

# The Carbon Bankroll

The Climate Impact and Untapped  
Power of Corporate Cash





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# Introduction

In response to the climate crisis, the world's most responsible companies are doubling down on their efforts to combat climate change. From utilizing 100% renewable energy to electrifying fleets to investing in carbon removal technologies, the growing toolbox of climate solutions companies employ to decarbonize their direct and supply chain emissions is becoming increasingly systemic and effective.

However, one source of corporate supply chain emissions has long existed beneath the radar because it has been difficult to analyze: the climate impact of companies' banking practices. Even for corporations with billions of dollars in cash and investments, it has not been possible to calculate the greenhouse gas emissions generated by their corporate cash and investments.

Until now.



## The Climate Impact of Corporate Cash\*

**New research by the Climate Safe Lending Network (CSLN), The Outdoor Policy Outfit (TOPO), and BankFWD makes it possible to calculate the emissions generated by a company's cash and investments** (cash, cash equivalents, and marketable securities). This research illuminates that this previously hidden emissions source is substantial.

For some of the world's largest companies, including Alphabet, Meta, Microsoft, and Salesforce, their cash and investments are their largest source of emissions. In fact, for Alphabet, Meta, and PayPal, the emissions generated by their cash and investments (financed emissions) exceed all their other emissions combined.

That means for a company like Microsoft, in 2021 the emissions generated by the company's \$130 billion in cash and investments were comparable to the cumulative emissions generated by the manufacturing, transporting, and use of every Microsoft product in the world.<sup>1</sup>

For companies like Amazon and Johnson & Johnson, whose operations are more carbon intensive, their financed emissions still increase overall emissions by up to 15%.

In 2020, Amazon experienced record sales and emissions due to the COVID-19 pandemic. However, in 2021, its \$81 billion in cash and financial investments still generated more carbon emissions than the emissions generated by the energy Amazon purchased to power all their facilities across the world—its fulfillment centers, data centers, physical stores, and other facilities.<sup>2,3</sup>




















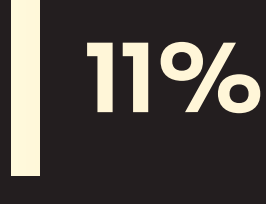
\*Throughout the report, the term "corporate cash" is used as shorthand for corporate cash and investments.



# Overview of Findings

Researchers selected the companies featured in this report to illuminate the magnitude of corporate cash and investment emissions and to highlight how companies' climate accomplishments are being undermined by a misaligned financial system that is channeling hundreds of billions of corporate U.S. dollars into the carbon-intensive sectors driving the climate crisis.

To ensure the accuracy of the report's financed emissions calculations, CSLN, TOPO, and BankFWD partnered with leading climate solutions provider South Pole, which acted as a research provider. A comprehensive breakdown of the methodology used to calculate the emissions each company's banking practices generate can be found in the Appendix.

|  | Reported Carbon Emissions (ktCO2e) | Cash & Investments on Balance Sheet (\$Million) | Financed Emissions (ktCO2e) | Uplift in Carbon Emissions Including Finance (%)   |
|--|------------------------------------|---|-----------------------------|--|
|  <b>PayPal</b>                | 24                                 | \$14,841  | 1,345                       |  // 5,512%* |
|  <b>Disney</b>                | 1,190 <sup>^</sup>                 | \$15,959  | 2,011                       |  169%       |
|  <b>Meta</b>                  | 4,067*                             | \$47,998  | 4,543                       |  112%       |
|  <b>Alphabet/Google</b>       | 10,326*                            | \$136,423                                       | 11,484                      |  111%       |
|  <b>Microsoft</b>             | 14,073                             | \$130,334                                       | 13,200                      |  94%        |
|  <b>Salesforce</b>            | 1,096                              | \$10,537  | 993                         |  91%        |
|  <b>Apple</b>                 | 23,200*                            | \$190,516                                       | 14,862                      |  64%        |
|  <b>Netflix</b>               | 1,529                              | \$6,028   | 760                         |  50%        |
|  <b>Johnson &amp; Johnson</b> | 21,121*                            | \$31,608  | 3,207                       |  15%        |
|  <b>Amazon</b>                | 60,640*                            | \$80,709  | 6,786                       |  11%        |

\*Emissions based on 2020 reporting as latest available. All other figures based on 2021 reporting.

<sup>^</sup>Disney reports only Scope 1 and 2 emissions publicly. All other reported emissions include Scopes 1, 2, and 3.


ktCO2e: abbreviation for thousand metric tonnes of carbon dioxide equivalent.

Note: cash holding figures do not include private equity and strategic investments as well as restricted cash, which some companies include in their 10-Ks as cash equivalents and marketable securities.



To comprehend the implications of the data and the novel methodological approach underpinning this research, it is helpful to understand several important factors:

- While the financial footprint figures in this report are specific, they should be viewed as an indicative estimation rather than a precise accounting. More precise calculations are possible but are dependent on better emissions reporting by financial institutions and more detailed asset-class-level data than corporations currently disclose.
- Despite the magnitude of the featured financial footprints, these figures are conservative and constitute an indicative underestimation of the actual emissions generated by financial supply chains. (see Appendix for more information)
- When interpreting financial footprint data, a high percentage “uplift” due to financed emissions often demonstrates climate leadership (i.e., the percentage is higher because the company has worked to reduce emissions from its operations and supply chains).



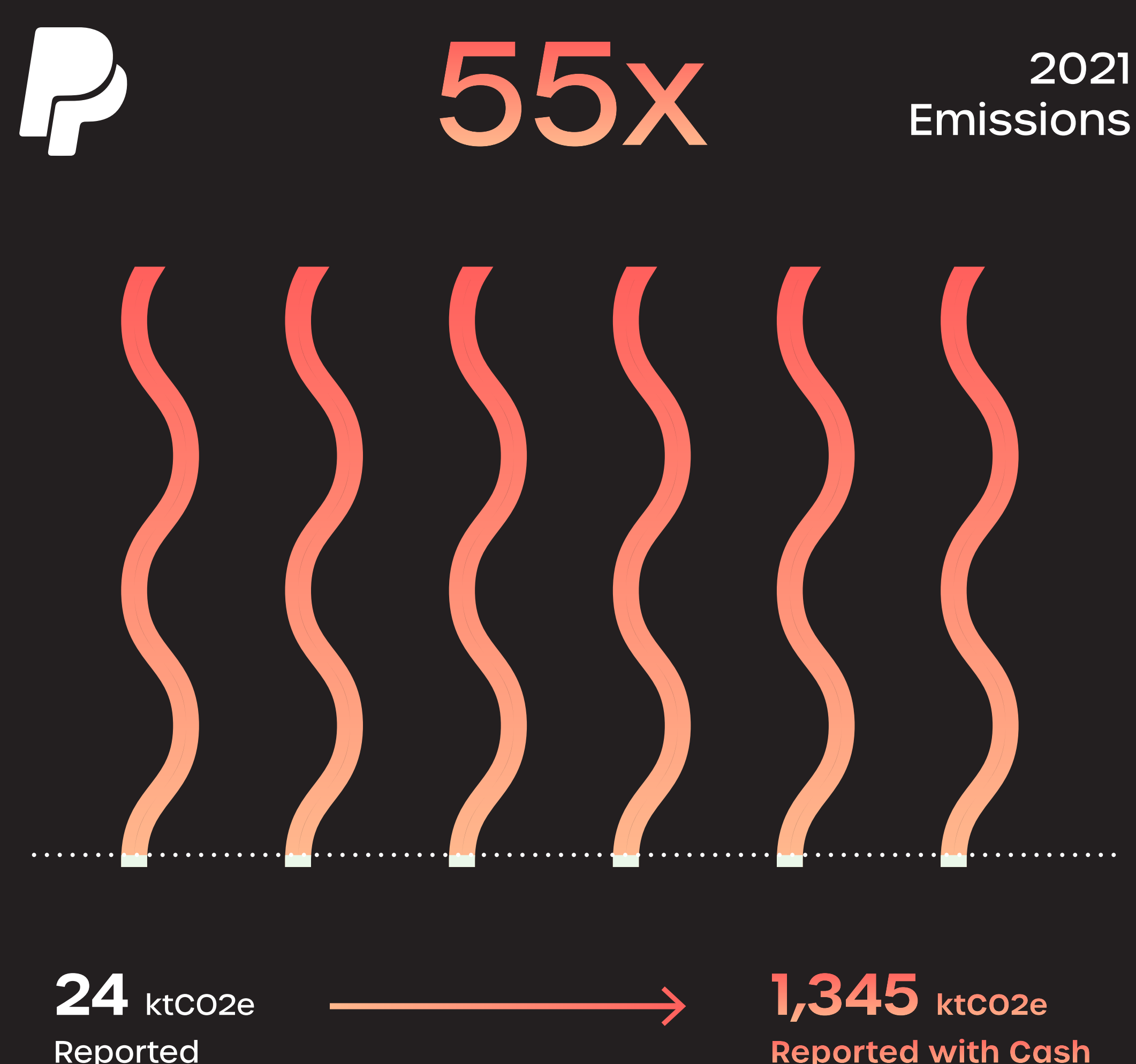
“This research is really new. It clearly shows that cash positions of large corporates have huge climate impact as well as their banks, which lend and invest into the economy and generate financed emissions.”

—Giel Linthorst

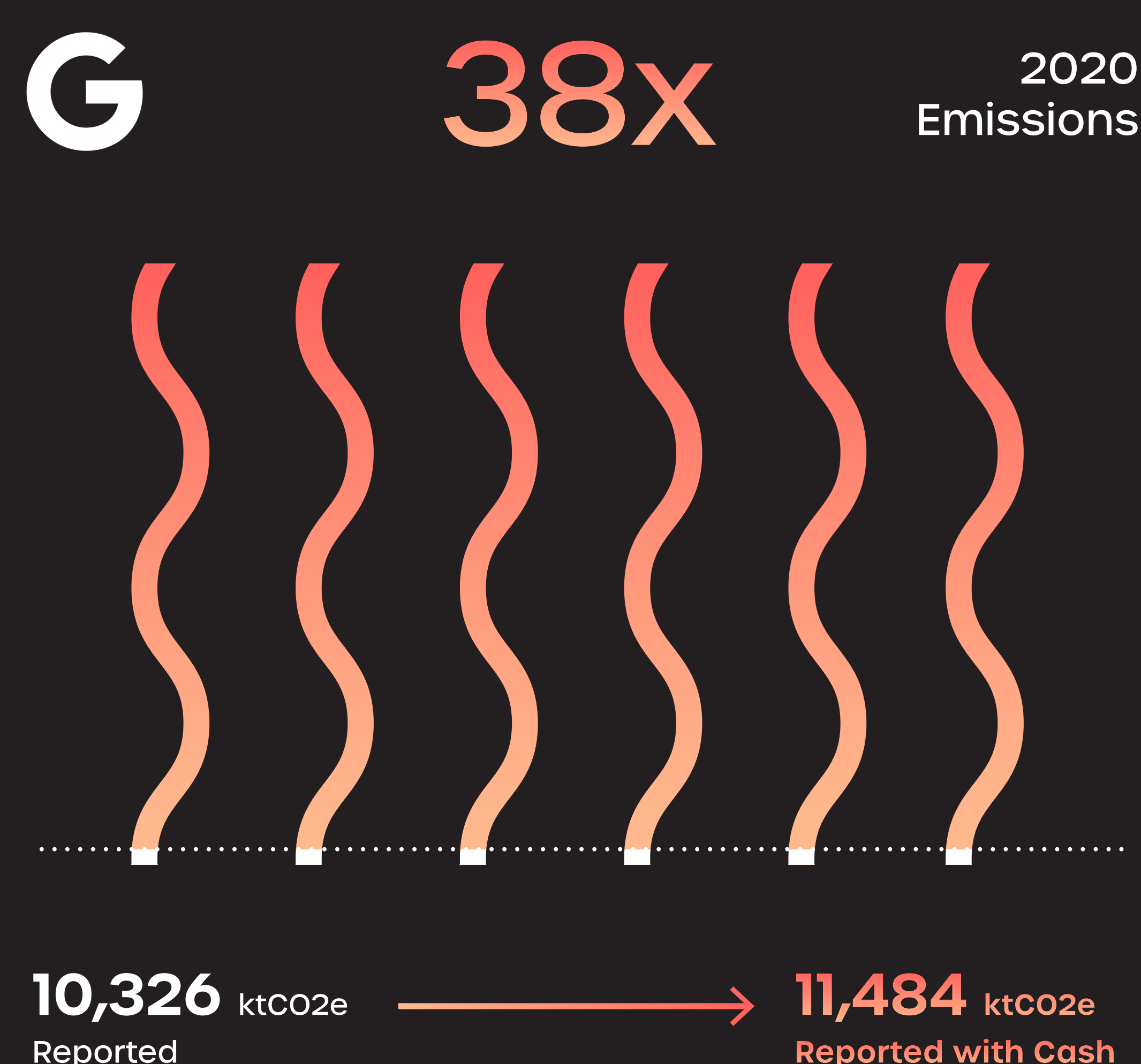
Executive Director, Partnership for Carbon Accounting Financials



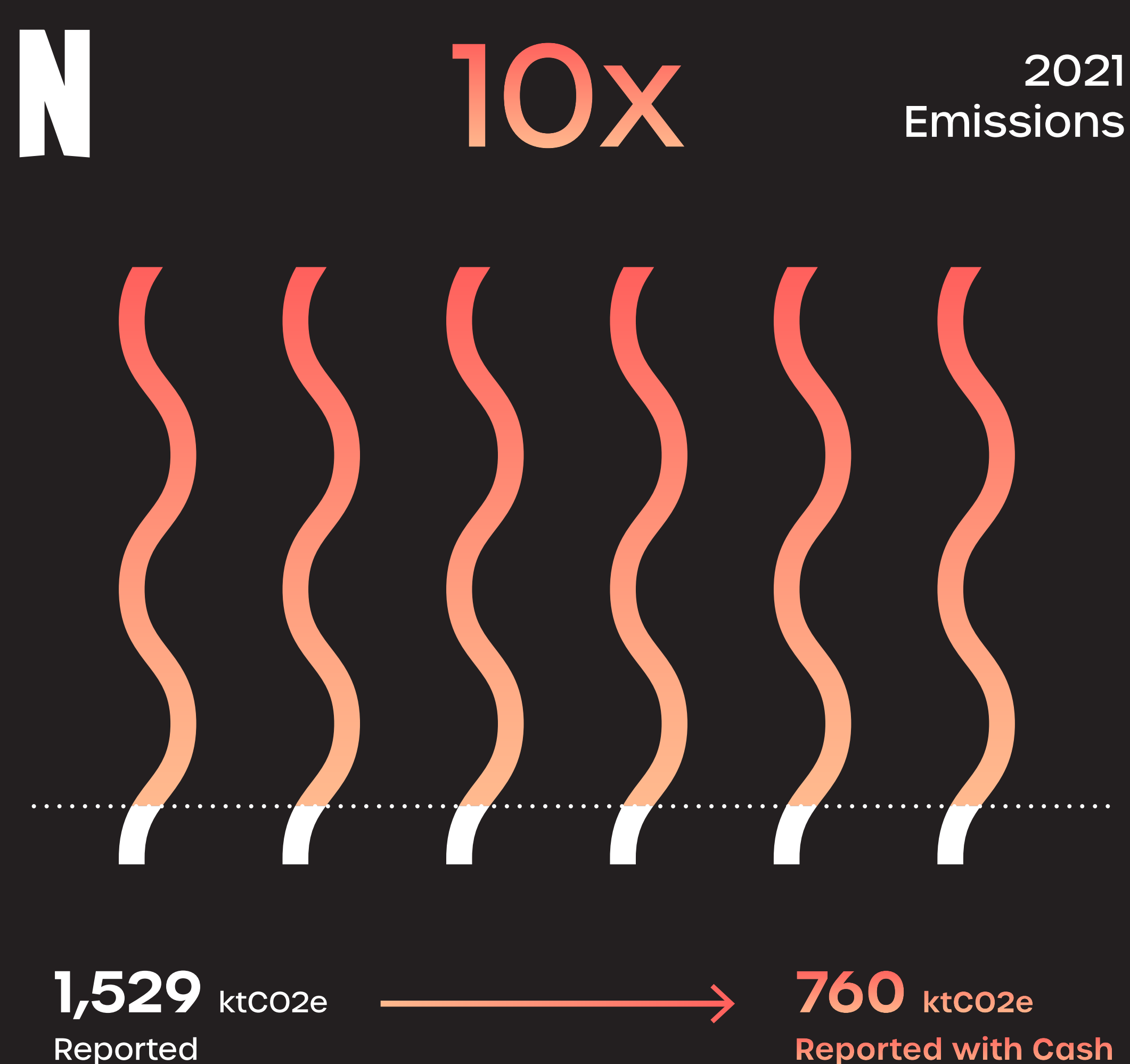
# Corporate Cash Emissions by the Numbers



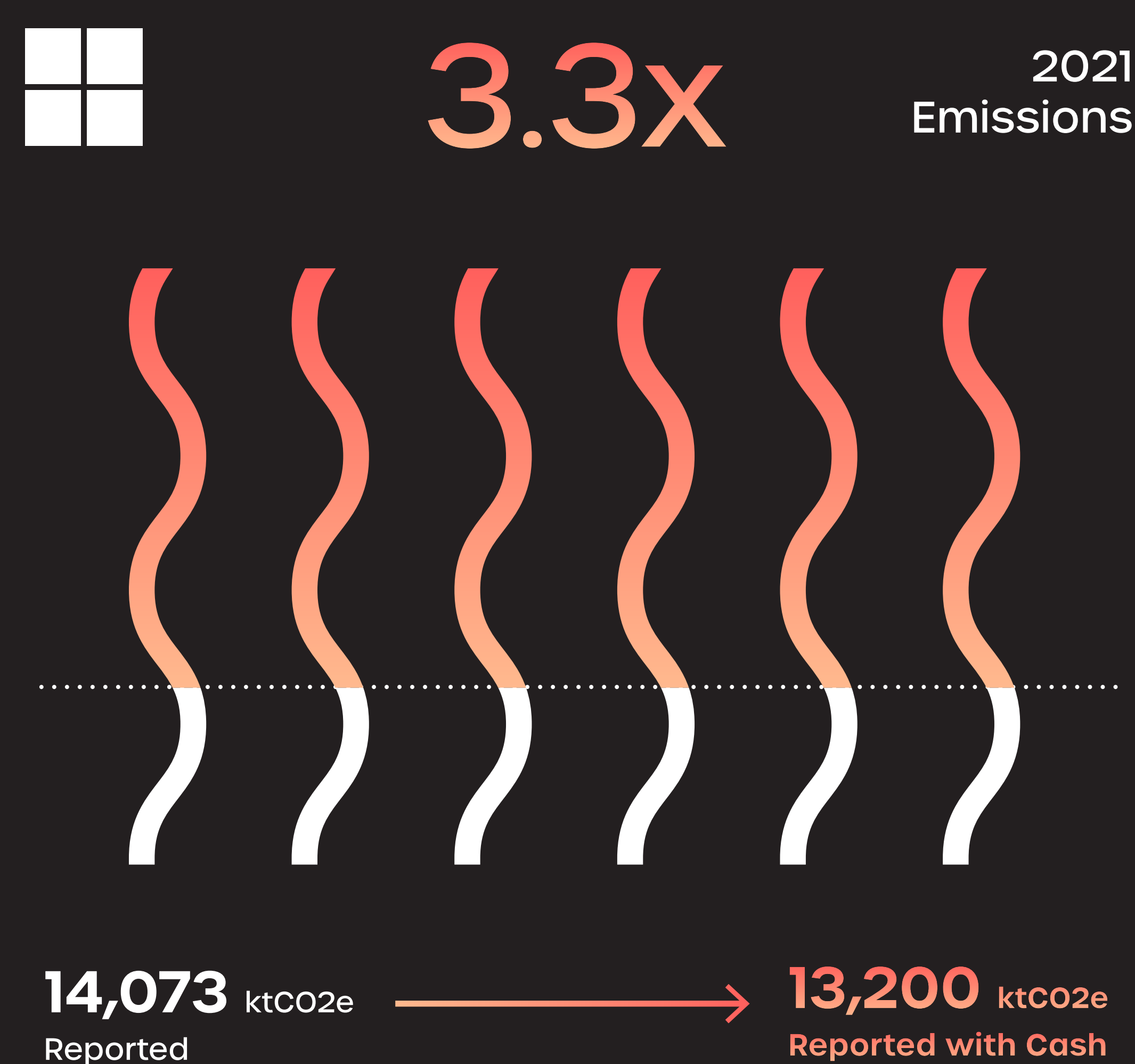
**55X:** In 2021, **PayPal's** financial footprint was 55X larger than the company's cumulative emissions (Scope 1, 2, and 3). That means at its current emissions rate, it would take until the year 2076 for PayPal to generate the cumulative emissions that the company's cash and investments generated in just 2021.<sup>4</sup>



**38X:** In 2021, **Google's** financial footprint was 38X larger than the company's total direct operational emissions (Scope 1) over the last five years (2016-2020).<sup>5</sup>



**10X:** In 2021, **Netflix's** financial footprint was 10X larger than the emissions generated by the worldwide streaming of Netflix.<sup>6</sup>



**3.3X:** In 2021, **Microsoft's** financial footprint was 3.3X larger than the emissions generated by the use of every Microsoft product and device in the world, which also includes Xbox products.<sup>7</sup>



# The Link Between Banks and Corporate Cash Emissions

To understand how it is possible a company's cash and investments could generate more emissions than all its other supply chain emissions combined, it is essential to first understand how banks manage corporate cash, the emissions this management generates, and how corporations invest.

Corporate cash and investments do not just sit passively in bank accounts accruing interest. Rather, this money is used to finance everything from energy development to construction projects to small-business loans, all of which generate emissions that banks and companies contribute toward.





Despite the highly publicized growth in green and environmental, social, and governance (ESG) offerings from their investment arms, many banks are still major suppliers of capital to carbon-intensive sectors and the fossil fuel industry—providing loans as well as underwriting and issuing bonds to maintain the flow of funds into these sectors. In fact, across the Group of 20 leading industrial and developing nations, banks have \$13.8 trillion of exposure to carbon-intensive sectors, which constitutes 19% of on-balance sheet loans.<sup>10</sup>

The lending and underwriting of carbon-intensive sectors at this rate generates a massive carbon footprint. The research featured in this report suggests that the average carbon intensity per unit of cash deployed by the US financial sector is 126.03 ktCO<sub>2</sub>e/billion USD. As context, a typical passenger vehicle emits roughly 4.6 metric tons of CO<sub>2</sub> per year, meaning that for every \$1 billion in cash a bank deploys, it generates comparable emissions to 27,398 vehicles' annual emissions.<sup>11</sup>

Considering that in February 2022, 13 of the world's biggest non-financial companies cumulatively held cash and investments that exceeded \$1 trillion, it is easy to see how the largest corporations' cash and investments generate emissions at a globally meaningful and previously under appreciated scale.



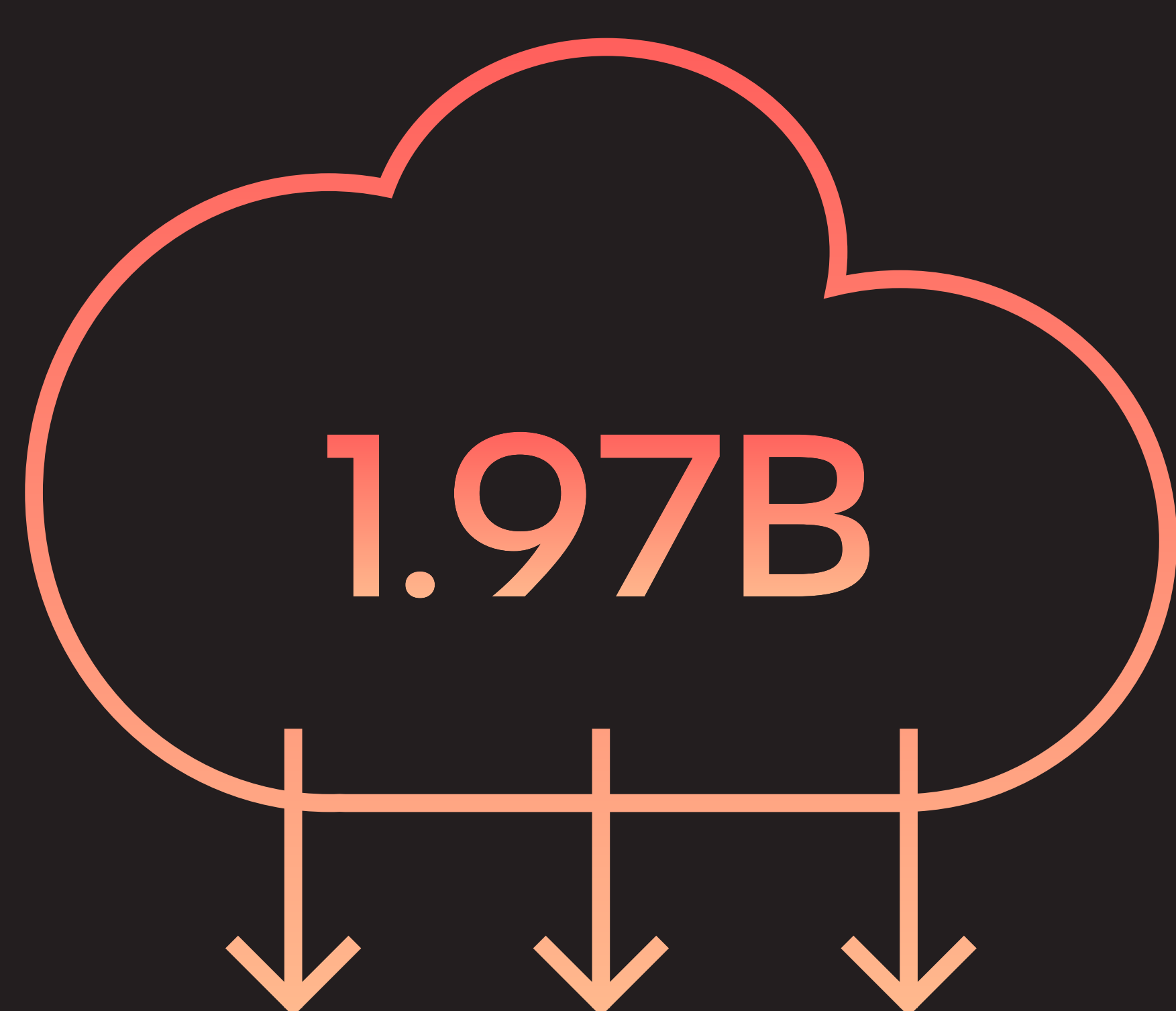
## Banking's Climate Impact by the Numbers



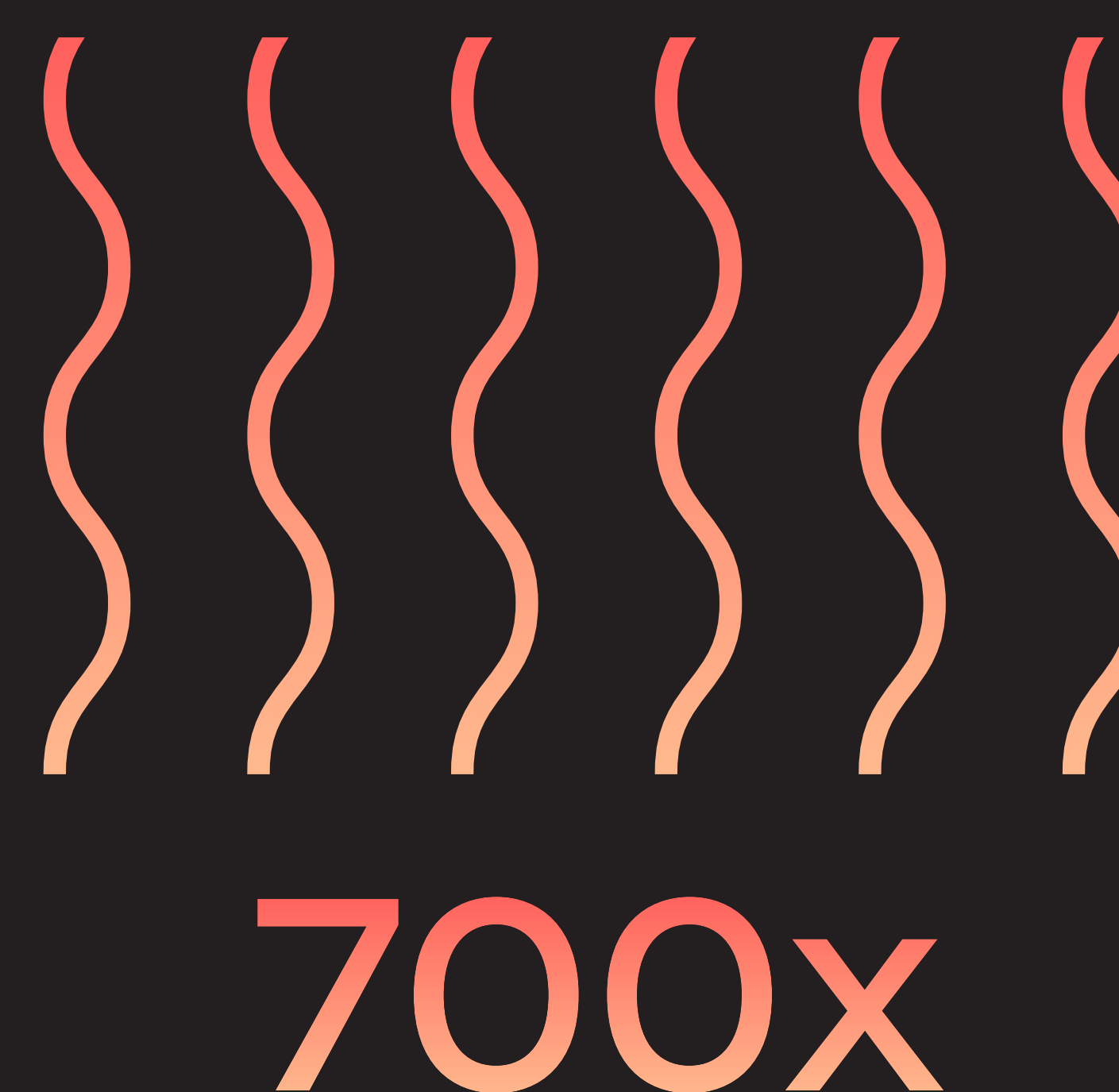
Since the Paris Agreement was signed in 2015, the world's 60 largest commercial and investment banks have invested \$4.6 trillion in the fossil fuel industry.<sup>12</sup>



Since 2015, JPMorgan Chase, Citi, Wells Fargo, and Bank of America have invested \$1.2 trillion in the fossil fuel industry, making them the four largest investors in fossil fuels during this period.<sup>13</sup>



The largest U.S. banks and asset managers were responsible for financing the equivalent of 1.968 billion tons of carbon dioxide in 2020, which would make the U.S. financial sector the world's fifth-largest emitter if it were a country (just below Russia).<sup>14</sup>




The emissions generated by global financial firms investing, lending, and underwriting activities are, on average, more than 700 times higher than their direct operational emissions.<sup>15</sup>



## Incorporating Financial Footprints into Corporate Emissions

Historically, companies have not included the emissions generated by their cash and investments (their financial footprint) in their reported corporate carbon footprints, but this long-standing situation is on the verge of changing.

To ensure a global, standardized approach for measuring greenhouse gas emissions, companies employ a framework called the Greenhouse Gas (GHG) Protocol. According to the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), which manage the Protocol, corporate cash and investments have always been an element of a company's Scope 3, Category 15 emissions—but companies have not yet been able to report these emissions due to data and methodological limitations. However, these data and methodological deficiencies no longer exist.



“CDP believes the interplay between finance and business is key to driving environmental action. This report reinforces the reality that the financial economy exists only because of surplus cash generated in the real economy.”

—**Nicolette Bartlett**  
Chief Impact Officer, CDP



## A New Frontier of Climate Leadership


This research does not just uncover and quantify a previously overlooked emissions source. It also reveals one of the most powerful levers companies possess to realize their climate ambitions: using their clout as major cash managers and investors as a catalyst for climate progress.

Currently, climate-conscious companies are only activating a small percentage of their cash and financial influence to realize their corporate and global climate objectives. Much of this financial leveraging occurs through a combination of impact investing, utilizing ESG investment screens; and initiatives such as Microsoft's Climate Innovation Fund, which is investing \$1 billion in new carbon reduction and removal technologies.<sup>16</sup>

Meanwhile, those companies have deposited and invested hundreds of billions of dollars in banks, which are financing fossil fuels and other carbon-intensive sectors. As a result, climate-leading companies are passively channeling hundreds of billions of dollars a year into the sectors driving the climate crisis.

Companies are not resigned to this fate of passive, emissions-intensive investment. Just as they do with other corporate supply chains, companies can work proactively to decarbonize their "financial supply chain": essential corporate financial activities including cash management, investing, and pensions. Doing so would not only help companies achieve their corporate climate goals, but it would also advance a global climate necessity: improving the financial sector's climate performance and accelerating the decarbonization of the economy.





“We are in a climate emergency and that requires every organization to accelerate to net zero as fast as possible. At Salesforce, we believe that the future of transformative climate action will come from collaboration between customers and suppliers. That's why we welcome this new analysis from CSLN, TOPO, and BankFWD so companies like Salesforce can deepen collaboration with banking sector leaders to accelerate their climate ambition and drive meaningful change at scale.”

—Patrick Flynn

Senior Vice President and Global Head of Sustainability, Salesforce



## A Timely, Powerful Systemic Solution

Among an ever-growing collection of corporate climate tools, decarbonizing cash and proactively engaging financial supply chain partners stand apart as systemic solutions that require urgent attention. That reality is grounded in two critical factors:

- **A climate-safe world is not possible unless the financial sector sets robust near-term, science-based climate goals;** quickly phases out the flow of finance to fossil fuels and deforestation; ramps up investments in transition across all economic sectors; and scales up innovative climate solutions (IEA).
- **Companies are well-positioned to help accelerate the transformation** of the financial sector because they can deliver unprecedented financial pressure on banks to decarbonize.

**Despite mounting pressure from politicians, nonprofits, foundations, shareholders, and grassroots activists, financial firms are not decarbonizing at the needed scale and pace**—just one-third of the largest publicly traded financial institutions have set reliable 2030 goals,<sup>14</sup> and the 60 largest commercial and investment banks still invested \$742 billion in the fossil fuel industry in 2021.<sup>16</sup>




As a result of this insufficient decarbonization, the financial sector is on track to fund emissions generation well beyond the global goal of the 1.5°C temperature increase that Intergovernmental Panel on Climate Change (IPCC) scientists say is required to maintain a safe planet.



Companies have the power to significantly shift this trajectory and proactively engage with the financial sector to help steer the world toward a path of rapid climate progress. To realize that impact, companies must activate their latent financial influence and motivate banks to accelerate their decarbonization, which would generate direct and systemic benefits:

- **Increase investment in climate solutions:** By implementing climate filters on their engagement with financial service providers, companies can transition the hundreds of billions of dollars they are collectively channeling into carbon-intensive sectors into investments in climate solutions.
- **Catalyze systemic change across the financial sector:** As major stakeholders, companies can pressure banks to implement policies that accelerate their decarbonization efforts—steps such as ending financing and underwriting for fossil fuel expansion and setting absolute 2030 emissions reductions targets. By doing so, companies could catalyze systemic change throughout the financial system, which would significantly increase the possibility of achieving the global goal of not exceeding a 1.5°C temperature rise.



“This report provides a valuable insight representing yet another key intervention point for CFOs in driving sustainability through their financial supply chain.”

—Jessica Fries

Executive Chair, Accounting for Sustainability



## Harnessing an Untapped Corporate Power

The world's most climate-conscious companies—many of which are highlighted in this report—have demonstrated time and again that as their understanding of their environmental impact progresses, so does their commitment and ability to address that impact. Those companies have also repeatedly proven that their desire for change is not just compelling words on a page but a real commitment to leverage their influence as a force for climate progress.

The data presented in this report illuminate a previously unidentified source of emissions and, in doing so, exposes one of, if not the, most powerful levers companies possess to realize their corporate and global climate ambitions: their financial supply chains.



“The Race to Zero relies on mobilizing action from every available angle to galvanise alignment. Harnessing the latent agency of companies to transform the sustainability of financial supply chains could play a pivotal role in decarbonizing finance flows and redirecting long-term investments in the real economy.”

—Nigel Topping


UN High Level Climate Action Champion, COP26



By harnessing their untapped power to influence the financial sector, companies have the ability to reduce their climate footprint and realize their corporate climate objectives. And by stimulating bold action across the financial sector and global economy, companies have the opportunity to meaningfully reshape the world.

Banks play a foundational role determining our climate and economic future by taking short-term money and investing it in long-term infrastructure. Presently, too much of that infrastructure is furthering the climate crisis. The longer this situation persists, the more challenging it becomes to achieve global climate goals. As a result, by passively enabling their cash and investments to finance carbon-intensive sectors and infrastructure, companies have been unintentionally funding a future they are working tirelessly to avoid.

Companies have the power to fix this undesirable paradigm. By leveraging their financial influence and climate expertise, companies can optimize their financial impact and transform their cash and financial relationships into a force for climate solutions. In doing so, companies will realize their substantial and latent power to shape the world in a real and profound way.



“The research and findings contained in this report offer companies a new, massively important opportunity to help shift our financial system away from fossil fuels and deforestation toward climate solutions on a global scale. Companies that are serious about their climate pledges will welcome this breakthrough, and move urgently toward tapping this lever for systemic change.”

—**Jamie Beck Alexander**

Director, Drawdown Labs at Project Drawdown



# Making Cash Core to Corporate Climate Efforts

How a company manages its financial supply chain is a core business operation. Historically, companies have treated this business practice as a climate-neutral activity, which is understandable given that the concept of a company's financial footprint is a novel insight that relies on both new data and a new methodological approach.

Armed with the methodology detailed in this report, which is built upon the Partnership for Carbon Accounting Financials' (PCAF) foundational work, every company can now develop an approximate calculation of its financial footprint and how that compares to its other emissions sources. The next step is for companies to start decarbonizing their cash and investments and engaging with their financial partners.



Some well-established strategies already exist for how companies can decarbonize their financial supply chains and accelerate the transition of the economy. However, given the emergent nature of this corporate sustainability arena, activating this powerful climate lever will require developing a comprehensive playbook that harnesses the untapped power of corporate finances.

This suite of solutions can be divided into four broad activity buckets:

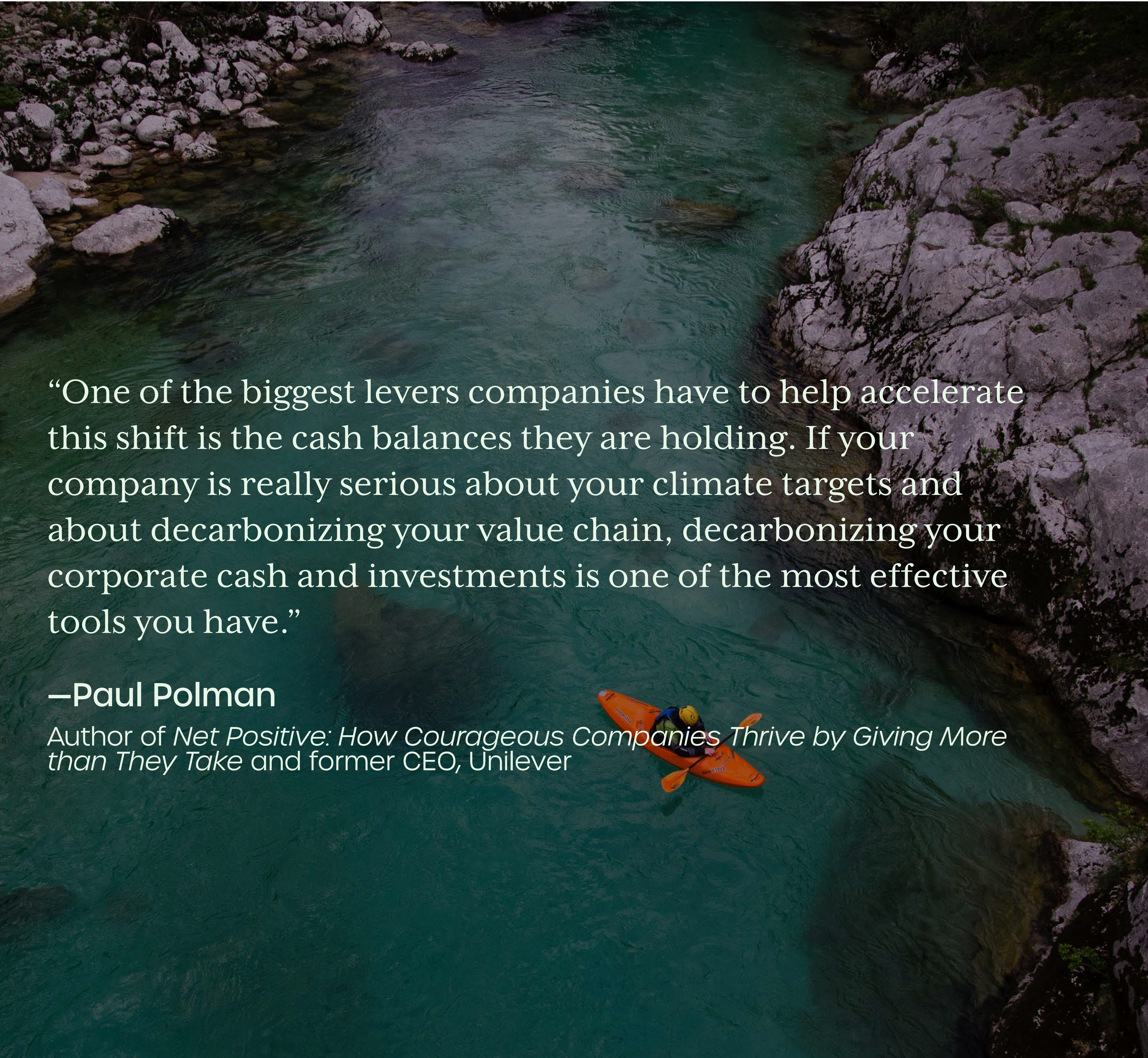
- **Select:** identify financial institutions and products that are environmentally sustainable and socially equitable from the existing landscape.
- **Engage:** their existing finance providers in their financial supply chain on climate and sustainability, making clear requests and incentivizing good practice.
- **Innovate:** develop innovative new products, mechanisms, incentive schemes, data insights, behavioral drivers, etc., that enable companies to accelerate the decarbonization of their financial supply chains.
- **Advocate:** push for climate-aligned financial regulation and policy that will increasingly drive the financial system toward progressive sustainable products and services.

Fortunately, many of the companies most committed to activating the corporate cash lever are creative companies that have world-leading capacity to innovate and scale new ideas—both with their products and their sustainability solutions. Additionally, they have extensive experience working to decarbonize a wide range of supply chains, which they can apply to greening their financial supply chain. As a result, climate-conscious companies are well-equipped to develop this four-pronged suite of solutions.



However, to ensure these solutions are developed quickly and effectively, in the coming months, CSLN, TOPO, BankFWD, and other partner organizations will launch a collaborative effort to create this comprehensive playbook. Central to that effort will be harnessing corporations' world-leading capacity to innovate, scale new ideas, and decarbonize supply chains.

We are inviting corporations to join together and work with us on this collaborative effort to develop the toolbox companies need to transform their financial supply chains into a positive climate force.

A photograph of a person in an orange kayak navigating a narrow, rocky river. The water is a deep teal color, and the surrounding banks are composed of large, light-colored rocks. The scene is captured from an elevated perspective, looking down at the kayaker.

“One of the biggest levers companies have to help accelerate this shift is the cash balances they are holding. If your company is really serious about your climate targets and about decarbonizing your value chain, decarbonizing your corporate cash and investments is one of the most effective tools you have.”

—Paul Polman

Author of *Net Positive: How Courageous Companies Thrive by Giving More than They Take* and former CEO, Unilever



# A Deeper Dive into the Climate Impact of Corporate Cash

## Understanding the Data

Given the novel nature of financial footprints, it is helpful to consider several factors when reviewing this data.

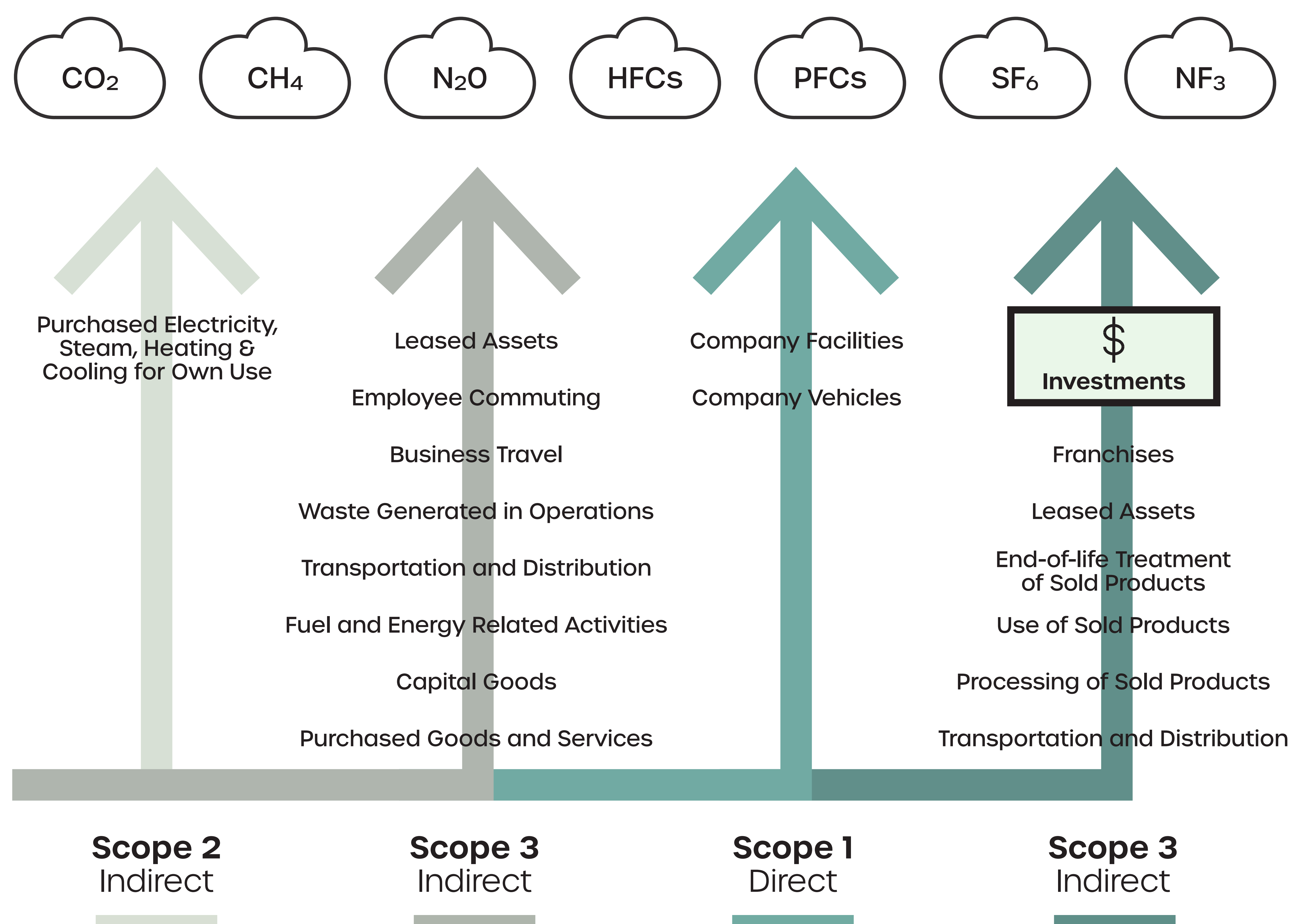
- Financed emissions percentages skew toward companies with smaller operating footprints and large cash reserves. Simply put, the more cash and investments a company has, the larger its unaddressed financial footprint will be.
- These financed emissions percentages appear relatively worse for climate-conscious companies that have already reduced other sources of emissions and therefore have a lower overall carbon footprint as a point of comparison.
- Large companies are accruing the deepest cash reserves in history—the S&P 500 nonfinancial companies are sitting on a record \$2.7 trillion in cash and investments. If this boom continues and companies become increasingly cash rich while reducing their other emissions, their relative financial footprints will continue to increase.<sup>17</sup>



## A Quick Emissions Explainer—Scope 1, 2, & 3

To understand the magnitude of this report’s findings, it is key to comprehend how companies employ the GHG Protocol to calculate their emissions. The GHG Protocol classifies emissions in three distinct categories:

- **Scope 1 Emissions** – direct GHG emissions from operations that are controlled or owned by the reporting company, such as vehicle fuel consumed by owned or leased vehicles.
- **Scope 2 Emissions** – indirect GHG emissions resulting from the generation of purchased or acquired electricity, heating, steam, and cooling for the reporting company’s own use.
- **Scope 3 Emissions** – indirect GHG emissions refer to all other indirect emissions that occur in a company’s value chain (not already included in Scope 2), which includes sources such as purchased goods and services, business travel, and waste generation.<sup>18</sup>

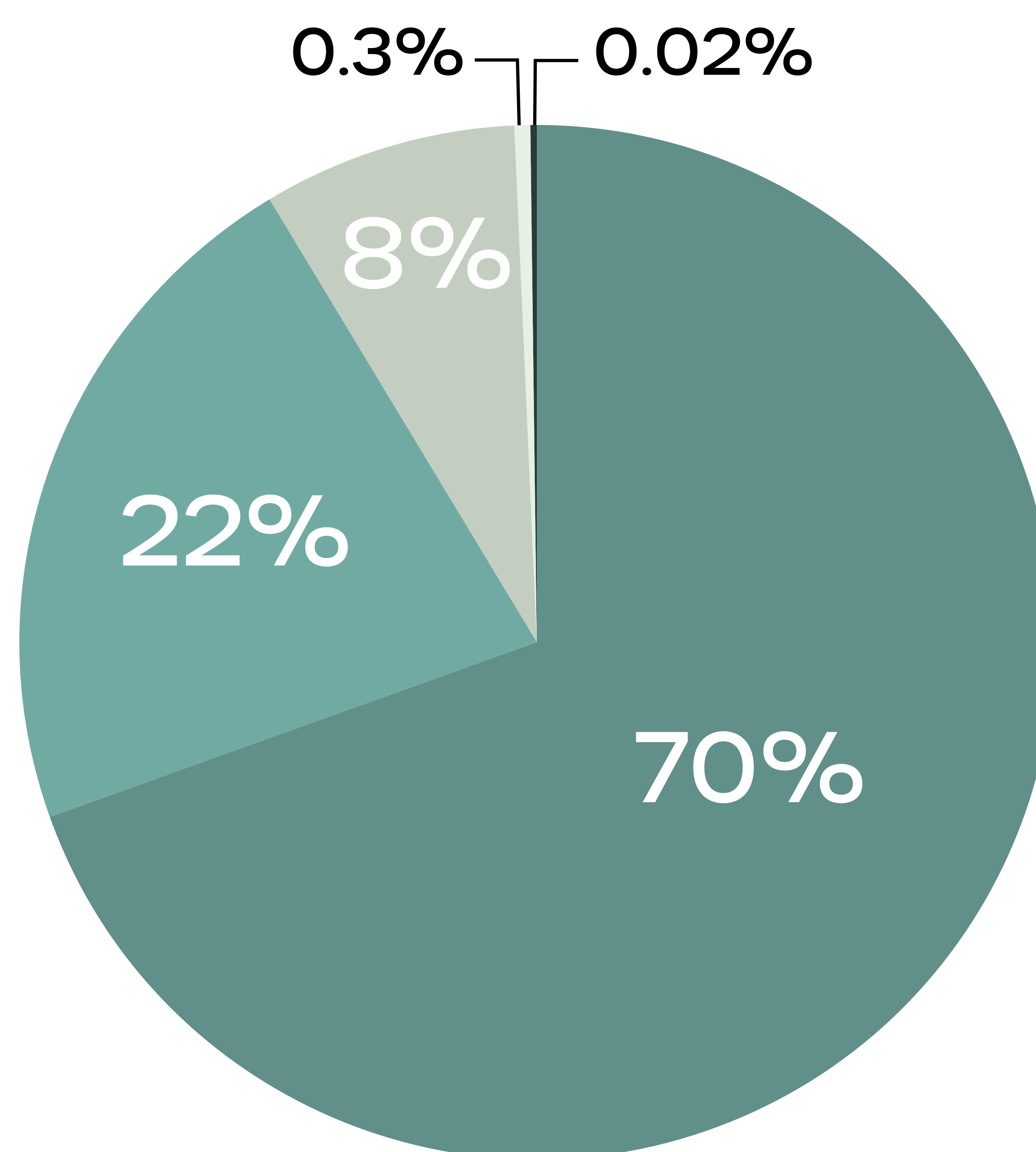




To ground this explanation in a real-world example, here is how the GHG Protocol applies to Apple, which has a reported combined Scope 1, 2, and 3 emissions of 23.2 million metric tons of CO2e for its 2021 operations.

Apple’s combined Scope 1 and 2 emissions represent less than 1% of its overall emissions. As a result, Apple’s product life cycle emissions constitute more than 99% of the company’s carbon footprint:

- **Product manufacturing** is by far the company’s largest source of emissions (70%)
- **Product use** includes all the emissions associated with the energy required to operate every Apple product throughout its lifetime (22%)
- **Product transport** accounts for 8%
- **End-of-life product processing** is less than half a percent
- **The company’s direct emissions and electricity** are effectively zero<sup>19</sup>

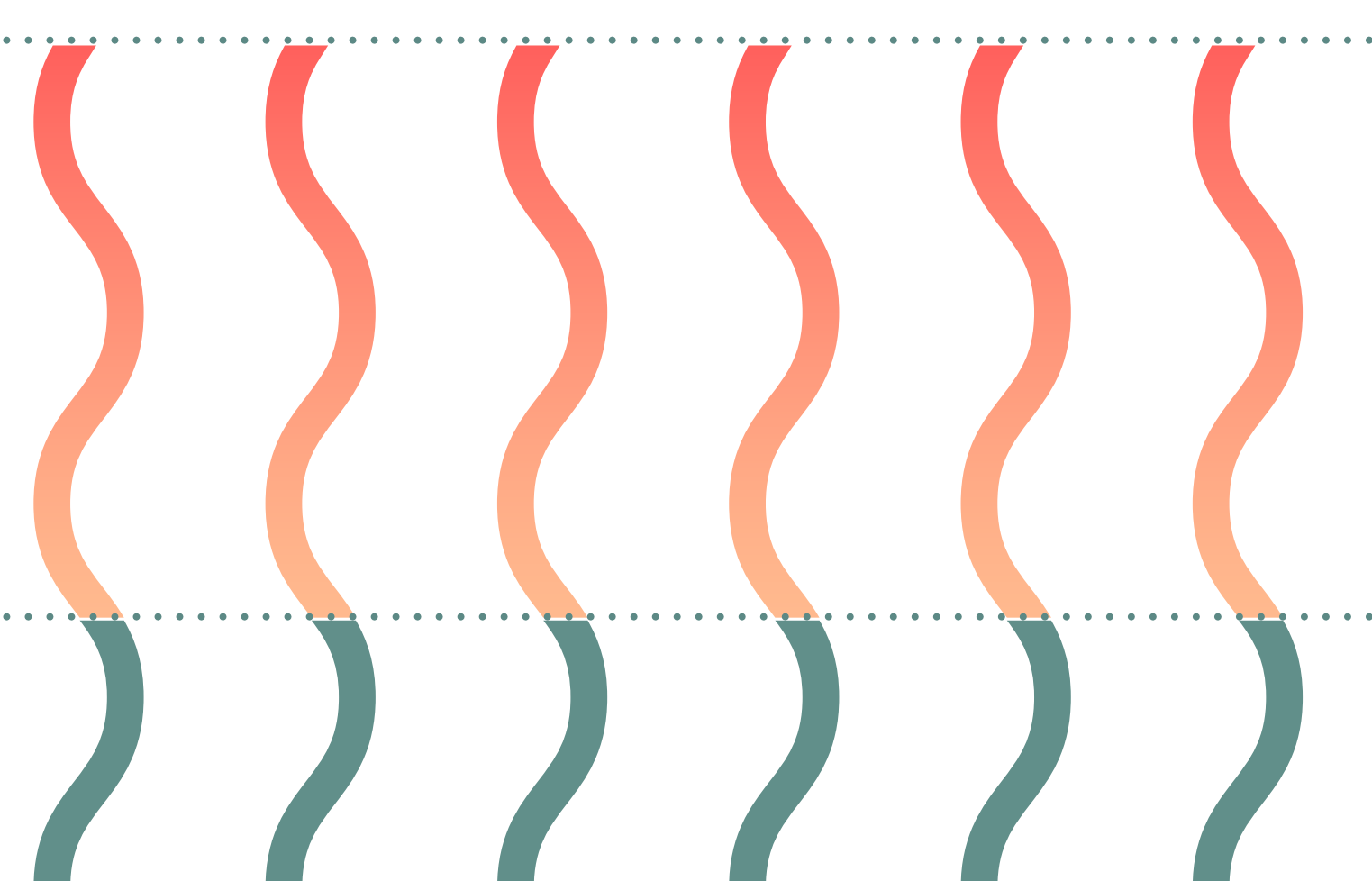


Meanwhile, in 2021, the emissions Apple’s \$191 billion in cash and investments generated was 14.9 million metric tons, 64% of Apple’s current reported emissions. Therefore, **the emissions that Apple’s cash generated was nearly three times larger than the total emissions generated by the use of every Apple product in the world in 2021.**

**3x**

Emissions generated by Apple’s cash

Emissions generated by use of every Apple product in the world





# The Emissions Benefits of Decarbonizing Corporate Cash

What makes financial supply chain decarbonization such a powerful climate lever is its dual benefits: direct emissions reductions and systemic financial sector transformation. Subsequent sections will explain the global benefits at length, but several facts help illuminate the substantial direct carbon reductions a company can achieve by working to decarbonize its financial supply chain.

Importantly, companies should not view decarbonizing their cash and investments as a choice that is weighed against other common emission reduction strategies. Decarbonizing cash needs to be an additive sustainability tactic that compliments ongoing efforts. However, by comparing the emissions reduction potential of decarbonizing corporate cash to existing corporate sustainability efforts, the power of this solution becomes apparent.



The following examples are intended to demonstrate the scale of financial footprints and to highlight an additional leverage point to help drive systemic change. They should not be interpreted as recommendations because primary operational emissions reduction should always come first.



By using 100% renewable electricity for **Apple's** facilities, the company saved 1 million metric tons of carbon emissions in 2021.<sup>20</sup>

If Apple reduced its 2021 financial supply chain emissions by just 7%, it would represent comparable annual emissions savings as the company achieved by powering its facilities entirely on renewable energy.



**Google** is the world's largest annual corporate purchaser of renewable energy. In 2020, Alphabet reduced its total emissions via renewable energy power purchase agreements by 4,954 ktCO<sub>2</sub>e.<sup>21</sup>

If Google reduced its 2021 financial footprint by 43%, the emissions reduction would be roughly equivalent to the carbon savings Alphabet has generated by being the world's largest purchaser of renewable energy.



From 2005–2020, **Johnson & Johnson's** CO<sub>2</sub> Capital Relief Program spent \$445 million on 241 energy efficiency projects at the company's most energy-intensive manufacturing and R&D sites, which has helped the company avoid 298,905 MT CO<sub>2</sub> annually.<sup>22</sup>

If Johnson & Johnson reduces its financial footprint by just 10%, it would represent comparable annual emissions savings as the company has achieved with its successful CO<sub>2</sub> Capital Relief Program.



**Microsoft** has committed to reach carbon negativity by 2030—meaning the company would emit net negative emissions every year. To achieve this ambitious goal, Microsoft will reduce its Scope 1 and Scope 2 emissions to near zero and cut its Scope 3 emissions by more than 50%.<sup>23</sup>

By cutting its financial supply chain emissions by 54%, Microsoft could achieve similar carbon reductions as it is working to achieve via the core element of the company's carbon negative strategy.



If **PayPal** cut its banking emissions by just 10%, it could represent about 5X the annual emissions reduction as the company would generate by eliminating its total 2021 reported Scope 1, 2, and 3 emissions.<sup>24</sup>



# A Rare Opportunity to Forge Climate Progress


## What's at Stake

In May 2021, the International Energy Agency (IEA) published *Net Zero by 2050: a Roadmap for the Global Energy Sector*, which details a comprehensive roadmap for how humanity can achieve the goals of the Paris Agreement and maintain global warming below 1.5°C above pre-industrial levels. Central to this roadmap was the IEA's recognition that:

- The financial sector's continued commitment to investing in climate-intensive sectors and fossil fuel development is accelerating the global march toward a climate tipping point.
- We have a tight window to transform our energy sector, which not only requires immediately ending the development of oil, gas, and coal reserves but also launching what the IEA describes as a "historic surge in clean energy investment."<sup>25</sup>

The confluence of those circumstances creates a monumental fork in the road. If the financial sector heeds the IEA's guidance, ends fossil fuel funding, and ramps up investments in a climate-safe economy, humanity's ability to navigate the climate crisis increases exponentially. However, if the financial sector ignores the IEA's road map and continues business as usual, the world will quickly exceed its global carbon budget, and humanity will actualize disastrous climate impacts.



An aerial photograph of a dense forest with a river or stream winding through it. The trees are mostly dark green, with some lighter green and brown patches, suggesting a mix of species or perhaps some autumnal change. The water is dark and reflects the surrounding trees.

“It is impossible to overstate just how important this analysis is: this team is uncovering the largest remaining source of huge and hidden carbon emissions in our economy. It’s the equivalent of the moment when physical scientists figured out the last big new source of carbon—the melting tundra. But in this case, armed with these figures, we can swiftly do something about it.”

—**Bill McKibben**

Founder of Third Act and 350.org  
Schumann Distinguished Scholar at Middlebury College



While some financial firms are rising to the challenge and taking steps to become climate safe, the sector, by and large, continues to double down on fossil fuel investment and further accelerate climate change. As a result, climate-conscious businesses, which are major bank customers, have an unprecedented opportunity to help forge a climate-safe world by leveraging their financial resources and sustainability expertise to accelerate the transformation of the financial sector.

## The Next Step in Corporate Sustainability

Over the last three decades, the corporate sustainability movement has undergone a substantial evolution. As the collective understanding of the environmental impacts of corporate activities has progressed, so has corporations' ability to reduce the impact of their and their suppliers' operations. Nowhere are those advancements more profound than in the climate space, where the tools for fighting climate change have become far more sophisticated, powerful, and systemic.

Decarbonizing corporate financial supply chains is the next step in this evolution and will be one of, if not the most powerful, lever corporations can activate to mitigate climate change. That power lies in companies not only working to decarbonize their own supply chain but also leveraging their immense financial and social clout to drive systemic climate reform across the banking sector.



## The Latent Opportunity for Companies to Influence Financial Sector Decarbonization

In response to growing warnings from entities such as the United Nations that it is now “code red for the planet,” the United States’ most responsible companies are rising to the challenge and taking bold action to reduce their carbon footprint and chart a better climate future. The same cannot be said for the United States’ six largest banks, which despite committing to net zero by 2050 have invested more than \$1.4 trillion in fossil fuel expansion since the Paris Agreement was signed in 2015.<sup>26</sup>

To understand the commitment gap that exists between the United States’ most cash-rich companies and its largest banks, look no further than the state of their net zero accomplishments and commitments.

|           | Global Ranking of Cash & Investments | Total Cash & Investments | Reported Total Emissions (Scope 1, 2, & 3) in 2021 | Commitment to Net Zero Emissions by 2050 | Commitment to Cut 50% Absolute Emissions by 2030 | Commitment to Align with 1.5°C Pathway |
|-----------|--------------------------------------|--------------------------|--|--|--|--|
| Apple     | 1                                    | \$203B                   | ✓  | ✓  | ✓  | ✓                                      |
| Alphabet  | 2                                    | \$169B                   | ✓  | ✓  | ✓  | ✓                                      |
| Microsoft | 3                                    | \$132B                   | ✓  | ✓  | ✓  | ✓                                      |
| Amazon    | 4                                    | \$86B                    | ✓  | ✓  | ✗  | ✓                                      |
| Meta      | 7                                    | \$55B                    | ✓  | ✓  | ✓  | ✓                                      |

*Investors Business Daily* cash data as of 2/3/22<sup>27</sup>

|                  | Global Ranking (aggregate fossil fuel finance 2016-2021) | Total Fossil Fuel Financing Since 2015 | Reported Total Emissions (Scope 1, 2, & 3) in 2021 | Commitment to Net Zero Emissions by 2050 | Commitment to Cut 50% Absolute Emissions by 2030 | Commitment to Align with 1.5°C Pathway |
|------------------|--|--|--|--|--|--|
| JP Morgan Chase  | 1  | \$382B                                 | ✗  | ✓  | ✗  | ✓                                      |
| Citibank*        | 2  | \$285B                                 | ✗  | ✓  | ✗  | ✓                                      |
| Wells Fargo      | 3  | \$272B                                 | ✗  | ✓  | ✗  | ✓                                      |
| Bank of America* | 4  | \$232B                                 | ✗  | ✓  | ✗  | ✓                                      |
| Morgan Stanley*  | 12   | \$137B                                 | ✗  | ✓  | ✗  | ✓                                      |
| Goldman Sachs    | 14   | \$119B                                 | ✗  | ✓  | ✗  | ✓                                      |

\*Citibank, Bank of America, and Morgan Stanley did not report total emissions in 2021 but have pledged to moving forward

Fossil fuel financing data from Rainforest Action Network<sup>28</sup>



The gap in climate commitment and leadership illuminates both the problem and opportunity facing the world's most climate-conscious corporations, which are going to great lengths and spending billions of dollars decarbonizing every aspect of their supply chains.

- **The problem:** Much of their work to decarbonize their climate footprint is being undermined by their financial supply chains, which are tied to environmentally misaligned financial institutions that are investing hundreds of billions of dollars of these companies' cash in the carbon-intensive sectors driving the climate crisis.
- **The opportunity:** By working with their banking partners to decarbonize their financial supply chains, these companies will push some of the world's largest and most climate-lagging banks to ramp down dirty investments, increase investments in climate solutions, and accelerate their pace to net zero, all of which are essential to meet global climate goals.





## Corporations' Ability to Transform the Financial Sector

Despite the overwhelming environmental and economic evidence that the banking sector should decarbonize as quickly as possible, the reality is that the largest banks are not transforming at the requisite pace and scale to align with global climate goals. With no straightforward, ready-made solutions, how does a company decarbonize its cash when no banks exist that can both meet the company's environmental requirements and fulfill its complex banking needs?

The answer to that question is multifaceted and requires companies to leverage their financial, social, and political influence to accelerate the banking sector's pace to reach net zero.

Until now, few businesses have included financial sector engagement as a key component of their sustainability strategy, save for a handful of pioneering companies. However, the paradigm needs to shift as companies recognize that their banking practices are one of their most significant environmental activities and one of their most impactful levers for creating climate progress.

For years, a growing coalition of responsible banks, nonprofits, foundations, shareholders, and activists have been working to decarbonize the financial sector. While those entities have scored many victories and pushed the financial sector in a positive direction, they have not been able to drive the requisite scale and pace of transformation needed to put the sector on the path to becoming climate safe.

By working to decarbonize their cash and investments, climate-conscious companies will join that growing effort and bring three unique strengths to the table: their ability to deliver powerful financial pressure, long-standing relationships with banks, and expertise decarbonizing supply chains.



# Solutions

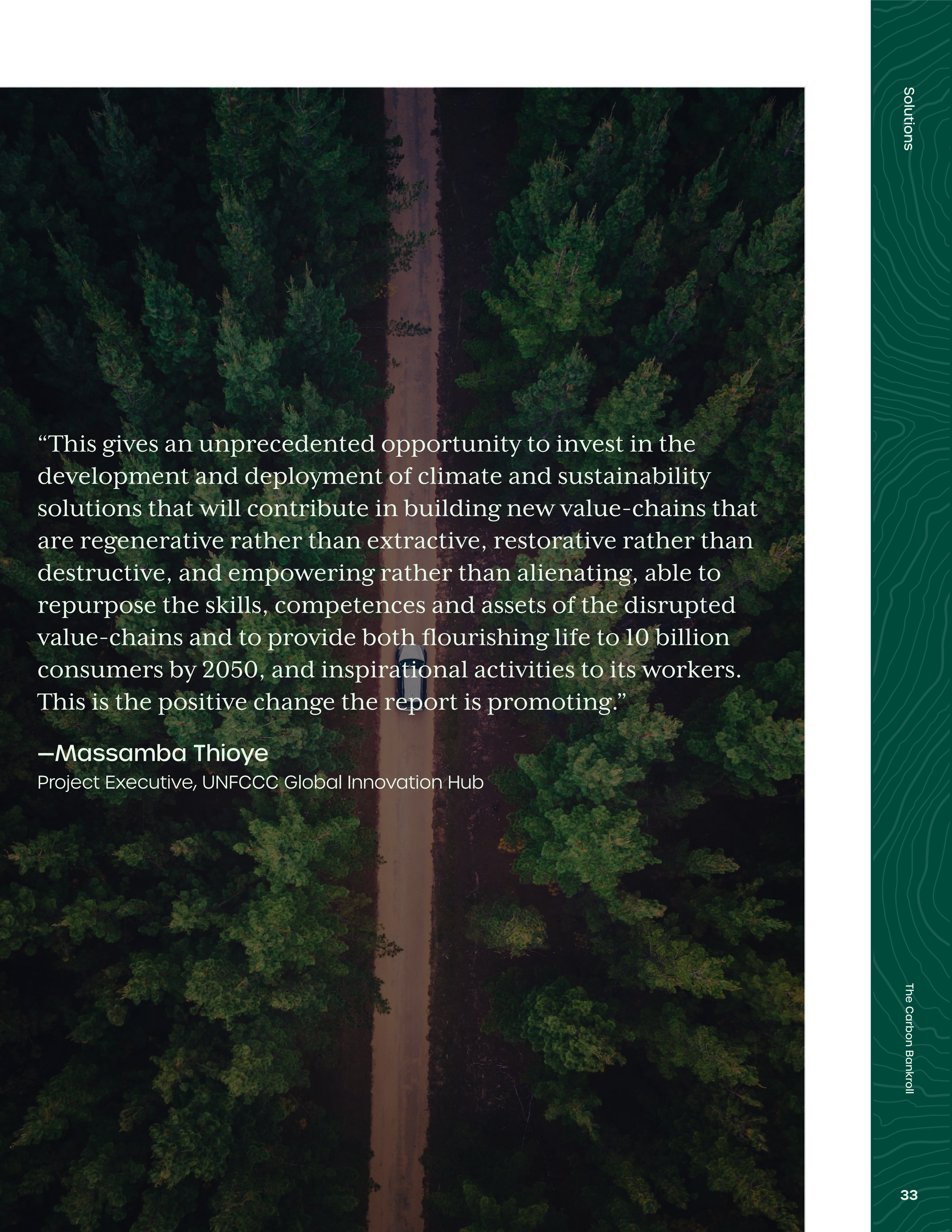
## What Companies Can Do to Decarbonize Their Financial Supply Chains and the Financial Sector

In the coming months, CSLN, TOPO, BankFWD, and other partner organizations will launch a collaborative effort to develop a comprehensive playbook of strategies companies can employ to decarbonize their financial supply chains and accelerate the financial sector's decarbonization. To ensure this effort's success, the initiative will be strategically designed to harness corporations' world-leading capacity to innovate, scale new ideas, and decarbonize supply chains.

In the interim, here is a high-level overview of 10 potential strategies that illustrate the type of tactics companies can employ. This suite of solutions comprises all four buckets of financial supply chain decarbonization activities: selecting, innovating, advocating, and engaging.

Companies can make progress on this new corporate sustainability front by working individually to implement these strategies. However, by working together and ensuring their efforts are aligned, companies will generate a collective power that will heighten the impact of these solutions, deliver more substantial results, and transform corporate financial supply chains into more effective climate levers.





“This gives an unprecedented opportunity to invest in the development and deployment of climate and sustainability solutions that will contribute in building new value-chains that are regenerative rather than extractive, restorative rather than destructive, and empowering rather than alienating, able to repurpose the skills, competences and assets of the disrupted value-chains and to provide both flourishing life to 10 billion consumers by 2050, and inspirational activities to its workers. This is the positive change the report is promoting.”

—**Massamba Thioye**

Project Executive, UNFCCC Global Innovation Hub



## 1) Demand emissions reporting and transparency

For companies to decarbonize their cash, they must first understand the emissions their cash is generating. To accurately calculate their financial footprint, companies will need reliable emissions data from their banking partners. Unfortunately, that emissions data is widely lacking. As a result, as a first baseline request, companies should demand that their existing banking partners, as well as any future banking partners, disclose their total emissions (Scope 1, 2, and 3) through established frameworks such as the Partnership for Carbon Accounting Financials.

## 2) Move the money you can

Large companies cannot move all their money to climate-safe banks given their insufficient size and services. However, companies should explore moving some money to lower-emitting banks, especially certain banking operations that are smaller and require less service sophistication such as philanthropy funds. By moving money to climate-safe banks, companies can reduce the emissions of every dollar by more than 60%.

## 3) Demand measurable and high-impact green bonds

The green bond market is growing considerably and provides businesses the option to invest in climate solutions; but given how money circulates in financial institutions, it is difficult for bond purchasers to determine the true impact of green bonds. To ensure green bonds are delivering a measurable climate benefit, companies can issue a mandate to hold their money in a green bond with specific terms and ask issuer financial institutions to bid on the funds.



## 4) Create new climate-friendly financial products

This report features many of the most successful technology brands, which all have world-leading capacity to innovate and scale new ideas. Companies can put this expertise to use by developing new targeted financial products and bank-specific loans that scale climate solutions.

## 5) Fuel green demand

Companies with large cash deposits can target funds and financial products that banks offer customers, in turn fueling customers' transition to net zero. Sustainability-linked loans could offer discounted lending for taking climate-aligned action. The more we stimulate this, the faster a bank balance sheet (and associated cash deposits) decarbonizes. Doing that effectively means giving customers access to good data—a forte of tech companies.

## 6) Can't change banks? Then change your bank.

As major customers, companies can pressure banks directly and advocate for real change in their decarbonization efforts—for example phasing out fossil fuel finance and deforestation-linked lending. Companies could also encourage tangible action on climate strategies to support the transition of a bank's customers, demanding clarity and accountability on progress.

## 7) Issue a carbon-reduction banking challenge

Just as companies can use their consumer power to pressure their existing banks to reform, companies can also leverage the promise of their business to incentivize banks to improve their climate performance. Either individually or collectively, companies could promise to move a portion of their business to the bank(s) that commits to the highest environmental standards. The potential of landing that sizable chunk of business could spark competition that would push laggard banks to accelerate their path to net zero.



## 8) Put high-carbon banks in “the freezer box”

This collaborative concept borrows from a well-tested markets method that excels at deterring unwanted behavior and facilitating long-term alignment between banks and clients. The practice entails developing a methodology for rating banks’ climate performance and then placing the bottom two banks in the “freezer box,” which would prevent member companies from conducting all or select business operations with those banks. Those banks would remain in the “freezer” until they improve their climate performance. At that time, the two lowest-rated banks would then cycle into the freezer (and so on). By doing so, a freezer box program works to progressively improve the performance of the worst-rated banks while still ensuring that enough banking partners exist that companies can meet their complex banking needs.<sup>29</sup>

## 9) Look beyond your cash

The environmental impact of a company’s financial practices extends well beyond its cash. Just as corporate cash is being passively invested in industries driving climate change, so is the money employees and employers are investing in 401(k)s and retirement plans. Fortunately, climate-friendly, financially reliable 401(k)s do exist, and companies can offer those existing products to their employees as well as work with their financial partners to develop tailored, climate-safe retirement plans.

## 10) Model full accountability in accounting

The GHG Protocol is intended to report Scope 3, Category 15 cash and investments, but there has been insufficient data to make sensible disclosures until now. The more open companies are about direct and indirect climate emissions in financial products and requests for proposals for cash management and financial services, the more pressure it will put on financial institutions to properly account for their financed emissions and work to reduce them.



# What People Are Saying

"We are not going to build the new, clean, inclusive and thriving economy on which our planet and humanity depend, in the time we have, unless the global banking sector moves with much greater speed and scale. One of the biggest levers companies have to help accelerate this shift is the cash balances they are holding. If your company is really serious about your climate targets and about decarbonizing your value chain, decarbonizing your corporate cash and investments is one of the most effective tools you have."

—Paul Polman

Author of *Net Positive: How Courageous Companies Thrive by Giving More than They Take* and former CEO, Unilever

"We are in a climate emergency and that requires every organization to accelerate to net zero as fast as possible. At Salesforce, we believe that the future of transformative climate action will come from collaboration between customers and suppliers. That's why we welcome this new analysis from CSLN, TOPO, and BankFWD so companies like Salesforce can deepen collaboration with banking sector leaders to accelerate their climate ambition and drive meaningful change at scale."

—Patrick Flynn

Senior Vice President and Global Head of Sustainability, Salesforce

"CDP believes the interplay between finance and business is key to driving environmental action. This report reinforces the reality that the financial economy exists only because of surplus cash generated in the real economy. We hope this research catalyzes meaningful engagement between corporates and their banks, stressing the need for banks to disclose their Scope 3 financed emissions and to publish science based policies in phasing out fossil fuel finance."

—Nicolette Bartlett

Chief Impact Officer, CDP

"This research is really new. It clearly shows that cash positions of large corporates have huge climate impact as well as their banks, which lend and invest into the economy and generate financed emissions. More and more banks are now publishing their financed emissions, using PCAF's Global GHG Accounting and Reporting Standard, reviewed and approved by the GHG Protocol."

—Giel Linthorst

Executive Director, Partnership for Carbon Accounting Financials



“It is impossible to overstate just how important this analysis is: this team is uncovering the largest remaining source of huge and hidden carbon emissions in our economy. It's the equivalent of the moment when physical scientists figured out the last big new source of carbon—the melting tundra. But in this case, armed with these figures, we can swiftly do something about it.”

**—Bill McKibben**

Founder of Third Act and 350.org, Schumann Distinguished Scholar at Middlebury College

“With the interest rates that are record low and inflation on the horizon, the dilemma of corporates is what to do with their excess liquidity? At the same time, the world is currently satisfying only partly the core human needs of its population with value-chains that are exposed to climate physical and transition risks and do not fit within the planetary boundaries. This gives an unprecedented opportunity to invest in the development and deployment of climate and sustainability solutions that will contribute in building new value-chains that are regenerative rather than extractive, restorative rather than destructive, and empowering rather than alienating, able to repurpose the skills, competences and assets of the disrupted value-chains and to provide both flourishing life to 10 billion consumers by 2050, and inspirational activities to its workers. This is the positive change the report is promoting.”

**—Massamba Thioye**

Project Executive, UNFCCC Global Innovation Hub

“This report provides a valuable insight representing yet another key intervention point for CFOs in driving sustainability through their financial supply chain.”

**—Jessica Fries**

Executive Chair, Accounting for Sustainability

“The Race to Zero relies on mobilising action from every available angle to galvanise alignment. Harnessing the latent agency of companies to transform the sustainability of financial supply chains could play a pivotal role in decarbonising finance flows and redirecting long term investments in the real economy. By making the connections between money management and climate impact more visible, the Carbon Bankroll offers businesses a fresh perspective on the potential that their cash, investments and other financial relationships have in shaping the net-zero future of finance.”

**—Nigel Topping**

UN High Level Climate Action Champion, COP26

Until now, the role that corporate banking practices play in fueling the climate crisis has been murky at best. This landmark report shines a floodlight. The research and findings contained in this report offer companies a new, massively important opportunity to help shift our financial system away from fossil fuels and deforestation toward climate solutions on a global scale. Companies that are serious about their climate pledges will welcome this breakthrough, and move urgently toward tapping this lever for systemic change.

**—Jamie Beck Alexander**

Director, Drawdown Labs at Project Drawdown



# Appendix: Methodology

## Process Overview

To ensure the accuracy of the report's financial footprint calculations, CSLN, TOPO, and BankFWD partnered with leading climate solutions provider South Pole. South Pole obtained the data inputs that are the foundation of these calculations via a three-stage process:

1. To provide assurance over the GHG footprints for every company evaluated, South Pole reviewed each company's latest environmental or sustainability report as of April 30, 2022, to acquire its self-reported emissions (Scope 1, 2, and 3).
2. To ensure the accuracy of the cash and investments for each company analyzed, South Pole reviewed the reporting in every company's 2021 Consolidated Balance Sheet and other sections included in its 10-K form. The figures provided as "cash and investments" are the total sum of each company's cash, cash equivalents, marketable securities, short-term investments, and long-term investments. South Pole then broke down each company's portfolio of financial holdings by asset class. Not included in these calculations are private equity, strategic investments, and restricted cash, which some companies include in their 10-Ks in the aforementioned categories.
3. South Pole then proceeded to calculate the emissions arising from the deployment of the cash and investments held by the companies included in this assessment. Given that these companies do not disclose banking arrangements and major US banks are only starting to report their emissions, South Pole used established asset-class carbon intensity figures per unit of investment to determine the emissions generated by each company's wide-ranging assets. By multiplying the amount of money in each asset category with the corresponding carbon intensity figure and then totaling these emissions, South Pole was able to develop a tailored financial footprint for every company, based on each company's public reporting.



While South Pole applied a rigorous methodological approach, it is important to note that due to data limitations, the reported financial footprint for each company is an extrapolation based on averages. Therefore, while the figures listed in this report are specific, they should be viewed as an indicative estimation rather than a precise accounting. Importantly, these calculations should also be viewed as a conservative estimation for a variety of reasons that are explained in the “Limitations and Assumptions” section below.

## How South Pole Employed Carbon Intensity Figures

The carbon intensity figures used in the report’s data analysis are sourced from recent analyses conducted by industry leaders across the climate finance accounting space. One of the report’s primary source materials is the *Wall Street’s Carbon Bubble: The Global Emissions of the US Financial Sector* (hereafter referred to as the “US report”),<sup>30</sup> which the Center for American Progress and Sierra Club published in December 2021 and which features research South Pole conducted.

The US report provides estimates of the absolute emissions financed by banks and asset managers, as well as the carbon intensity per asset class and institution type, to provide an indication of the Scope 1 and Scope 2 emissions financed by an important subset of the US financial sector. All figures are based on publicly available reporting.

The US report’s investigation of the US banks and asset managers has followed the same methodology used for the calculation of the GHG intensity of the UK’s lending and investment portfolios highlighted in *The Big Smoke: The Global Emissions of the UK Financial Sector*.<sup>31</sup> The sample was composed of eight US-incorporated banks based on the list of institutions outlined in the Large Institution Supervision Coordinating Committee supervisory program and the 10 largest asset managers in terms of the value of assets under management (AUM) in 2020.



The US report's findings suggest that the average carbon intensity per unit of cash deployed by the US financial sector can be estimated to be **86.83 ktCO<sub>2</sub>e/billion USD**. That estimation is the average of the carbon intensity of the bank's credit exposure and asset managers' equity and fixed income portfolios analyzed in the US report. The carbon intensity of the banks' commercial credit exposure evaluated in the US report is estimated to be **126.03 ktCO<sub>2</sub>e/billion USD**. The US report's research also generated a carbon intensity figure for mortgage-backed securities and a wide-range of assets contained within the equity and fixed income portfolios evaluated in the US report. All figures in the report are indicative and subject to the limitations outlined in the "Limitation and Assumptions" section below.

## Carbon Intensity of Sovereign Debt

Many companies hold sovereign debt with varying liquidity and maturity rates as part of their cash and investments. Sovereign debt presents a particular methodological challenge because no consensus exists regarding the methodology that should be applied when estimating the emissions that sovereign debt finances. Two main questions arise when looking at this process.

The first question relates to the share of a country's emissions financed by the bondholder. When comparing the GHG emissions of sovereign bonds with the GHG emissions of other asset classes, the choice of denominator for calculating that share of ownership is important. For comparing carbon in mixed funds that include sovereigns and other asset classes, denominators of different asset classes should be as similar as possible. In an ideal scenario, the government debt plus equity would be used as a denominator, describing the government balance. That approach appears to be quite challenging in sovereign investments because the concept of enterprise value is not directly applicable (government equity is rarely valued). The closest proxy available is a government's outstanding debt.



The second question concerns the type of GHG accounting used to determine the emissions associated with government debt. When considering the government as a regulator that can impact the carbon intensity across its entire economy, three options arise:

- production-based accounting, which essentially measures the emissions generated within a country's borders;
- consumption-based accounting, which focuses on and aggregates the carbon footprints of all the products consumed within the country's borders, effectively excluding emissions related to exported goods;
- attribution-based accounting, which attributes to a country all emissions upon which it has direct or indirect control by summing all domestic, exported, and imported emissions.

For this report, South Pole recommended the use of an attribution-based accounting methodology, which apportions the emissions of the country to its government. This approach creates a more holistic understanding of emissions and relies on the closest proxy for the value of government equity—general gross debt of a government. This data is readily available and updated in a timely manner that allows for the calculation of two “ownership”-driven metrics:

- carbon footprint per unit of gross domestic product (GDP; output method);
- carbon footprint per unit of investment (AUM method).

Using this methodology, S&P Global calculated an emissions intensity of 104 ktCO<sub>2</sub>/billion USD for US sovereign bonds. While this methodology does have some limitations, South Pole recommended the use of the 104 figure as the carbon intensity for US sovereign debt, given its methodological strength and the fact that it aligns with the prevailing understanding that sovereign debt has a significant impact on global emissions.<sup>32</sup>



South Pole recommended the use of a simplified assumption that models all foreign sovereign bonds on the basis of US sovereign bonds. This approach is conservative in nature given that the carbon intensity figure applied does not factor in the carbon footprint per unit of GDP measured using purchasing power parities (PPP).

Increasingly in the world of carbon accounting, entities such as the IEA are recommending the use of correlating GDP measured in PPP terms. This transition is occurring because GDP measured in PPP terms is more accurate than GDP measured in market exchange rates terms (Xr) because it more accurately compares the volume of activity and production of one country to another. However, PPP calculations often prove to generate higher stated emission intensity figures, such as in the case with India's economy, which is four times larger when measured in PPP terms than when using Xr.<sup>33</sup>

## Limitations and Assumptions

The calculations made in this research are subject to the limitations and assumptions outlined in detail in the US report. The limitations of the US report focus mainly on the following:

- limited availability of public information, specifically financial disclosures
- the boundaries of the carbon accounting of the assessment
- the lack of harmonized reporting frameworks for financial activities and institutions
- the methodological limitations of the Global GHG Accounting and Reporting Standard for the Financial Industry and the use of averaged macroeconomic data to estimate the carbon footprint of several of the underlying assets included in the exercise



Building on the US report's analysis, this research encountered its own limitations as well. For most firms, the reporting they have done on the composition of their cash and investments is quite limited, and many of the asset classes contained within them (e.g., money market instruments) are still not covered by standard carbon accounting methods like PCAF. Because of that limitation, an investigation relying on public information and current standards cannot perform a granular assessment of the emissions financed by these holdings.

South Pole's work introduces assumptions to illustrate the potential climate impact of cash and investments held by the evaluated corporations. For example, it is assumed that cash and cash equivalents represent liquid assets that are deposited at large banks, which the institutions themselves then redeploy for their lending activities and therefore follow a similar distribution to that of the bank's credit exposure.

Using public information, it is not possible to guarantee that funds deposited in a bank are reinvested following the same sectoral and geographic distribution that the bank's credit portfolio has. Those funds could be potentially allocated to any combination of loans across different industries and geographies globally, leading to unique carbon emission profiles.

Additionally, the calculations in this report assume that each dollar reported as cash is deposited and reinvested in its entirety. Banks do not necessarily redeploy the entirety of that capital because they need to meet a considerable amount of liquidity requirements to ensure their safe operation. The proportion of the deposits that is used will depend on the banks that receive them, and their final allocation may vary accordingly. Therefore, this assumption is taken as the best alternative available for estimating cash's climate impact.



Similar assumptions are made in the calculation of the emissions associated with cash equivalents, marketable securities, and investments. In this case, some corporations' current reporting provides little information about the assets contained within these categories in their balance sheets. Even when there is specificity about the category of assets, the information is not granular enough to glean any additional insight about the assets' carbon footprint. As a result, South Pole applied a uniform carbon intensity for each asset class as a representative figure.

Last, as detailed previously, significant limitations also exist regarding the emissions generated by domestic and foreign sovereign debt. Considering that many companies have significant assets held in sovereign debt, developing more accurate accounting mechanisms for the wide range of sovereign debt securities is essential.

## Indicative Estimates of Financial Footprints

Due to the limitations and assumptions listed above, the financial footprint data in this report constitutes an indicative estimation of the actual impact corporate cash and investments have on global carbon emissions—estimates that are likely a substantial under accounting of the climate impact of corporate cash and investments. Several factors illuminate why corporate financial footprints are likely much larger than the reported figures:

- The carbon intensity figures for the asset classes analyzed in this report are conservative estimates that constitute an indicative underestimation of the actual emissions banks generate through their financial services.
- A comprehensive analysis of a company's financial footprint would account for the totality of its financial practices, including components like pension plans, equity investments, and insurance, which would generate a larger financial footprint calculation than simply cash and investments.



Of particular importance is the conservative nature of the carbon intensity figures, which in many cases might be substantially larger than the figures employed in South Pole's calculations. The reason for this discrepancy is that the US report's carbon intensity calculations were developed using the guidelines established by PCAF, which despite being the most established carbon accounting methodology for financed emissions, still has sizable gaps for banks and some instruments handled by asset managers. Two particular gaps help explain how the report's carbon intensity figures are an indicative underestimation:

- The US report's carbon intensity calculations do not incorporate Scope 3 emissions of any loan or investment, which represent a significant source of emissions. This omission is especially notable for loans and investments in industries where Scope 3 dominates the overall carbon footprint, such as the integrated oil and gas industry, which according to the financial firm MSCI has Scope 3 emissions that are more than **six times the level of its Scope 1 and Scope 2 emissions**.<sup>34</sup> This exclusion substantially limits the absolute emissions associated with these industries, which accordingly reduces the carbon intensity of the asset categories that South Pole analyzed for this report.
- The US report's carbon intensity estimates only included emissions arising from direct global lending and investments by the global financial institutions analyzed. Notably, the emissions generated by mergers and acquisitions and securities underwriting were not included, which is critical because banks are increasingly choosing underwriting of securities as their mechanism of choice for supporting high-carbon industries. In fact, RAN's *Banking on Climate Chaos* report found that 65% of the fossil fuel financing it identified in 2020 was provided through securities underwriting.<sup>35</sup>



It is also worth noting that according to the latest information available, the carbon intensity of the US GDP is estimated to be 190 ktCO<sub>2</sub>e/billion USD.<sup>36</sup> While the financial sector does not directly participate in all sectors of the economy and its financing activities can be expected to have a smaller carbon intensity, that figure shows that South Pole's estimate may be a conservative one.

As a result of these conservative carbon intensity figures and the notable exclusions from the accounting methodologies that South Pole used, the financial footprint figures presented in this report, while substantial, are in reality deceptively small. Until these data limitations are addressed and the exclusions are incorporated into the leading carbon accounting methodologies, companies will not be able to accurately account for the full extent of their financial footprint.



# Methodology

# Conclusion

The methodologies employed to develop the baseline figures for the financed emissions of US banks, corporate cash, and investments provide a high degree of confidence in the validity of the underlying data as a conservative estimation.

That said, the need to employ these methodologies underscores an important fact: Reporting of emissions across the financial sector is deficient and fails to accurately account for the Scope 1, 2, and 3 emissions generated by all their lending, underwriting, and investing activities. As a result of these limitations, companies cannot yet fully account for the climate impact of their cash and investments.

Therefore, as companies begin the process of accounting for and mitigating the climate impact of their cash, it will be essential for banks to improve the transparency and accuracy of their emissions reporting.



# Endnotes

## Organizational Overview

**The Climate Safe Lending Network** (CSLN) is an international multi-stakeholder collaborative dedicated to accelerating the decarbonization of the banking sector to secure a climate-safe world. The Network brings together senior leaders and changemakers from across banks, NGOs, academics, investors, businesses, and policy experts to share insights and collectively explore how to play their optimum role in accelerating change. The Network runs a fellowship program for climate intrapreneurs from banks across the world and a policy initiative focused on regulatory and policy intervention, and brings together diverse perspectives on climate strategies relevant for banks into publications such as *The Good Transition Plan* (launched at COP26).

**The Outdoor Policy Outfit** (TOPO) is a “think and do” tank that creates and implements groundbreaking solutions to the systemic problems driving the environmental crisis. As a leader in the responsible finance space, TOPO specializes in building levers that harness the untapped power of consumers to transform the financial sector into an engine for environmental and social progress. From spearheading the Carbon Bankroll Initiative to developing a first-of-its-kind global banking certification program, TOPO’s team of problem solvers excel at building audacious solutions that meet the scale, complexity, and gravity of the systemic challenges we face.

\*TOPO is a fiscally sponsored project of Social Good Fund, a California nonprofit corporation and registered 501(c)(3) organization.

**BankFWD** is a sustainable finance initiative founded by the members of the Rockefeller family dedicated to accelerating the transition to a just, zero-carbon economy by influencing banks to align their business strategies with the 1.5°C target of the Paris Climate Agreement. BankFWD works to accomplish that goal by building a network of individuals and organizations united in the belief that by using their collective wealth and public standing, they can persuade major banks to lead on climate by phasing out financing for fossil fuels.



# About the Authors

## James Vaccaro

Executive Director, Climate Safe Lending Network

James is a strategist and systems thinker with 25 years of senior management experience in sustainable finance. He currently acts as the executive director of the Climate Safe Lending Network, a multistakeholder collaboration to accelerate the climate alignment of the banking sector. James served on the Global Steering Committee for the UNEP Finance Initiative, was one of the founding developers of the UN Principles for Responsible Banking, and now sits on the advisory panel for GFANZ (the Glasgow Finance Alliance for Net Zero) and the UK's Transition Plan Taskforce.

James runs the consultancy practice, RePattern, supporting businesses and their stakeholders in effective ecosystem innovation where he currently advises a number of organizations developing Nature-based Solutions (NbS) including a NbS Accelerator for WWF. He was previously group director of strategy for Triodos Bank and managed its UK investment business. James has been a non-executive director for a broad range of environmental and social businesses.

James is a senior associate of the University of Cambridge Institute for Sustainable Leadership, senior fellow of the Finance Innovation Lab, a director of Regen, an advisor for Cambridge-based venture builder Carbon13, and a strategy advisor for the Club of Rome's finance impact hub.

## Paul Moinester

Executive Director and Founder, The Outdoor Policy Outfit

A proven systems thinker and reformer, Paul specializes in creating and implementing groundbreaking solutions to the systemic problems driving the environmental crisis. After more than a decade championing environmental progress as a US senior congressional aide and campaign strategy consultant, Paul co-founded The Outdoor Policy Outfit (TOPO), an innovation hub that specializes in developing breakthrough solutions designed for seismic impact. As TOPO's executive director, Paul has established TOPO as a leader in the responsible finance space and is spearheading numerous finance initiatives, including *The Carbon Bankroll* report and related initiatives and a first-of-its-kind global banking certification program that evaluates and rates financial firms' social and environmental impact.



# Special Thanks

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## Sponsoring Partners

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Green America

One Earth

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The Sunrise Project



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