°C.
- Many tipping points will be irreversible on human time scales.

Some disruption is now certain – therefore it is critical we minimize this so we aren't overwhelmed and can adapt. But focus on adaptation without mitigation is foolish: both are needed.

Big assumptions being made about carbon capture and storage (CCS) and disappointment is almost certain (slide 16).

To meet the Paris agreement, we can emit a further ~600 gigatonnes. If emissions continue at current level, this is about 15 years. The more we emit now, the earlier we have to hit zero i.e. the more abrupt the change will have to be if we want to keep to 2°C (slide 15).

Major challenge is that national contributions promised in Paris were not enough to actually match the Paris agreement, and many countries are not even meeting these promises (slide 17).

Intergovernmental organisations are challenged. IEA has been repeatedly wrong on renewables but doesn't seem to learn (slide 18). Renewable energy has developed much faster than even optimists expected.

Karsten Löffler (Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance)

Karsten is on holiday and hasn't been able to check this, so it's what I took away from his presentation. If there are significant changes, I will let you know.

Policy is critical for climate change and investors.

Policy makers have not yet been bold enough - climate regulation has had limited real world effects. Several industrial sectors need to make major change

The good news is that Europe acknowledges climate related systematic risk and there is a big push on sustainable finance and long-term focus on the financial industry. A lot of the debate is focusing on questions of materiality, how to integrate ESG factors into investment decision making. But what impact is this having on climate change?

Insurance companies are seen as most vulnerable. The big challenges lies on the asset side, not on the liabilities side, since liabilities can be adjusted yearly underwriting changes. Yet the asset side has had less attention.

One big question is what is the social role of the financial sector? Should it contribute to a policy/political goal? In Germany, the agreement is that there should be a 'hands-off' approach: politicians shouldn't tell finance what to focus on and finance shouldn't tell politicians what they should do. But is this what actually happens in reality on other issues?

In other countries (e.g. France and UK) the finance sector is being seen as a key player in the climate debate. How far is this actually happening i.e. is there a 'walk the talk' challenge? If so, might Germany and other countries be, in practice, quite similar?

FS UNEP is one of about 20 centres globally working together on finance and sustainability. Much interest in China.

- Long-term agenda and setting the pace
- Governance model means increase in speed
- Future-proofing the economy through E(SG)
- A technology advantage over time with long-term payout

Germany risks falling behind if the urgency is neglected and there's insufficient innovation.

German utilities were very reluctant to invest in renewable energy, ignored the fact that fossils would be reduced, e.g. though legislation and generally hesitated for too long to transform the business model

Marc Lewis (Carbon Tracker Initiative)

What happened to the utility industry [slide 5] has useful lessons for: other sectors that are reluctant to make climate related changes, for the utility sector itself (it still faces major changes) and for investors (who need to choose to either enable forward looking leadership or cement in BAU).

European utilities are being squeezed from two sides: i.e. volume impact (due to renewable production) and value impact (wholesale power prices has been pushed down by renewables). The financial impact of climate change (and consequent action) is already very significant for this sector (EU utilities have written down $150bn of assets since 2010). And building new renewables is now cheaper than building new fossil but still more expensive than existing fossil – however, this will change over the next few years. [Slide 4].

Carbon Trackers calculate that half the coal plants in Europe are loss-making at an operating level today and almost all will be by 2030. [Slides 6-7].

- Renewables have broken through the <u>total</u> costs of fossil fuels as a global average so in those locations where this is the case, it makes no economic sense to build new fossil fuel electricity generation.
- Renewables are starting to break through the <u>variable</u> cost of fossil fuels i.e. it makes sense to shut down existing plants.
- A key factor will be the 'arrival of storage'.

A positive policy/cost/consumer cycle for renewables has started in many countries – lower costs emboldens regulators to make the polluters pay. But as economic and technological obstacles to transformation have reduced, so political obstacles have grown in some countries e.g. US, Poland. [Slide 8].

Emerging markets have a clear choice – either stick with model that worked in the West or leapfrog this to a much more direct and much less disintermediated system (with a lot less waste and pollution). [Slide 9-10].

<u>Q&A</u>

Who are the leaders? ENEL & Iberdrola. The market is rewarding companies that have shifted business strategy. Who are the laggards? RWE but even they are moving (significantly increased exposure to renewables as a result of the deal with E.ON). There have been big changes during the last 12 months.

What did senior execs/boards get wrong? They wrote off the development of renewables and over-estimated their political influence re nuclear.

Nicolas Moreau (DWS)

How can investors help finance the transition to a low carbon economy? Infrastructure, private equity and venture capital are likely to be offering the best kind of partnerships (e.g. DWS new private equity fund focused on Chinese clean tech companies or the new infrastructure fund focused on solar assets to help decarbonize company's supply chains). There is a need for capital and there is a demand from clients and large investors can play a useful intermediary role.

How can investors integrate climate risk into the investment decision-making and price it well? Engagement is key. But also have to adapt basic models e.g. DCF which assume historical distributions of risk (e.g. catastrophic events) which aren't like to happen going forward. And then develop appropriate execution strategies. The 2011 floods in Asia had a very big impact on the tech supply chain, so DWS is creating an index which exclude companies that have a supply-chain in areas that are at risk of flooding. Similarly, investors need to take climate risk into account when buying sovereign bonds.

How can investors best do engagement? Today, engagement is primarily for better disclosure. Many insurance companies have signed the Montreal pledge and are disclosing the CO2 footprint of their investment portfolio. 'What gets measured, gets addressed.'

<u>Q&A</u>

Q – It used to be the asset owners who pushed the agenda. Has this now changed?
A – Yes and no. More and more asset owners are requesting ESG. But whether there is client demand or not, IMs still need to take into account all material risks, e.g. climate change, in the way how they monitor securities. Also asset owners, particularly in France and especially those with union connections, are putting billions into impact investing projects that designed to tackle some of the most pressing social and environmental issues.

Q – Should we have more/better climate finance regulation?
A – French institutional investors, including asset owners, are quite active due to the implementation of article 173 which has a comply or explain aspect.
Current regulation has provoked greater interest in carbon footprint of investment portfolios and this has been a good thing.

Q – DWS has voted at US AGMs in favour of climate risk disclosure. Many large fund managers did not do this. Why has DWS been able to act consistently?
A – DWS follows Ceres principles and other fund managers are moving in this direction too.

Raj Thamotheram (Preventable Surprises)

Generalising – there is too much easy optimism ("green tech will solve climate change") and it feeds incrementalism/complacency amongst even climate aware investors.

There is radical uncertainty as Stefan explained and this is exacerbated by policy uncertainty as Karsten described and together this means investors should be being much more active than they are.

Energy utility sector is 24% of CO2 emissions and everything is in place to make the major changes needed. Plus the sector's current BAU has been a major cause of financial loss. McKinsey's recent report shows the sector's business model is fundamentally broken.

Unless we deal with this easy to change "low hanging fruit" sector now, we will not have the time to deal with the more difficult sectors e.g. aviation, shipping, cement etc.

Governance aspect: forward looking analysts and insiders had seen the problem for many years but the sector decision-makers ignored these warnings and the investors went along with the incumbency.

Academics at Zurich University have concluded that different investment strategies have different strengths – e.g. political signal sending, risk management, value alignment but that stewardship along with impact and thematic investing are most likely to create real world change.

Just as there are corporate leaders and laggards, so too in investor stewardship. One leader is ETHOS in Switzerland which is engaging, on behalf of Swiss pension funds, with 8 utility companies. Many of the biggest stewardship laggards are in the USA. And it's not just pension funds and investment managers – the USA is the HQ for most of really big investment consultants, sell side analysts, credit rating firms, auditors.

EU players need to push a systemic risk management agenda to make sure the global investment industry plays the part that it should.

Discussion

Q – Should the financial sector be asking for more regulation?

Participant A: We have asked for more regulation for 15 years! Why does the industry keep asking for data? How much more information is needed to make the correct decision in this context? There are just some investments out there that should not be in the investment. Data scientists will change the investment industry, showing patterns which then can be acted upon. Reporting of (many) companies is far ahead of the financial industry which must use the data that is out there before asking for more.

Participant B: Depends what investors are asking regulators to do. In the UK 'Know your clients' has focused on bribery & corruption but it could also focus on e.g. (climate related) systemic risk. Regulators could require all IMs to as their AO clients "do you want us to manage climate related systemic risk?" This regulatory nudge would apparent lack of demand into a clear signal for action. And we need to be careful about the unintended consequences of regulatory asks. For example, the French regulation has pushed investors towards managing their portfolio carbon scores. What we need is regulation which pushes investors to be active owners and ideally forceful stewards.

Q – What to do about the USA?

Participant C: The EU follows regulation, China follows the political path - the government just takes action to green the economy. Regulation in the USA doesn't work due to its specific context. Companies and cities/states, will need to take the lead. DWS, using Ceres principles, has a near 100% record of voting in favour of climate resolutions, whilst BlackRock is at 6% but this will change. By 2025 75% of the work force will be millennials. Studies show that millennial invest in line with their values and beliefs and they belief that climate change is happening. If fund managers don't adapt to this, they won't succeed with customers. But will this be fast enough?

Q – Are investors using AGMs as much as they could to push this agenda?

Participant D: We do not see many ESG resolutions on European AGM agendas, in contrast to the US. Remuneration is always on the agenda. And digitalization is a hot topic with many German boards about experts on this. But there are no ESG experts on the boards of energy utility companies. Why?

Participant E: There does not need to be an expert on the board. Once it is mainstream the people on the board should know about it. Companies have known about this for a long-time.

Post roundtable reflections – some personal comments

In the two short hours of this event we covered a lot. To try to come to consensus wasn't the aim. What this fascinating roundtable, building on an equally excellent event in Paris, has highlighted for me is as follows:

a) We now know a lot about climate science and consequences. 97% of peer reviewed scientists agree the situation is very serious and due to humans. Compare this with the GFC where only a few economists were pointing to the risks. People who ignore this scientific consensus are engaged in willful blindness.
b) Climate change is happening far faster than most companies and investors seem to realise. Partly, this is because governments have been co-opted by vested interests – nowhere is this clearer than the USA. And linked, the consensus IPCC process – and organisations that build on IPCC's work (e.g. the Taskforce on Climate related Financial Disclosure, TCFD) – are likely to be significantly under-estimating the challenge. This is clearest with regard to tipping points, but it also relates to the gap between what states volunteered to do and what they are delivering. Moreover, the election of Donald Trump is likely to give some countries cover for dragging their feet. Wilful blindness is the default setting for many.
c) In this context, unless the finance sector really steps up to the challenge, it is almost certain we will miss the 2°C target (leave aside the 1.5°C aspiration) and it's quite probable that we will move towards an average warming of 4-5°C by 2100.
d) The socio-economic implications of this are immense and economic models are deeply unreliable in this regard. As with the GFC, mainstream economists are again part of the problem. What is clear is that this kind of warming will not be consistent with business models for the insurance (a warning now repeated by Aviva and Allianz). The same goes for other sectors and for many countries (eg much of the Mediterean). To summarise, *human civilisation as we know it is not consistent with this kind of warming*. If we continue as we are doing, we may come to see that the first casualty was political democracy and established

ways of decision-making (e.g. the EU). In this context, only a really backward looking and technocratic definition of fiduciary duty could exclude this.

e) Germany has the best of renewables and the worst of traditional energy utility companies (from a climate perspective) and presumably some investors are exposed to both – how do they explain this?
f) We have a rather inconsistent approach to core issues like jobs. On one hand, politicians and investors seem to be quite relaxed about AI replacing millions of humans in the workplace in Germany alone. On the other hand, there is huge concern about the 17,000 people (down from 100,000) who still work in open pitch mining for brown coal in east Germany. This isn't a lot of people overall but it is from a region that is economically weak already and politically vulnerable. So much effort is put into "protecting" these jobs against all odds when perhaps leaders should be thinking creatively about using these state handouts in another way (e.g. universal basic income, intensive regional regeneration initiatives, etc.)?
g) Very little effort has gone into *really* understanding the investment opportunities from a major energy transition. This is much more than "clean tech". It's fine for climate advocates to say that climate change is the biggest investment opportunity ever – but until major financial players publish about this in detail and start to really act on it, sector by sector, this message won't land with the voters or consumers.
h) What has happened to the energy utility sector in Europe is a case in point – it is an archetypal "preventable surprise". By putting narrowly defined and short-term definitions of shareholder value so front and centre, the sector has actually been a huge loss maker for its investors. we have heard convincing accounts from insiders and ESG aware investors that they knew this scenario was likely to happen. But they were unable, despite their best efforts, to stop huge shareholder losses. Why? Because of the culture of the sector and the way investors have chosen to interpret their fiduciary duty. These dynamics have not changed much.
i) There is, even today, much diversity of opinion about stewardship. On one hand some industry participants think that what is happening is the best that can be done. And there are others who question the legitimacy of even the engagement that is happening now, arguing that only governments should set climate policy. There is even confusion about what constitutes a climate aware board.

In the meantime, GHGs rise year on year and we look on track for 4-5°C average warming by 2100.

What then can be done to move things forward?

An outsiders' perspective can be both useful. Climate change is a global phenomenon, no market is doing things well enough and learning from other markets is especially relevant to a sector like finance where German fund managers increasingly depend on non-German clients. But outside perspectives can be limited or unrealistic. Ultimately, it's how the outsider/insider interaction dynamic is made use of. In this context, let me share some ideas for German investment insiders to consider in the decisions that only you can take.

1. If German investors really wish to be a part of the solution and help bend the curve of GHGs in time to keep to less than 2°C, then the big German investors will need to speak with a common voice on climate risk far more powerfully than has happened to-date. The message needs to be directed at both German (and other) corporates but also the German government. Only a CEO or board member led dialogue can be fit for purpose i.e. CEOs, or

directors expressly mandated by the board, need to get personally engaged. In some cases, this will require fast executive education about the current science.

2. Whilst Anglo Saxon SRI/ESG investors have spent many years asking for scenario plans – and yet many are unwilling to vote for resolutions which have a normative agenda related to Paris agreement (as with Shell) – there is a powerful case for saying mainstream German investors should jump over this rather symbolic discussion about scenarios and ask for transition plans consistent with the Paris agreement. This is what Preventable Surprises has called "<2°C transition plans" and others (e.g B Team) call termed it "net zero by 2050". If German investors were to do this, it is likely that this would trigger action by French and Scandinavian peers and Anglo Saxon investors would soon be forced to follow.
3. There seem to be concerns about how the German regulator might react on concert party matters, even though the European Securities and Markets Authority has formally indicated that voting on environmental issues is part of the "white list".[1] These concerns should be addressed as if they are real, even if they turn out to be more imaginary. Specifically the German Investment Funds Association (BVI) should be asked to amend its voting guidelines to favour disclosure of climate risk. Given that the vast majority of the board of BVI[2] are from organisations that are members of UN PRI – which states that its members consider climate change to be the biggest risk issue – this should not be an insurmountable challenge. And this concern about possible concert party implications should also be an explicit agenda item for discussion with the German government.
4. There should be a public debate about whether investors have a fiduciary duty to encourage companies to align with the Paris agreement or whether this is usurping the role of the democratic process. This debate should be led by non-investment actors e.g. foundations, academic and media with investment professionals contributing. Just as war is too important to leave just to generals, so stewardship is far too important to leave just to investors. Investors are, day in and day out, passively supporting – if not actively encouraging – management to do things which are contrary to the Paris agreement (as shown by lack of *effective* investor stewardship vis a vis energy utility companies over the last decade). Thus climate change related stewardship, especially with regard to high impact companies, is the least investors can now do balance out net negative impact and be considered responsible. Whilst produced for a US audience, academic David Webber has written a book which is very timely. Entitled "The rise of the working class shareholder", it argues that the American Left – which is profoundly uncomfortable about the existence of pension fund assets controlled/influenced by trade unionists – is as responsible as the far right for holding back the development of stewardship. Similar dynamics could be usefully explored but from a continental European perspective.

Dr Raj Thamotheram, Founder & Chair, Preventable Surprises

[1] https://www.esma.europa.eu/sites/default/files/library/2015/11/2014-677.pdf -see 4.1 (d) (ix)
[2] https://www.bvi.de/en/bvi/about-us/governing-bodies-and-committees/