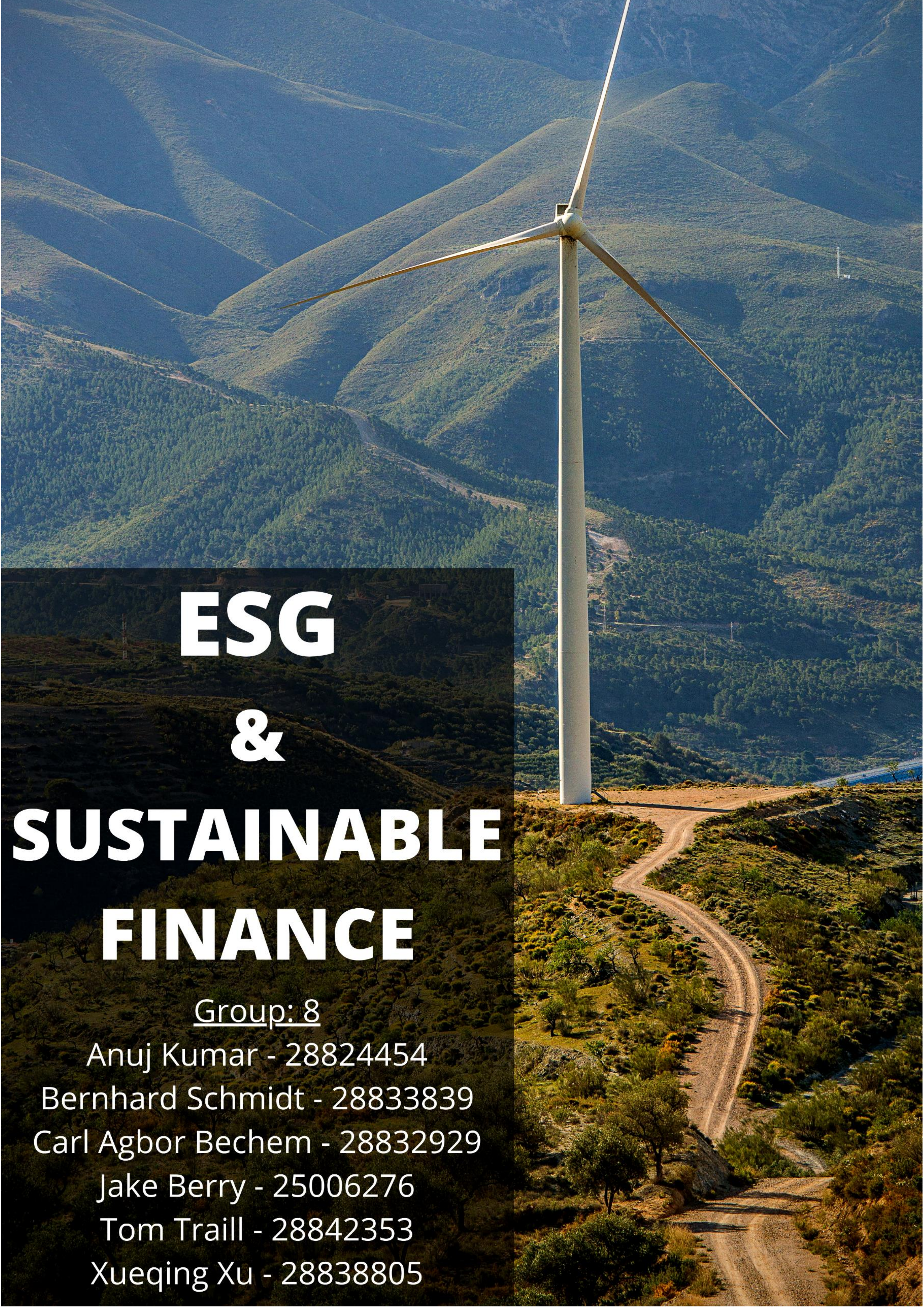

ESG & SUSTAINABLE FINANCE

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Contents

"The risk climate change poses to businesses and financial markets is real and already present"

- Michael Bloomberg

Executive Summary

The interplay between ESG/climate change and the financial markets is bilateral. As the source of funding that allows the current inertia, the financial system has within its power the ability to encourage better externalities. In fact, it is in their interest to do so; firms that follow more equitable and sustainable practices are shown to generate more equitable and sustainable returns. Public sentiment is changing, climate change is being taken more seriously, the financial industry can do what it was designed to: fund the projects with the best prospects.

ESG and the financial sector

Evidence is mounting that companies with good environmental, social and governance (ESG) credentials generate larger, more sustainable returns (Riding, 2020). New regulations and growing social pressure encourage lenders to support ventures that generate fewer negative externalities (Avermaete and Bouzas, 2019). Banks and other investment firms provide the financing allowing these negative practices; thus they can encourage more positive externalities. Financial firms endorsing ESG can be lauded and there can be severe reputational and legal consequences for companies seen to be assisting impropriety (Hall, et al., 2020).

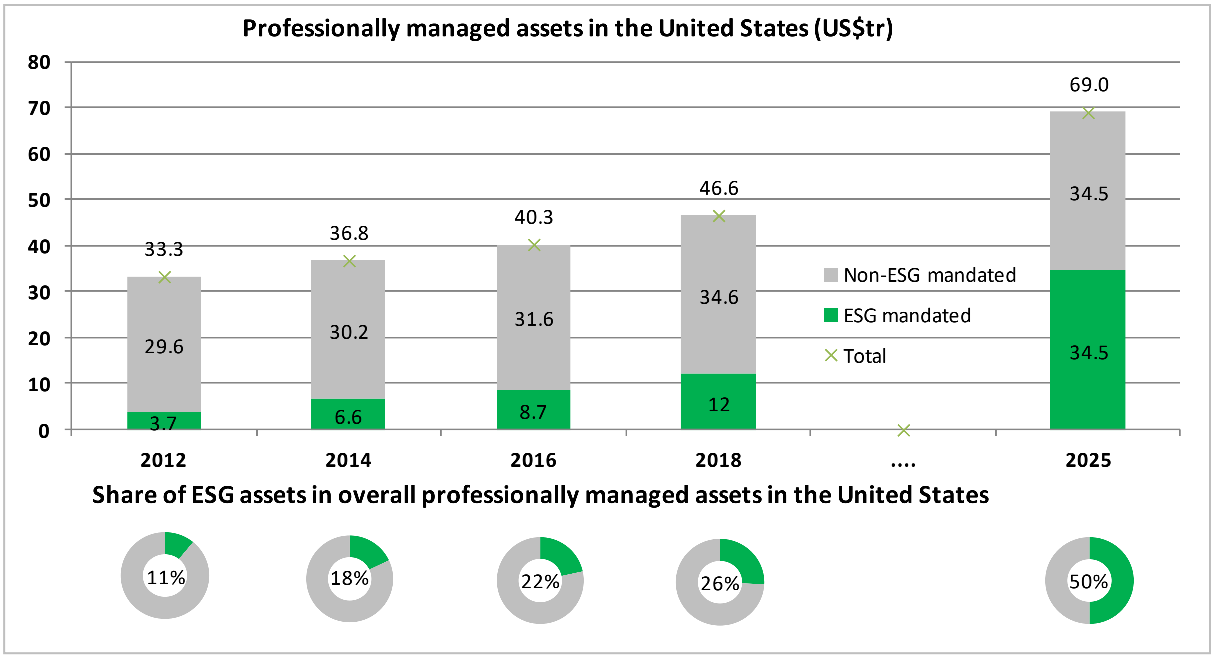
Firms are now rated on ESG factors, and these scores increasingly affect the willingness of investors to engage with them (Broughton, 2020). Fitch (2020) suggest that human rights violations are the ESG factor most likely to deter lending, but increasingly the most polluting firms, such as coal miners, are finding it harder to secure funding.

Under their remit of long-term financial stability, central banks and multinational organisations have taken an interest in ESG, with the Bank of England's (BOE) *Task Force on Climate-related Financial Disclosures'* (TCFD) framework among the most prominent. The European Banking Federation is encouraging lending to companies with more diverse employees, since research shows that a broader range of experiences in a firm at all levels has a positive effect on performance (Kotsantonis and Bufalari, 2019).

As with everything, ESG does have its detractors. There are accusations that some profitable firms are underpriced because they do not qualify as ESG (Vitium Global Fund, 2020), though these normally have low long-term prospects.

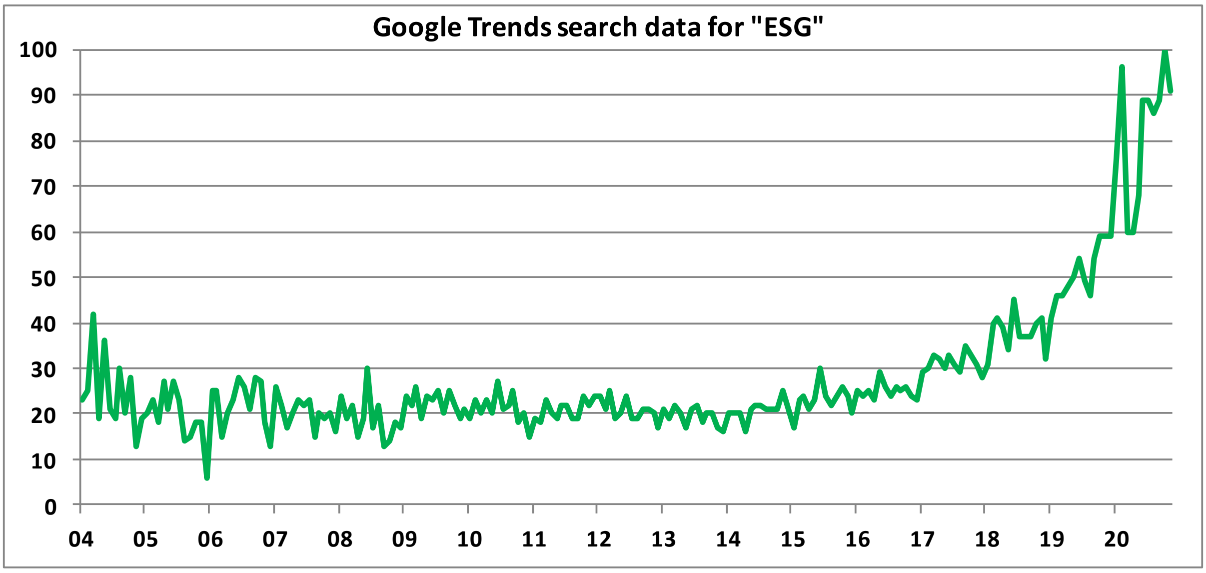
In early 2020, Deloitte reported that ESG products could grow to make up half of the active investments in the US by 2025, with a growth rate three times as fast as non-ESG assets (Collins and Sullivan, 2020). Demand for ESG products is increasing from both retail and institutional investors, particularly younger generations (RBC, 2020), propelled in part by a social momentum towards correcting imbalances in corporate representation and an increased awareness of the severity and urgency of climate change.

Figure 1



Banks have been keen to produce ESG-mandated products, since these have multiple benefits to them; potentially higher financial returns, a positive reputation and a more equitable future. Furthermore, ESG-products often charge higher fees than those with fewer restrictions.

Figure 2



(Source: Google Trends)

Financial risks

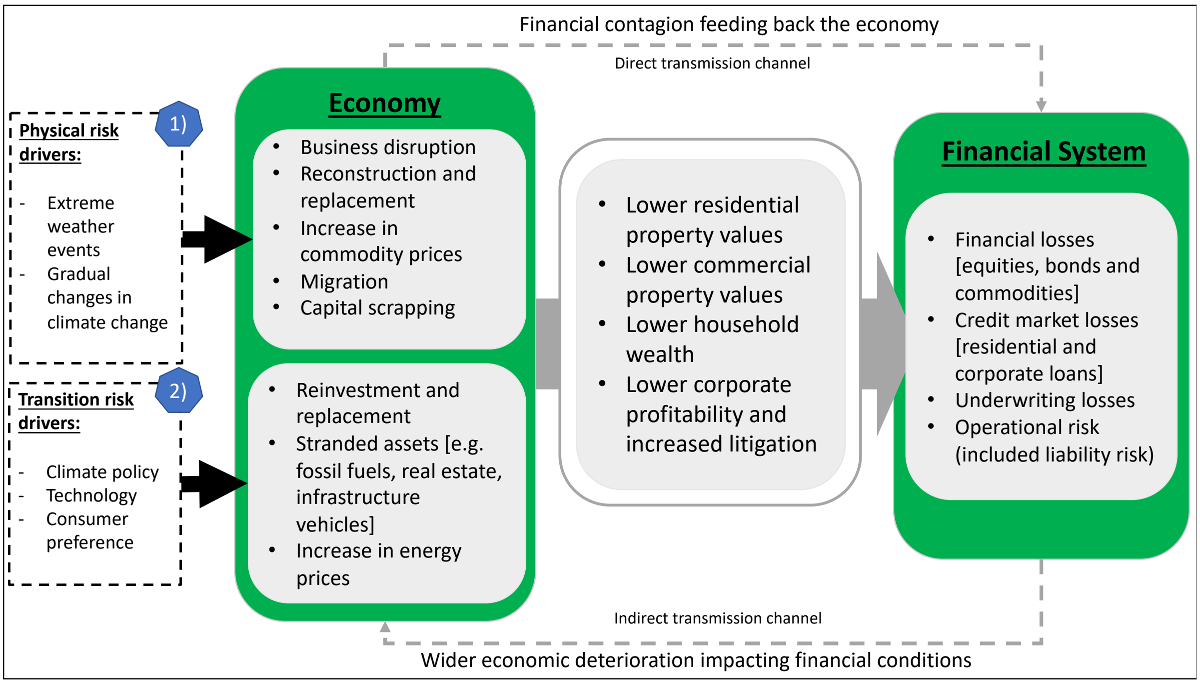
Tol (2009) argues that climate change is the mother of all externalities. The main emitters of greenhouse gases, companies and households, are the participants in financial markets, therefore the two are closely linked (Tol R.S., p.29; Hale, G., 2020). Given that climate change negatively effects financial markets, the three main financial risks are particularly concise (Carney M., 2015).

1) **Physical risks** are caused by extreme events due to climate change (Deloitte, 2020) affecting, organizations' premises, operations, international supply chains, transport needs, and employee safety (TCFD, 2017). Physical risks have a direct impact on real assets (TCFD, 2017, p.17), which are an important underlying factor of financial markets (Scott-Quinn, B., 2012).

2) **Transition risks** are political, legal or technological risks associated with the transition to a low-carbon economy. They occur due to necessary changes to address mitigation and adaptation requirements related to climate change (TCFD, 2017; Oliver Wyman).

3) **Liability risks** arise from the intrinsic motivation of risk averse investors or individuals who are seeking protection from losses they may have suffered due to physical or transition risks (Bank of England). Financial intermediaries are especially vulnerable to liability risks; liabilities are important to their balance sheets (Scott-Quinn, B., 2012).

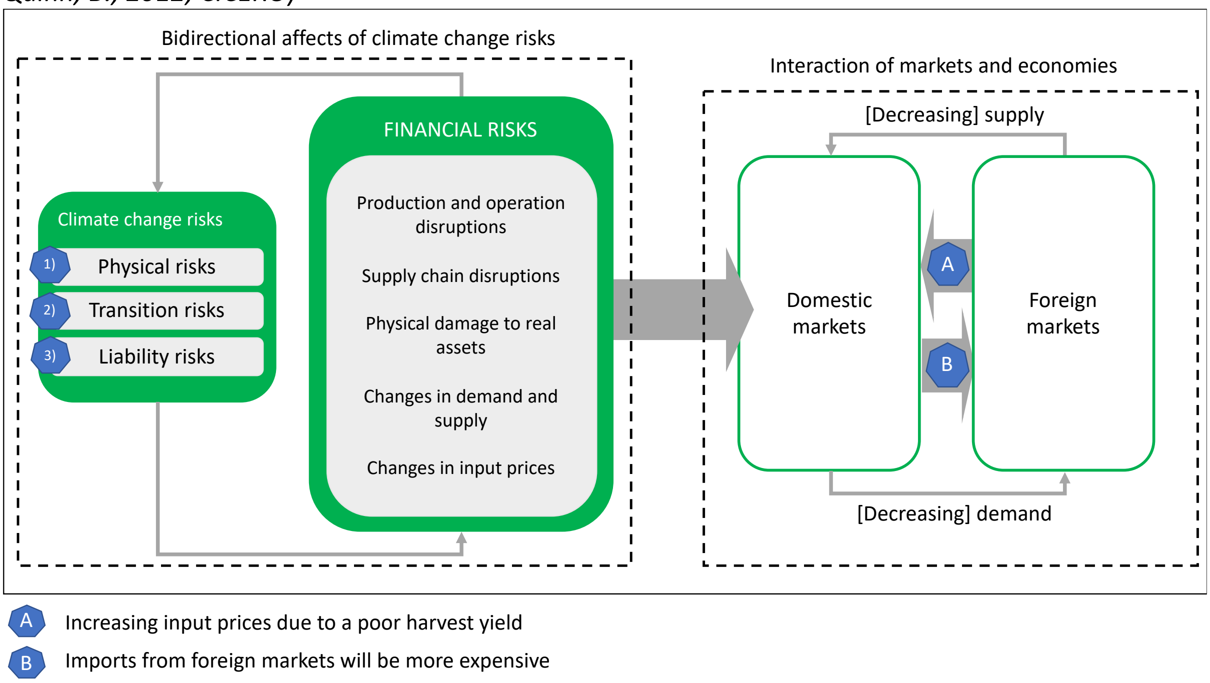
Figure 3, How climate change related risks might affect economies and financial systems (Deloitte, 2020)



Asset values

ESG has become incrementally more important to participants of financial markets and the reallocation of capital - evidence suggests that that investors prefer ESG friendly assets (Sahut, 2015; Scott-Quinn, B., 2020). Figure 4 illustrates how small changes caused by climate change may have a pronounced impact due to growing interdependencies.

Figure 4, The relationship between Climate change related financial risks and global markets (Scott-Quinn, B., 2012; CICERO)



The risks of climate change are myriad, affecting all aspects of the economy. One of the main concerns is a reduction, or mispricing, in the value of real assets. Such a change can have significant impacts on the economic system, because the latter is a function of the former (Bodie, Zane, et al., 2011). Consequently, decreasing asset values could lead to mispricing of underlying assets, affecting insurance companies, eventually causing solvency problems (Lewis and Davies, 2018).

Figure 5, Various potential effects and risks of climate change related risks

	Risk type	Affected by	Potential effect	Potential Risk
1	Physical Risk	Global warming - Increasing temperatures, flood and storms, rise of sealevels, etc.	Destruction and increased depletion of real estate and lack of pricing in these risks	Mispricing of real estate
2	Physical Risk	Global warming - Fires and drought	lower harvest yield	Increased prices for commodities and supply chain disruptions
3	Physical Risk	Global warming - Increasing sea levels	effecting coastal habitants, destructive erosion, wetland flooding, etc.	Internet access
4	Transition Risk	Change in government policies according to the Paris agreement	Fuel reserves could be burned	Mispricing and loss of value
5	Transition Risk	Necessary Investments in Technology	Companies are unable to meet financial obligations	Abrupt changes in asset valuation and default of companies debt
6	Transition Risk	New climate friendly policies	Higher business costs for according to new re-gulations leading to higher production costs	changes in demand for products and services
7	Liability Risk	People seeking for compensation of losses	Investors need information about its exposure to climate-related financial risks	Claims against businesses

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**Sources for every individual case are shown under References*

Financial risks of climate change

Traditional financial risks faced by institutions broadly fall into four categories (Maverick, 2019):

Market Risk	Credit Risk	Liquidity Risk	Operational Risks
These risks are unique to different sectors of global economy, and can be ushered in due to changing marketplace conditions or shifting consumer behavior e.g. rise in demand for plant-based meat products can spell a death-knell for traditional meat producers.	Such risks are incurred when a counterparty reneges on its due payments. Cash-flow statements are analyzed and due diligence is undertaken before extending credit to minimize Credit Risks. e.g. Argentine government defaulted on its sovereign bond payments in 2020.	Barriers to the ease of convertibility of physical or financial assets into cash in extraordinary times of need, fall in this category. Cyclical downturns in revenue can be a major source of these risks.	These risks originate from an organization's business activities and can include a misfired marketing campaign, distasteful comments by high profile employees, fraud risk, business model problems and lawsuits. Climate Change risks used to be part of operational risks.

Climate related financial risks are novel because they have the potential to affect the global economy at large and are not limited to any particular industrial sectors. Add to that the intractable problem of quantifying the economic risks of climate change, which compounds the problem for financial institutions to manage such risks prudently (Diaz and Moore, 2017). As to which aforementioned traditional financial risks would be precipitated by climate change, it depends entirely on the sector an organization is active in.

Fossil Fuels industry, for instance, faces all of the above traditional risks thanks to climate change. We have already witnessed the fall of Californian utility behemoth Pacific Gas and Electric Company (PG&E), an event widely publicized as the "First Climate-Change Bankruptcy" by The Wall Street Journal. Clearly, climate risks are unpredictable and can strike any sector (Gold, 2019).

Until recently, climate-related risks fell under the aegis of Corporate Social Responsibility (CSR) department and were classified as Operational Risks in an organization. But structural changes to the world economy, made pertinent by climate change, would require assimilating climate-related financial risks into existing financial risk management frameworks. Teams specializing in climate-change risk management and focusing on 'passively preventing negative actions' rather than 'actively encouraging positive actions' would become a necessity in every organization with exposure to ESG risk (Colas, Khaykin and Pyanet, 2019). Proactive, all-hands-on-deck engagement approach from every level of the firm would be required to stay ahead of the disruption curve.

On the basis of traditional financing risk evaluation, additional consideration of climate-related financial risks is more realistic and highly maneuverable. Since ESG mainly focuses on the analysis of impact on forward-looking sustainable factors, ESG factors should be considered in the risk assessment of medium and long-term projects, such as financing or mergers and acquisitions, with a certain financing scale.

Supranational recommendations and regulations

The finance industry and financial markets have come to realize that failure to incorporate climate change related risks in organizations' operating strategies will lead to misallocation of capital and face a risk of a repeat of the 2007-2008 global financial crisis. In a bid to encourage climate action in financial markets, the Bank of England's Financial Stability Board (FSB), through its *Task Force on Climate-related Financial Disclosures* (TCFD), put forward a set of widely adoptable recommendations to assist businesses in reporting climate-related financial information. These recommendations are tied to four thematic areas representing core elements of how businesses operate these include governance, strategy, risk management and metrics and targets.

- Organizations are required to disclose their governance around climate-related risks and opportunities by describing the board's oversight of climate-related risks and opportunities and, in addition, give a clear description of management's roles in assessing and managing climate-related risks and opportunities.
- In terms of strategy, organizations must disclose the actual and potential impacts of climate-related risks and opportunities on their businesses, strategy and financial planning and their resilience considering different climate-related scenarios.
- In addition, organizations need to disclose how they identify, assess and manage climate-related risks, by describing the processes they employ for these tasks and how these processes are integrated into the organization's overall risk management.
- Finally, organizations are required to disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities and include their performance against targets. They are to disclose Scope 1, Scope 2 and if appropriate Scope 3 Green House Gas (GHG) emissions and the related risks.

The United Nation's *Principles for Responsible Banking* provides a unique framework to guide banks' strategies and practices to ensure they align with the vision of the Sustainable Development Goals and the Paris Climate Agreement.

The six principles are: alignment, impact and target setting, clients and customers, stakeholders, governance and culture, and transparency and accountability. These seek to ensure that banks contribute to proactively and responsibly incorporate climate action in their strategic, portfolio and transactional levels across all business areas. More than a third of the banks in the banking sector have become signatories of this initiative to work towards a more sustainable future for all, as they realize that climate change poses a serious threat to the financial sector if left unchecked.

Case Study – Metro Bank

Overview

Metro Bank PLC (henceforth MB) is a UK based commercial bank, with £14.68 billion in loan assets at the beginning of year 2020. More than 70% of these loans are residential mortgages, and MB derives 87% of its income from interests paid on these mortgages (Metro Bank PLC, 2020).

MB's customer base is highly concentrated in Greater London and South-East England area, making up more than two-thirds of its lending portfolio secured on property (Metro Bank PLC, 2018). Any adverse risk to the value of properties in these regions will have a disproportionate negative impact on MB's loan portfolio.

MB faces two main risks emanating from climate change: transitional risks and physical risks.

Transitional Risks

Risks associated with greening of global economy pose only limited risks to MB's loan book because the bank does not lend to any carbon-intensive industries. Nor is the bank active in project finance sector. Herein lies the strength of MB's assets. Having committed to focus on small and mid-sized enterprises, MB has avoided material environmental risks (Metro Bank PLC, 2020). There is a concern that changes in regulation - for example over the cladding on flats or the energy efficiency of homes - may damage the resale value of some of their charges.

Physical Risks

Extraordinary weather events such as storm surges, coastal erosion and flooding, can potentially dent the value of MB's loan assets. This is the prime environmental weakness in MB's asset book. Heavy rains in the southern UK region may severely dent MB's clients' ability to service their mortgage loans and consequently diminish the value of its assets.

ESG Ratings

Data from Bloomberg depicts steadily rising ESG disclosure score for MB, but major strides need to be taken to ensure that ratio of women in total workforce matches that of women in management positions. The equivalent data from Refinitiv shows a drop in the ESG score for 2018, largely due to a sudden fall in the ESG controversies score from A+ to D+.

It is noteworthy that MB has not yet declared its Scope 3 emissions MB claims to have taken a host of initiatives to cut down its own carbon emissions, which including design changes in its stores, an embrace of hi-tech online-first approach and an EV-only fleet. These steps are likely to buttress MB's ESG ratings in future.

Figure 6: Metro Bank ESG Disclosure Score

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
ESG Disclosure Score	3.51	3.51	22.37	27.19	28.51	30.7
Environmental						
Environmental Disclosure Score	—	—	8.04	13.39	16.07	20.54
Total GHG Emissions	—	—	6.2	6	6.4	5.9
Social						
Social Disclosure Score	—	—	23.33	31.67	31.67	31.67
Number of Employees	—	—	2,417.00	3,002.00	3,803.00	3,555.00
Pct Women in Workforce	—	—	43	47	46	46
% Women in Mgt	—	—	32	28	38	34
Pct Minorities in Workforce	—	—	45.08	46.7	47.3	46.8
Governance						
Governance Disclosure Score	14.29	14.29	50	50	50	50
Size of the Board	9	10	10	11	12	10
Indep Directors	—	—	8	9	10	6
% Indep Directors	—	—	80	81.82	83.33	60
Board Duration (Years)	—	—	1	1	1	1
# Board Meetings	—	—	10	10	10	10
Board Mtg Attendance	—	—	94	97.11	100	98.63
Political Donations	—	—	0	0	0	0

(Source: Bloomberg)

Figure 7: Metro Bank GHG emissions Report

GHG emissions	2019 (TCO2e)	2018 (TCO2e)	2017 (TCO2e)	2016 (TCO2e) baseline year
Scope 1 emissions	1699	2306	1312	1160
Scope 2 emissions	4247	4064	4668	5044
Total Scope 1 & 2 emissions	5946	6369	5980	6204
Full Time Employees (FTE)	3555	3803	3002	2417
Total emissions per FTE	1.67	1.67	1.99	2.57

(Source: Metro Bank Annual Report 2019, Pg. 47)

A SWOT assessment of Metro Bank's Asset Book with respect to ESG/climate change risks

	Strengths	Weaknesses	Opportunities	Threats
Environmental/ Climate Change risks	MB does not lend to fossil fuels industries. It has no exposure to project finance or carbon-based transportation system as well	Geographical concentration in a single region renders MB vulnerable to sudden swings in asset portfolio brought upon by a climate change event	Take a lead role in financing next generation, energy efficient housing with zero-carbon footprint	Energy Performance Certification (EPC) changes in future might affect customers' ability to rent out, and therefore, pay the mortgage
Social Risks	Even amidst the pandemic, MB was the only UK high-street bank to keep all their branches open	Dismal online presence makes MB toothless in terms of pushing its agenda, and bringing about a positive change	Utilize its loyal customer network to reach out more aggressively to find new clients	Neither having signed UNEP Finance Initiative, nor officially supporting TCFD means MB risks inviting a social boycott
Governance Risks	The deposits by customers still remain sticky in spite of all the negative press	MB's brand took a beating after an accounting error came to light in 2019	Regain trust of customers by delivering better services than ever before	The company's strategy to have a glitzy physical presence, could ultimately prove anachronistic in the age of purely digital banking
	The loyal customer base, a stable loan book and recent entry into Fintech space makes MB an attractive target for acquisition by a larger rival seeking exposure to mid-market segment (Lloyd, 2020)	Lack of specialised staff adept at modelling credit risk to its mortgage portfolio	Acquisition of peer-to-peer unsecured lending platform, Ratesetter gives MB a footing in the Fintech sector and bodes well for future growth (Metro Bank PLC, 2020)	The emergence of financial technology, backed up by huge venture capital companies in mortgage lending sector
	MB has remained among the top performers in third-party customer satisfaction surveys	Resignation of MB's founder quashed their long-term plans to challenge other high-street UK banks for market share	Use expertise in retail mortgage segment to automate the entire loan sanctioning process for retail customers	Discontentment is brewing among shareholders regarding Directors' Remuneration Policy. More trouble ahead for MB (Metro Bank PLC, 2020)

Implementation Strategy

Given the ESG challenge that MB faces, here we illustrate a strategy for identifying, managing and mitigating these risks. Whilst these are tailored to MB, they are relevant and applicable to many financial institutions.

Firstly, MB is still yet to become one of the c.200 signatories for United Nations Environment Programme Finance Initiative's (UNEP FI) '*Principals for Responsible Banking*'. We recommend that they take this action. UNEP FI illustrates three steps that banks must take to optimise their externalities in their '*Principals for Responsible Banking'* (2020) report.

1 – Impact Analysis

"Analyse where your bank has significant positive and negative impacts on society, the environment and the economy. Then identify where your bank can realize the greatest positive impacts and reduce significant negative impacts."

2 – Target Setting & Implementation

"Set SMART targets that address the significant impacts your bank has identified, and work towards achieving them."

3 – Accountability

"In your bank's existing reporting, describe how your bank is implementing the Principles for Responsible Banking. Provide an assured assessment of the progress that your bank is making."

We also propose to further build on the work of UNEP FI via the proposition of an additional step. We believe that the addition of the step below will help to create a ripple effect and continue to spread the positive impact and societal externalities after the banks public reporting is released.

Proposed Step 4 – Education

Banks should educate their customers about their positive steps and their outcomes and highlight the next steps that they plan.

We propose this is achieved primarily through two channels:

1. Shared across the bank's website and social media platforms (figure 8) to target a younger demographic, whom climate change will affect the most.
2. Highlighted in store on posters and pamphlets (Covid-19 permitting), this will be targeted more towards an older demographic and those who prefer to bank in store or are not enrolled with online banking. Metro Bank has a total of 77 stores that it would be able to distribute the pamphlets in (figure 9).

We believe that the implementation of step 4 will spread awareness about the benefits of addressing ESG/climate change issues and encourage other firms to take steps to mitigate against their own negative externalities and to continue the positive ripple effect. We also believe that the implementation of step 4 makes financial sense as it may result in an increase in new clients that want to bank ethically and wish to bank with an institution that is taking steps to tackle the issues that society faces.

Figure 8

Metro Banks Social Media Summary			
	Social Platform	**Link**	**Reach**
	LinkedIn	https://www.linkedin.com/company/metro-bank-uk-/	59k+ followers
	Twitter	https://twitter.com/Metro_Bank	20k+ followers
	Instagram	https://www.instagram.com/metro_bank/	3k+ followers
	YouTube	https://www.youtube.com/user/MetroBankChannel	2.8K+ Subscribers

Figure 9

Ashford	Eastbourne	Northampton
Aylesbury	Edgware	Orpington
Basildon	Enfield	Oxford
Basingstoke	Epsom	Peterborough
Bath	Fulham Broadway	Piccadilly
Bexleyheath	Guildford	Putney
Birmingham	Hammersmith	Reading
Borehamwood	Harrow	Romford
Brighton	Hemel Hempstead	Sheffield
Bristol	High Wycombe	Slough
Broadmead	Holborn	Solihull
Bromley	Hounslow	Southall
Cambridge	Ilford	Southampton
Canterbury	Kensington High Street	Southend
Cardiff	King's Road	St Albans
Cardiff Newport Road	Kingston	Staines
Cheapside	Liverpool	Sutton
Chelmsford	Liverpool Street	Swindon
Chiswick	Luton	Tottenham Court Road
Clapham High Street	Maidstone	Tunbridge Wells
Clapham Junction	Manchester	Uxbridge
Colchester	Merry Hill	Watford
Crawley	Milton Keynes	Wimbledon
Croydon	Milton Keynes Oakgrove	Windsor
Ealing	Moorgate	Wolverhampton
Earl's Court	Newbury	Wood Green

Source: Metro Bank

Conclusions

The financial markets original aim was to fund the best projects, by matching those who which to lend with those who wish to borrow. Increasingly, the environment has become a tragedy of the commons - with no recourse for those taking the short-term view. The financial industries role in funding these projects is now being brought into question. By funding more equitable and sustainable projects lenders are seeing better returns and better consequences. Supranational advice is, hopefully, catalysing a change that will having lasting effects.

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