Sustainability Finance

Dyrehaugen Web Notebook

2023-12-09

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1

Finance

The finance sector is dancing to any music that makes money for the moment.

Finance is not production, but it seems to be involved in every aspect of it.

Indeed, under conditions of financial capital abundance, finance operates not so much as "a system for the allocation of resources" than as "a weapon by which the claims of wealth holders are asserted against the rest of society".

Piketty himself gets into some murky waters because his "Marshallian apparatus" sees capital "more as a stock of accumulated savings rather than a claim on future output".

Finance is a way to separate foolish retail investors from their hard-earned savings.

Finance is useful. Financialisation, on the other hand, describes a situation in which ordinarily non- financial activity is seconded into service for finance. When finance escapes its marketplace, it is because it has been allowed, or even solicited, to do so. (Part 2 of this paper has detailed the reasons for, and

effects of, financialisation.) Definancialisation, then, refers to the process of restoring ordinary non-financial activity so that it can operate normally, and removing dysfunctional social dependencies on finance. Percy (2021) Universal Basic Prosperity: Sustainable prosperity for the 21st century

Finance is both dumb and dangerous. It is dumb because it can only read numbers, unable to understand, much less assess, difficult social problems or complex business or engineering strategies. And it is dangerous because the people at the helm of financial institutions think they are smarter than they are, which leads them to assume that they should steer the ship…. Financialization has become so deeply rooted that we seem to have unlearned politics. By blindly relying on price tags, we have deprived ourselves of the skills for building consensus and developing effective strategies that avoid imposing the greatest costs on people whose lives are not "priced in." No one benefits more from this calamity than finance. But those returns cannot last indefinitely. (Katharina Pistor)

2

Climate Finance

2.1 Institutional Dynamics

Baer

Financial markets not only have an important role to play in steering financial capital to support the net-zero transition but also are increasingly vulnerable to climate-related financial risk that may be a source of financial instability. In this context, Frank Elderson, chair of the Network for Greening the Financial System, in a speech of 2018 meaningfully titled 'Let's dance'

, highlighted the elevated responsibility of central banks to act on climate change.

Analysing the institutional relations between political authorities (governments) and delegated authorities (central banks and financial regulators), as well as their mandates and degree of freedom for intervention across jurisdictions, the authors of this paper argue that central banks cannot and should not 'dance alone', as only coordinated efforts between these institutions will be sufficient to mitigate climate risks – put simply, it takes two to dance.

Supporting the analysis and to better explain the heterogeneity in institutional behaviours in the field of climate-related financial policies, the authors propose a framework to distinguish: i) the motives for policy implementation – either the desire to tackle climate change by directly influencing the allocation of financial capital (promotional) or the desire to ensure the stability of the financial system in the face of climate-related challenges (prudential); ii) the relevant policy instruments to achieve these objectives (informational, incentive and coercive); and iii) the type of implementing authority (political or delegated).

Applying this framework, the authors demonstrate how sustainable financial interventions in certain jurisdictions – most notably, the EU – rely solely on in-

formational policies to achieve both promotional and prudential objectives; this is in contrast to emerging economies. The authors term this restricted usage of climate-related financial policies for promotional purposes in Europe a 'promotional gap' and explain this through two main institutional dimensions: the low strength of public control on private financial markets; and the high degree of independence of delegated authorities. This leads to an institutional deadlock in which only measures fitting with both political and delegated authorities' objectives can be implemented.

Relying on a game-theoretic framework, the authors then argue that the current institutional setting is unstable and discuss three potential evolutions: a drift towards a green financial technocracy; a re-politicisation of delegated authorities; or a move towards fiscal-monetary coordination.

Baer (pdf)

Murau

Monetary architecture and the Green Transition

The political challenge of converting cautious monetary institutions, with their enormous power, into deliberate instruments of ecological transformation, is beginning to receive serious study.

How to finance the Green Transition toward net-zero carbon emissions remains an open question. The literature either operates within a market-failure paradigm that calls for carbon taxes or cap-and-trade to help markets correct themselves, or via war finance analogies that offer a "triad" of state intervention possibilities: taxation, treasury borrowing, and central bank money creation. These frameworks often lack a thorough conceptualization of endogenous credit money creation and disregard the systemic and procedural dimensions of financing the Green Transition. We propose "Monetary Architecture" as a more comprehensive framework that perceives the monetary and financial system as a constantly evolving and historically specific hierarchical web of interlocking balance sheets. Using the United States as a case study, we stress the importance of a systemic financing dimension that uses all available elasticity space in the monetary architecture while considering a division of labor between firefighting balance sheets such as central banks or treasuries and workhorse balance sheets such as off-balance-sheet fiscal agencies or shadow banks. Procedurally, public workhorses should provide an initial balance sheet expansion and crowd in the rest of the monetary architecture, notably shadow banks, for long-term funding. Firefighters should prevent systemic instability and manage a possible final contraction. Murau (2023) Monetary architecture and the Green Transition (pdf)

Tooze

Text has variaous links to transition articles:

Tooze (2023) Car debt, turning money green, gold and race, rightwing human

rights & Wittgenstein's bad day

2.2 Assistance to Developing Countries

Climate Finance assistance to developing countries is NOT on track. Oxfam Report 2020 (News issue)

2.3 Asset Managers' Scoreboard

We surveyed 29 major asset managers, mostly based in Europe and among the biggest institutions in terms of assets under management. We analyzed their investment practices regarding climate change, using coal as the most straightforward benchmark on climate. The first edition of this scorecard focuses on coal, as one of the easiest asset classes financial institutions can begin to act on and as the sector that requires the most urgent exit.

Key information on our sample of 29 asset managers:

• They represent a total of €34 trillion in assets under management;

• Overall, 'passively' managed assets represent approximately 48% of this amount;

• Each participant represents at least €300 billion in assets under management and 24 participants are headquartered in Europe.

Main findings:

• Less than half of the asset managers assessed have a public policy to phase out coal. Vanguard, PIMCO and Schroders are among the big asset managers that have still not adopted such a policy.

• Moreover, because these policies often allow for many exceptions, overall, only 25% of all the assets managed within our sample were covered by a coal exclusion criterion. For example, while they have adopted a coal policy, BlackRock, Legal & General Investment Management and UBS AM's coal policies apply to less than 40 % of their assets.

• Even when a coal policy does apply, the criteria used to exclude companies are rarely robust. Only 20% of the asset managers exclude companies that still have coal expansion plans. As a result, of €23 trillion of assets covered by long term climate commitments, only €3.4 trillion exclude companies with coal expansion plans.

• Even worse, whilst being signatories of the Net Zero Asset Managers Initiative, six asset managers have still not adopted any public policy to restrict investments in coal, including Vanguard, DWS and Allianz GI.

• 'Passively' managed investments are increasingly a recipe for climate chaos: although they represent more than 45% of the assets handled by the 29 asset managers, they are hardly covered by coal-related criteria. Hence, passive asset managers' exposure to coal remains very high. Among the biggest 'passive' managers in our sample, less than 3% of their passively managed investments is currently covered by a coal exclusion criterion.

• Half of the asset managers are publicly requesting or recommending companies they invest in align with Paris Agreement objectives. However, none systematically define time-bound requests or apply sanctions in case of absence of short-term progress. As a result, combined with weak exclusion policies, most asset managers are not acting to protect their clients from stranded assets.

Slow Burn (2021) Assets Managers' Coal Scoreboard (pdf)

2.4 Accounting Standards

2.4.1 Double Materiality

The concept of double materiality brings environmental impacts into the focus of standard-setting in accounting. Different reasons for adopting this concept might lead to widely varying interpretations, yet the fitness of the financial system to facilitate a net-zero economy depends on how it is conceived.

Lack of data – lack of decisions

No matter where on the spectrum any one institution sits, they all voice one similar complaint: there is a lack of granular, high-quality, useful data. Without that data, financial actors often feel unable to make climate-related decisions, even if they wanted to. This has prompted both debates and actions by financial supervisors and regulators in terms of adapting disclosure requirements to plug the data gap. The Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) is the most global and prominent example. More recently, the International Financial Reporting Standards Foundation (IFRS), which sets accounting standards for approximately 120 nations, announced it was throwing its weight behind the task of bringing sustainability into financial disclosure. In this context of sustainability-related financial disclosure, a new concept has emerged: double materiality. What is double materiality?

Double materiality is an extension of the key accounting concept of materiality of financial information. Information on a company is material and should therefore be disclosed if "a reasonable person would consider it [the information] important", according to the US Securities and Exchange Commission

. Thanks to the work by the TCFD, it is now widely accepted within financial markets that climate-related impacts on a company can be material and therefore require disclosure.

The concept of double materiality takes this notion one step further: it is not just climate-related impacts on the company that can be material but also impacts of a company on the climate – or any other dimension of sustainability, for that matter (often subsumed under the environmental, social and governance, or ESG, label).

This notion of materiality is already embedded in the EU's new sustainable finance disclosure regime for financial firms and corporates. Additionally, Mark Carney, former Chair of the FSB, is now, as UN Special Envoy for Climate Action and Finance, pushing for worldwide mandatory climate disclosure ahead of the COP26 climate summit, elevating the concept of double materiality to a matter of global concern.

Accounting standards are not neutral, but they systematically affect capital allocation and market dynamics. Decades of global standard harmonisation have veiled the fact that accounting practices are simply social conventions and not exact or objective measures. In 1993, for instance, the German car manufacturer Daimler disclosed 615 million Deutsche Mark in net profits under German accounting rules but a loss of 1.84 billion Deutsche Mark under US rules. Accounting rules can therefore substantially alter the perception of a company in the eyes of financial markets and incentivise certain management practices (e.g. distributing profits to shareholders) over others (e.g. reinvesting profits). They might even exacerbate financial crises; fair value accounting, for instance, has been criticised for having pro-cyclical effects during the 2008 financial crisis. Thus, far from being neutral, accounting standards shape capital allocation dynamics. Their implications for facilitating or preventing climate-aligned investment therefore deserve close attention.

Täger

2.5 Tax-credit transfer

St. John

From tax equity to transferability: A sea change in how clean energy is financed

Why can't today's tax-equity markets handle the coming wave of clean energy tax credits initiated by the Inflation Reduction Act? Simply put, the traditional way of doing things is just too complicated and expensive to meet the scale and scope of investments coming, Moon said.

Moon and his co-founder at Reunion Infrastructure, Billy Lee, both come from the tax-equity investment world, starting together at solar development pioneer SunEdison and then working separately at large banks and private equity firms. "We've pitched tax equity [deals] to corporates for 15 years — and they very rarely do it," Moon said. "It's very complex."

At the core of that complexity is the long-standing rule that allowed only the project owner to claim tax credits associated with the project. The government structured the rules that way to ensure that the benefits of the tax credits would go to an entity with a vested interest in ensuring the project was actually built and operated properly.

But it also complicated the process of using tax credits to build clean energy projects. Project developers and deep-pocketed tax-equity investors used complex transaction structures, such as partnership flips and sale-leasebacks, to make the investor the owner of the project for as long as it would take for them to be eligible to claim the tax credit. After that, they would "flip" ownership back to the developer for the remainder of the project's lifespan.

These labyrinthine partnerships can take millions of dollars in legal and administrative costs to put together, and because of their inherent complexity, there is little opportunity to streamline or standardize based on past efforts and make future deals simpler or cheaper, Moon said. They also force investors into the position of owning a clean energy project for years at a time, exposing them to risks that very few companies are willing to take on.

That's why the pool of tax-equity investors is as small as it is, LevelTen's Worrall said. "Over 50 percent of it is JPMorgan and Bank of America," with about 40 other institutions rounding out the market, he said. And because these deals are so complex and risky, these investors have little appetite or capacity to expand how much new business they can take on — "they're investing regularly, and they're full."

These conditions have led to a "huge supply-demand imbalance for tax equity," Moon said. "Projects that could previously get tax equity are in the last six months struggling — there just isn't enough. And if you don't get tax equity, you can't build a project."

Another problem with the status quo is that tax-equity investors tend to only target deals of $100 million and up. That has forced developers of smaller-scale projects like community solar to sell to project aggregators that bundle numerous smaller projects together into high-dollar portfolios valuable enough to attract the interest of banks.

The IRA's new transferability option upends this landscape entirely, Moon said. "Now there's an option for those developers to build the projects and sell the credits themselves."

Would-be buyers of tax credits also have a much simpler road ahead under the new transferability option, Worrall said. "There's no longer a partnership investment with a ton of due diligence upfront and a ton of maintenance over the lifetime of the investment. You're talking about a simple transfer: corporate tax credits for cash." These deals also have much simpler accounting requirements, he added.

While tax-credit transferability opens the door to smaller developers and inexperienced corporate investors, it could also be an option for those already active in the existing tax-equity markets, Moon added. “Large and very experienced developers are talking about how this will be part of the portfolio. All the banks and tax-equity investors are looking at how to integrate transferability,” with financiers including Bank of America reporting deals in progress.

We need to move from a world where there are 40 or 50 credible” financial institutions investing in the market and processing about $20 billion in traditional tax-equity deals per year, to one capable of processing about “$85 billion in credits per year by 2031.

One way to make the new tax-credit transfer deals more appealing to skittish corporate buyers is by reducing their risk exposure as much as possible. “The key to that is the buyer protections” that dealmakers must structure to protect companies from the risks they take on when they purchase large amounts of tax credits.

Right now, the biggest risk lies in what’s called “recapture,” Ullman said, referring to the Internal Revenue Service’s right to reclaim the tax credits from failed, sold or otherwise ineligible clean energy projects. Many clean-energy tax credits, including those for solar power projects, are pegged to the value of investment into a project in the year it begins operating.

If that project ends up going bankrupt and shutting down, or is destroyed by extreme weather, or is sold to another party, or otherwise fails to meet the rules that allowed it to claim the tax credit in the first place? If that worst-case scenario occurs, the IRS can claw back the value of those tax credits.

The good news is that there are already established ways to mitigate this risk. “Recapture insurance and qualification insurance is a mature market — all the big carriers and brokers carry that insurance, Insurers are all quite excited by the market opportunity.

St. John (2023) New tax-credit transfer rules could unlock $1T in cleantech investment

3

ESG

ESG = Extra Strong Greenwashing

3.1 Win-Win

Austin

It has been increasingly clear that our predominant response to the sustainability crisis over the last 3 decades – the voluntary market-based approach of ESG, 'impact investing' and sustainable business in general – has not been able to bend environmental trajectories as much as hoped. This inevitable clash of sustainability interpretations now forces the ESG community into a difficult, but potentially catalysing, reflection of two fundamental issues: (i) the credibility of its 'win-win' narrative and (ii) the sustainability of 'economic growth'.

The challenge for the sustainable business community is that, as a market-based movement, it has generally not questioned 'economic growth'. Sustainable business certainly espouses a preference for green growth, but that merely reinforces growth-favouring norms, with the consequence of waving through mostly non-green growth, at a time when environmental buffers are diminishing.

We are missing the physics for the finance. A major cause of our sustainability problems is that the economic values we steer by are so decontextualised from the underlying natural world that a core aspect of the sustainability challenge is to see through the blindness that economic and financial conventions induce.

Our ecological problems are rooted in matter and energy flows not financial flows. Our situation has arisen because we have transformed the matter and energy of the world at a much faster rate than the natural world can absorb. Given the entropic toll of every transformation, it is our underexamined urge to keep transforming – even with good intention – that is the core driver of our ecological crisis. But, in what sustainability researcher Pasi Heikkurinen has termed our 'transformation paradox', our instinctive response to problems caused by past excess transformation of the world's matter and energy is to keep transforming! Our increasingly urgent ambition to build a green economy masks the deeper point that we remain firmly upon a transformation treadmill. We say 'greener', the Earth just registers 'more'.

In races against time, possibly the most precious commodity is more time. How can we buy time for our sustainability crisis? By slowing down those parts of the economy making no contribution to a greener future economy.

Critically, the de-growth or post-growth that advocates have in mind is not

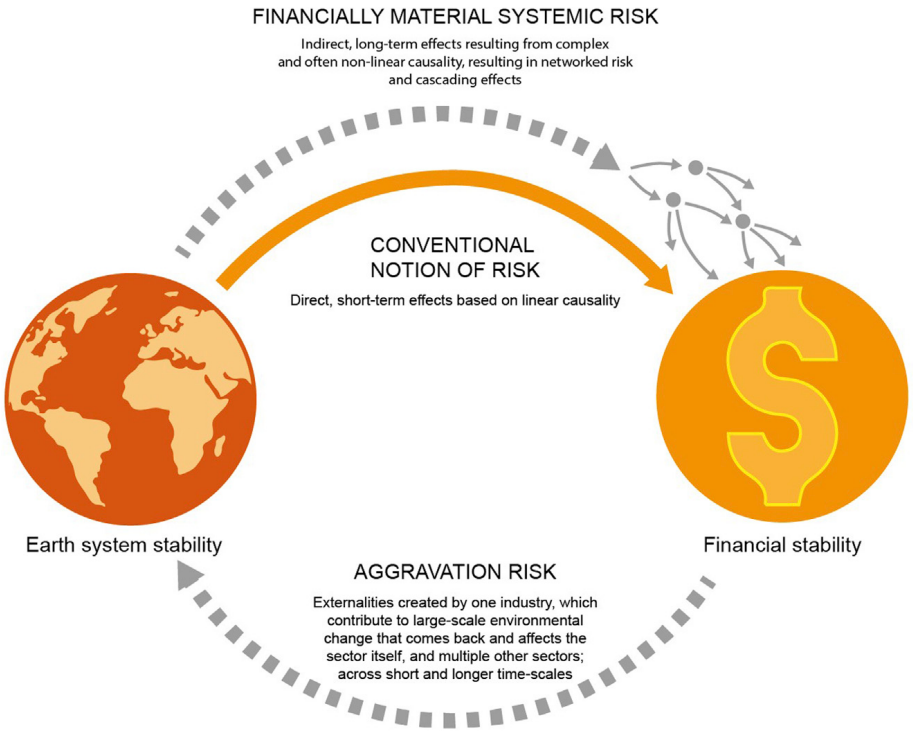
the sporadic recessions that upset our prevailing growth mindset, but rather an intentional, radical transformation and re-conception of prosperity and welfare, complete with transitional justice.

[Austin (2021) From Win-Win to Net-Zero](https://www.responsible-investor.com/articles/from-win-win-to-net-zero-would-the-real-sustainability-please-stand-up9 (pdf full)

3.2 Externalities Risks

Crona

Globally, financial services are well positioned to contribute to the transformation needed for sustainable fu- tures and will be critical for supporting corporate activities that regenerate and promote biosphere resilience as a key strategy to confront the new risk landscape of the Anthropocene. While current financial risk frame- works focus primarily on financial materiality and risks to the financial sector, failure to account for invest- ment externalities will aggravate climate and other environmental change and set current sustainable finance initiatives off course. This article unpacks the cognitive disconnect in financial risk frameworks between envi- ronmental and financial risk. Through analysis of environmental, social, and governance ratings and esti- mates of global green investments, we exemplify how the cognitive disconnect around risk plays out in practice. We discuss what this means for the ability of society at large, and finance in particular, to deliver on sustainability ambitions and global goals.



Global issuance of green bonds recently surpassed $250 billion, representing ca. 3.5% of total global bond issuance ($7.15 trillion)

The multiple, often complex, mechanisms by which environmental change unfolds and is aggravated by investments are not equally recognized.

Climate, biodiversity loss, water, and land-use change are not isolated phenomena, but directly interconnected and mutually reinforcing processes.

For example, deforestation to produce oilseed in one region leads to regional drought affecting the oilseed production itself, but also affecting geographically distant sectors, such as aquaculture reliant on oilseed for feed input.

Failure to see these connections matters. If they are not recog- nized in risk assessment tools, strategies, and solutions used to address the problem, these will deliver only partial results.

Most detrimental risks of climate change on portfolios may very well arise from second-order effects.

This article contrasts widespread conceptions of climate- related financial risks (such as those of the Taskforce on Climate-Related Financial Disclosures [TCFD]) with insights from Earth system science, to highlight the disconnect between environmental and financial risk in prominent financial risk frameworks. We show the necessity of a broader conceptualization of climate and

environmental risk to avoid devastating impacts on the economy, society, and biosphere as a whole. We then use environmental, social, and governance (ESG) investments as a means to exemplify how the cognitive disconnect plays out in practice and its implications for the ability for society at large, and finance in particular, to deliver on sustainability ambitions and global goals.

Multiple sources of scientific evidence show that a stable climate is determined not just by GHG emissions, but by a com- plex set of interactions between human activities and large-scale biological, geological, and physical processes related to, e.g., forest and land-use dynamics, global hydrological flows, and radiative forcing.

Climate stability hinges not just on the atmosphere.

Financial risk frameworks explicitly aimed at incorporating climate systemic risk (e.g., Aglietta and Espagne) 40 fail to recognize that propagation mechanisms can also be linked to interconnections between Earth system processes. They consider merely social and economic elements.

Many disasters have happened because of a failure to imagine that they were possible and therefore to build insurance to be prepared.

The exceptional development in risk definitions in the financial sector over the past 3 decades. A similar trend is supported by the shifting focus of risk discussions in the annual reports by the World Economic Forum. 55 This rapid development in the definition of financially relevant risks shows that a shift to also consider aggravation risk is possible

alfa and beta only

Managing investment risk hinges on diversifica- tion. Conventional portfolio risk management is limited to diver- sifying idiosyncratic risk (managing alpha) by selecting securities across different financial assets. It further assumes that this diversification has no influence on market-wide issues that could affect multiple asset classes (beta).

The assumption—that systemic risks affect investments, but are not affected by these same investments—is the single biggest theoretical failing of modern portfolio theory.

For large institutional investors and so-called “universal owners,” with highly diversified and long-term portfolios repre- sentative of entire capital markets, climate change has already been recognized as a key driver of future value and not an exter- nality.

Coalitions have therefore emerged to rally this highly concentrated segment of the financial sector into action (see, e.g., Climate 100+, with over 500 investors as signatories and more than US$47 trillion in assets under management), yet to date these remain focused only on shifting away from fossil fuels and do not consider the interconnected dynamics between eco- nomic activity, Earth system dynamics, and biosphere resilience.

A 7-fold increase in claimed losses (from $50 billion in 1980 to $350 billion in 2017).

Crisis of insurablility

As climate change-related risks, such as storms, fires, and sea-level rise, all mount and occur simultaneously, the sheer vol- ume of material assets affected and the multiple types of liabil- ities incurred threaten to trigger a crisis of insurability.

Climate change will affect many sectors simultaneously in the future. As such it will affect financial institutions by reducing their capacity to diversify.

Most financial risk assessment still relies on historical data, and would underestimate or completely miss the potential for thresholds and cascading ef- fects not previously experienced.

ESG frameworks are a good example of how the cognitive disconnect plays out in practice. ESG refers to a collection of often divergent approaches to using non-financial data for socially responsible investment strategies. ESG grew out of a socially responsible investment movement emerging as early as the 1960s, and early versions were motivated by a belief in sustainable development, adopted a systems view, and focused on capturing absolute assessments of corporate externalities. However, as the interest in ESG issues rose in the wake of the 2004 UN Global Compact report, the financial materiality-driven rationale was favored by the major rating providers (such as MSCI). According to Eccles et al., this was because such an approach was easier to scale, was most closely aligned with investor needs for finan- cially focused assessments, and also arguably did not challenge investors to reflect on more complex externalities. This way of conceptualizing ESG issues now dominates sus- tainability approaches adopted by prominent norm-setting actors such as the SASB, the TCFD, and the limited set of ESG providers that hold the majority of market shares in the highly concentrated market segment of ESG rating services.

Current ESG ratings are based on a risk perception that does not account for externalities, and therefore is unlikely to address the root causes undermining sustainability.

Divergence in ESG ratings has spurred debates about what reliably constitutes a sustainable investee, as it prevents comparison of the performance of ESG investments.

It runs an acute risk of developing sustainability strategies that are off the mark.

In systems science it is well established that thresholds in systems are easily overshot when feedback has long delays, leading to collapse.

Since shortening the time lag of how the Earth system operates is not possible, two things will be key to achieve a financial system that fundamentally promotes long-term sustainability: (1) incorporating the necessary information feedback

and (2) developing structures by which this information is taken into account and acted upon. The two cannot be treated in isolation

In 2019 only 14% of total global investments were linked to any form of "green" label. While "green" or "sustainability"-linked loans and bonds have experienced significant growth, they represented less than 0.5% of total debt issued.

(32%) of the $95 trillion of total equity in 2019 were "green."

The bulk of green equity investments are in shares of listed companies that were deemed to be associated with any of the following procedures: positive, negative, or norm-based screening; any type of ESG integration; sustain- ability-themed (impact) investment; or engagement and shareholder action. 85 Taken together these stretch "sustain- able investments" to include a vast array of investment stra- tegies with arguably very different capacities to achieve sustainable outcomes.

As long as *central banks* continue to conceptualize prudential regulations as "blunt instruments for dealing with climate-related externalities," and maintain that "adapting capital requirements to reflect externalities could undermine their primary purpose, or give rise to undesirable effects," it is questionable whether these efforts can become little more than a rearranging of the proverbial deck chairs of the ill-fated Titanic.

Mainstream approaches for delivering on sustainability ambitions (such as ESG) are on a trajectory that is currently off the mark.

Refining ESG metrics without incorporating measures of impact will increase precision, but fail to address accuracy.

Today, unintelligent accountability appears to be rising in the financial sector, as a result of misalignment between sustainability ambitions and current risk frameworks and risk assessment measurements. This hampers the crucial role finance can and needs to play.

Our analysis has highlighted three key actions that will sup- port the financial sector in bridging this gap: (1) recognizing a wider set of Earth system processes (including the climate and hydrological flows in addition to GHGs); (2) acknowledging that current risk frameworks lack an acknowledgment of the risk of aggravating climate and large-scale environmental change through investments; and (3) moving to develop impact accounting systems that cut across all financial investments and become a core part of capital allocation decisions. Doing this will require forging new alliances between science and finance, but also new transdisciplinary research to assist finance in developing risk management tools to better address the Anthropocene reality and ensure that the development of impact accounting is grounded in both social and environ- mental sustainability science.

`Memo DH:`
`Giving up on Governments, appealing to finance`

Crona (2021) The Anthropocene reality of financial risk (pdf) (pdf SI) Alt link: One Earth

3.3 Climate Impact Management System

2i Investing

Recently, there has been a surge in financial sector initiatives focused on climate-related targets or strategies, with a number of big industry names making Net-Zero targets in the past few months alone.

However, some commitments have centered on targets that are decades away, with little clarity on the near-term actions that will be undertaken to meet these targets. Additionally, there has been limited focus on understanding how these kinds of initiatives will contribute to impact – that is, greenhouse gas emissions reductions – in the real economy (see our previous report, On the Road to Paris).

The Climate Impact Management System aims to fill this gap, by providing FIs with a clear roadmap to develop, refine, and communicate on impactful climate strategies. The system was developed by 2DII's Evidence for Impact Program and the French Ecological Transition Agency (ADEME), as part of the Finance ClimAct project.

2i Investing (pdf)

3.4 ETF Universe

VisualCapitalist

Globally, sustainable exchange-traded fund (ETF) assets hit $150 billion last year, vaulting 25 times higher than in 2015.

Yet despite this growth, sustainable ETFs—baskets of investments that focus on environmental, social and governance issues—account for roughly 5% of the entire ETF universe.

MSCI

The Sustainable ETF Universe

In 2020, sustainable ETFs saw record inflows of $75 billion–triple those seen in 2019.

Below, we show the ESG ETF universe broken down by type, carbon intensity, and domicile, given its growing relevance in financial markets today.

Source: MSCI LLC ESG Research: Fund ESG Transparency Q1 Quarterly Report 2021 (Feb, 2021)

ESG type

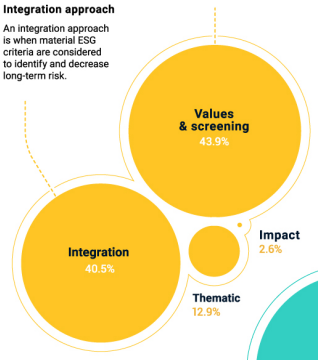
Globally, an increasing number of ETFs are ESG-focused, which means that they incorporate environmental, social, and governance (ESG) investing criteria.

Values & screening approaches

Values and screening approaches are designed to align with investor values and specific preferences.

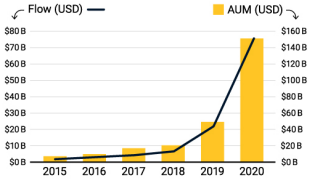
Integration approach

An integration approach is when material ESG criteria are considered to identify and decrease long-term risk.



Global ESG ETF growth

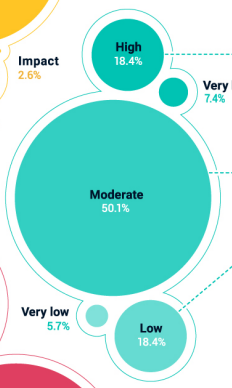
Since 2015, ESG ETFs have grown 25X, from $6 billion to over $150 billion AUM.



Source: Refinitiv/Lipper Research and MSCI ESG Research LLC (Feb, 2021)

Carbon intensity

Carbon intensity shows a fund's exposure to carbon-intensive companies. It is an important metric in measuring climate risk.



High intensity

Extraction-based sector funds, such as mining or energy ETFs, witnessed the highest carbon intensity levels.

250

Moderate intensity

A moderate carbon intensity level falls between 70 and 250 tons of CO_2 equivalent/USD million sales.

70

Low intensity

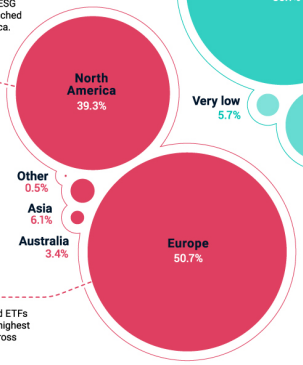
Typically, ETFs that illustrated higher exposure to financials, banking, and insurance had the lowest carbon-intensity.

Carbon intensity

Units of tons CO_2 equivalent per USD million sales.

North America

Roughly 1,350 ESG ETFs were launched in North America.



Europe

Europe-focused ETFs expressed the highest ESG ratings across global regions.

Domicile

Domicile refers to the country or region where an ETF was formed.

How do sustainable ETFs break down according to asset class?

Asset class

In 2020, 120 ESG ETFs were launched alone, the majority of which were equity ETFs.

Total ESG ETFs: 410

Equity	80.7%	331
Bond	16.8%	69
Mixed	2.0%	8
Alternative	0.5%	2

Powering better investments for a better world. msci.com

Source: MSCI ESG Research LLC (2021)

VisualCapitalist

Part I

Appendices

Appendix A

About

Dyre Haugen and *Dyrehaugen* is Webian for *Jon Martin* - self-owned Globian, Webian, Norwegian and Canarian with a background from industrial research policy, urban planning and economic development consulting on global, regional and urban scales. I am deeply concerned about the (insane) way humanity (i.e. capitalism) interfere with nature. In an effort to gain insights in how and why this happens stuff is collected from around the web and put together in a linked set of web-sites. The sites are operated as personal notebooks. However, these days things can be easily published to the benefit of others concerned with the same issues. But be aware - this is not polished for presentation or peer-reviewed for exactness. I offer you just to have a look at my 'work-desk' as it appears in the moment. Any comment or suggestion can be mailed to dyrehaugen@gmail.com You can follow me on twitter as @dyrehaugen. Thanks for visiting!

Appendix B

Links

Current Dyrehaugen Sites:

- rcap - On Capitalism (loc)
- rclm - On Climate Change (loc)
- recs - On Economics (loc)
- rfin - On Finance (loc)
- rngy - On Energy (loc)
- renv - On Environment (loc)
- rsts - On Statistics (loc)
- rurb - On Urbanization (loc)
- rvar - On Varia (loc)
- rwsd - On Wisdom (loc)

Blogs:

- rde - Blog in English (loc)
- rdn - Blog in Norwegian (loc)

Discontinued:

- jdt - Collection (Jekyll) (loc)
- hdt - Collection (Hugo) (loc)

Not listed:

- (q:) dhe dhn jrw56
- (z:) rcsa rpad rstart

Appendix C

NEWS

C.1 230319 Silicon Valley Bank

Tooze

One of the underlying frailties of the global banking system right now, are the unrealized losses on bonds incurred by banks as a result of central banks hiking interest rates to combat inflation. As interest rates have gone up, bond prices have gone down. This is bad news, if billions in depositor-withdrawals force you to sell the bonds thus "realizing" the loss. But, if you are not in dire straights, if you are not selling off your portfolio in fire sales, where do you run if the financial world seems to be falling apart (again)? The safe place to run to is … yup … government bonds. They are safe. The market is liquid. Plus, they are cheap right now!

So, a crisis that was triggered in part by bond prices going down, led investors to run into bonds and drive prices back up. A panglossian friend of the markets might say that this is the self-equilibrating invisible hand at work. This is not how it felt last week.

Tooze (2023) Chartbook #203 Banking crises, states of exception & the disappointment of sovereignty - a roundup of last week

C.2 211118 OCC Nominee fight

The Prospect

> "She does not see banks as the clients of the OCC."

After several months, President Biden has finally chosen a nominee to head the Office of the Comptroller of the Currency (OCC), a key financial regulatory post. It's Saule Omarova, a Cornell professor and critic of financial overreach.

Omarova immediately faced a flood of criticism from the banking industry, described as "radical" and "Biden's most polarizing pick for a top financial regulatory job."

Thus far, Omarova has been primarily condemned for musing in an academic paper last year about how individual bank accounts at the Federal Reserve could replace private deposits. The U.S. Chamber of Commerce on Tuesday announced their "strong opposition" to Omarova for precisely this reason.

THE CHOICE OF OMAROVA breaks sharply with precedent for the traditionally bank-friendly office. Established by Abraham Lincoln as a branch of the Treasury in 1863, the OCC is the main regulator for federally chartered banks, overseeing roughly two-thirds of total assets in the U.S. banking system. The agency is self-financed through the inspection fees it charges the banks it oversees, a funding mechanism critics of deregulation have identified as a conflict of interest.

The history of the OCC over the past half-century gives those critics abundant evidence that the agency operates as a bank advocate masquerading as a prudent regulator.

The Prospect (2021) Wall Street's Attacks on Biden Nominee Are a Red Herring

C.3 210421 GFANZ: Low Carbon Banking

Banks and financial institutions with more than $70tn assets have pledged to cut their greenhouse gas emissions and ensure their investment portfolios align with the science on the climate.

In the initiative, chaired by Mark Carney, the former governor of the Bank of England, 160 companies, including 43 banks from 23 countries, will set targets to cut the carbon content of their assets by 2030, in line with an overall goal of net zero emissions by 2050.

The forum, the *Glasgow Financial Alliance for Net Zero*, aims to encourage the financial sector to divert investment towards low-carbon infrastructure and technologies, and to discourage high-carbon investments, ahead of Cop26, the vital UN climate talks to be hosted by the UK in Glasgow this November.

Janet Yellen, the US Treasury secretary, and John Kerry, the US special presidential envoy for climate, are backing the alliance.

GFANZ [will be] the gold standard for net zero commitments in the financial sector. The alliance would not allow banks to "greenwash" their commitments.

However, since the signing of the Paris agreement in 2015 banks have poured at least $3.8tn into fossil fuel financing.

The financial system is fuelling environmental breakdown on a catastrophic scale, and what we really need is for central banks to play their roles as regulators

and take concrete action to prevent all of the firms they oversee from making investments that are incompatible with governments' climate targets.

Banks signing up to GFANZ would be required to show "credible plans" for reducing their investment in high-carbon assets, but would not face a deadline for exiting fossil fuel investment. Advertisement

Officials said there would be no blanket requirements for companies to stop financing coal, for instance, and banks would be allowed to make their own judgments on the carbon content of their portfolios, on a case by case basis.

Guardian

C.4 210406 Biodiversity and Financial Stability

NGFS and INSPIRE launch a joint research project on 'Biodiversity and Financial Stability'

A growing number of central banks and supervisors have recognised the need to extend their focus from climate change to the challenges of addressing the implications of broader nature-related risks and the conservation of nature and biodiversity. Doing this will involve understanding the impact of finance on the provision of key ecosystem services as well as the consequences of biodiversity loss for financial stability.

Companies are highly dependent on the services that ecosystems provide, but may at the same time have a harmful impact on the environment. The financial risks that stem from a loss in biodiversity are a serious threat to the financial sector that urgently require better understanding by policy makers and regulators to which the new NGFS/INSPIRE Study Group will provide an important contribution.

Appendix D

Sitelog

Latest Additions