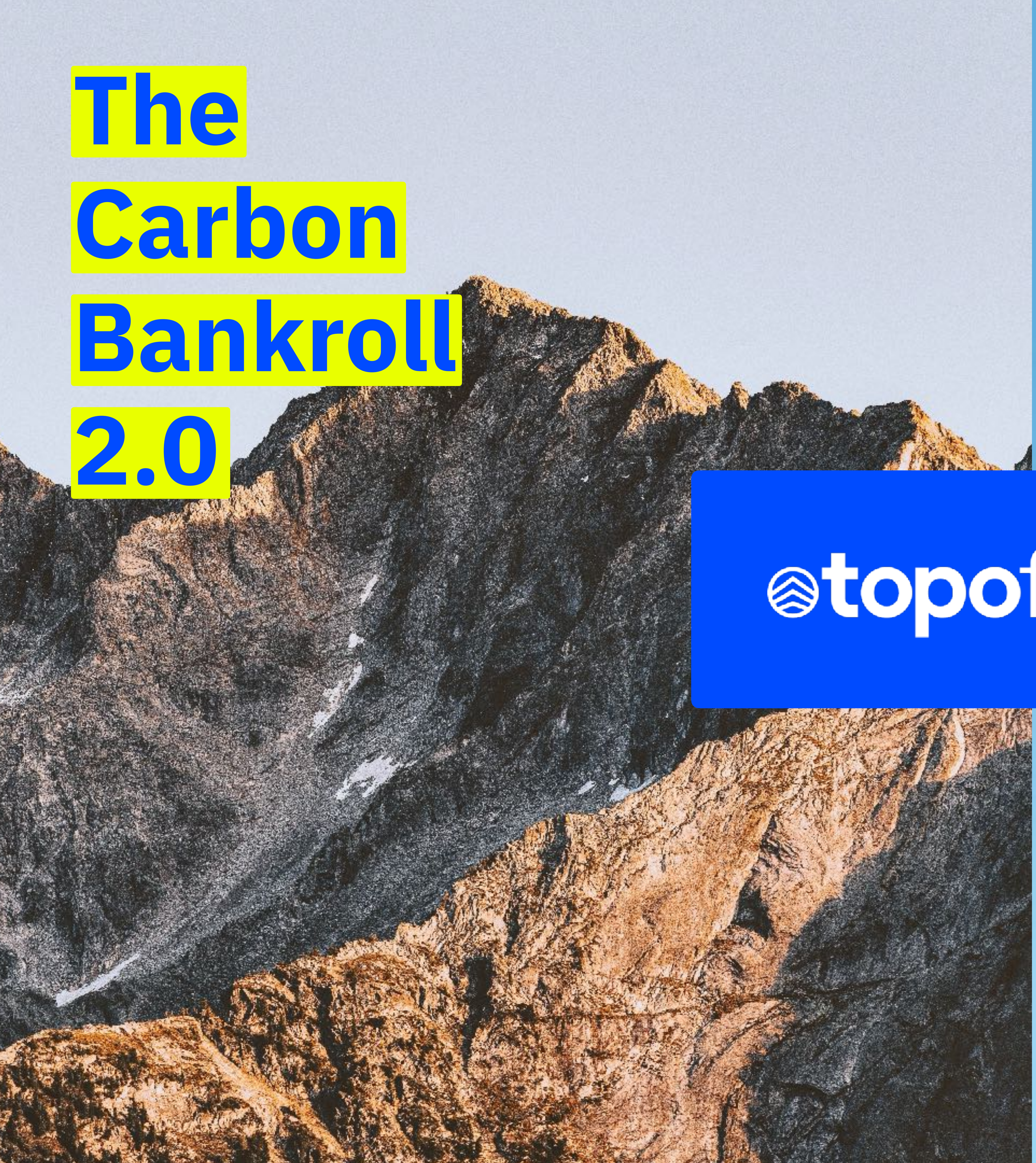
The Carbon Bankroll 2.0

From Awareness to **Action**



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The Carbon Bankroll 2.0: **From Awareness to Action**

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Developed by: Topo Finance

Topo Finance is a nonprofit organization dedicated to transforming the financial sector into a force for creating a more just, regenerative world. We work to actualize this future by conducting pioneering research and developing pragmatic solutions that enable all organizations and individuals to maximize the positive impact of their finances.*

We are here to help your organization leverage this new climate power, so please let us know how we can assist.

In Partnership With:

EXPONENTIAL ROADMAP INITIATIVE
World Business Council for Sustainable Development
FUTERRA
Certified B Corporation pure STRATEGIES
BankFWD
Climate Safe Lending Network

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Disclaimer

Nothing in this report is intended to serve as financial advice or as an endorsement of specific financial institutions or products. This report is informative and presents a high-level assessment of the estimated climate impact of large corporations' investments and cash positions held with financial institutions. All the information in this report is written in general terms using available public information. The figures are therefore indicative by nature. The description and diagrams related to lending and banking activities are illustrative and simplified, and do not cover all aspects, such as regulatory requirements. Cash management is referred to in general terms, meaning customer cash and cash equivalent deposits at banks. The methods used in this report are outlined in the "Methodology" section. It covers assumptions and highlights the limitations related to this type of research.

Preface

Patrick Flynn

Corporate Climate Action Lead at Topo Finance

Former Global Head of Sustainability at Salesforce

During my time leading sustainability for Salesforce, our objective was to leverage the full power of the company and pull every lever to meet the climate emergency. However, in 2021, I learned that I had overlooked the giant lever of financed emissions, which was hiding just outside our vision. I discovered this when I first met with Topo Finance and started learning facts like:

Fact 1:

The emissions generated by many companies' cash and investments are likely their largest source of emissions.*

Fact 2:

Our banking partners were lending billions of dollars of our money to the industries most responsible for driving climate change.

It's a pretty remarkable oversight considering we had analyzed our supply chain emissions every which way, targeted our suppliers with contractual obligations for climate action, and even built tools to help ourselves and customers calculate supply chain emissions.

However, now that Topo Finance has shined a spotlight on these emissions and illuminated the power of this overlooked climate lever, things are rapidly changing. Increasingly, companies are working with their financial service partners to decarbonize their banking and investing, which has me excited about the change ahead.

It's inspiring to see how fast service providers can move once they start hearing a clear and consistent demand from their customers. I have watched it play out many times firsthand.

And knowing what I know now, I believe companies' financial firms are their most important supply chain partner for climate action and provide the greatest opportunity to catalyze climate progress at a speed and scale that matches the urgency of the climate crisis.

That's why I am excited to now lead Topo Finance's efforts to help companies transform their finances into a powerful lever for climate action. Central to this work are **six guiding principles and strategies I want to share that provide helpful context to sustainability teams as you read this report:**

→

* It is important to remember that banking practices indirectly contribute to emissions generation. Rather than companies controlling these emissions directly, these emissions derive from financial institutions investing and lending their money to other activities that generate emissions.

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Preface

Patrick Flynn
Corporate Climate Action Lead at Topo Finance

Former Global Head of Sustainability at Salesforce

You have a lot on your plate, but this isn't just any "new" strategy:
Your finances are your most catalytic climate lever and the best way to decarbonize industries and markets at scale, which will create tailwinds for all your suppliers and customers.

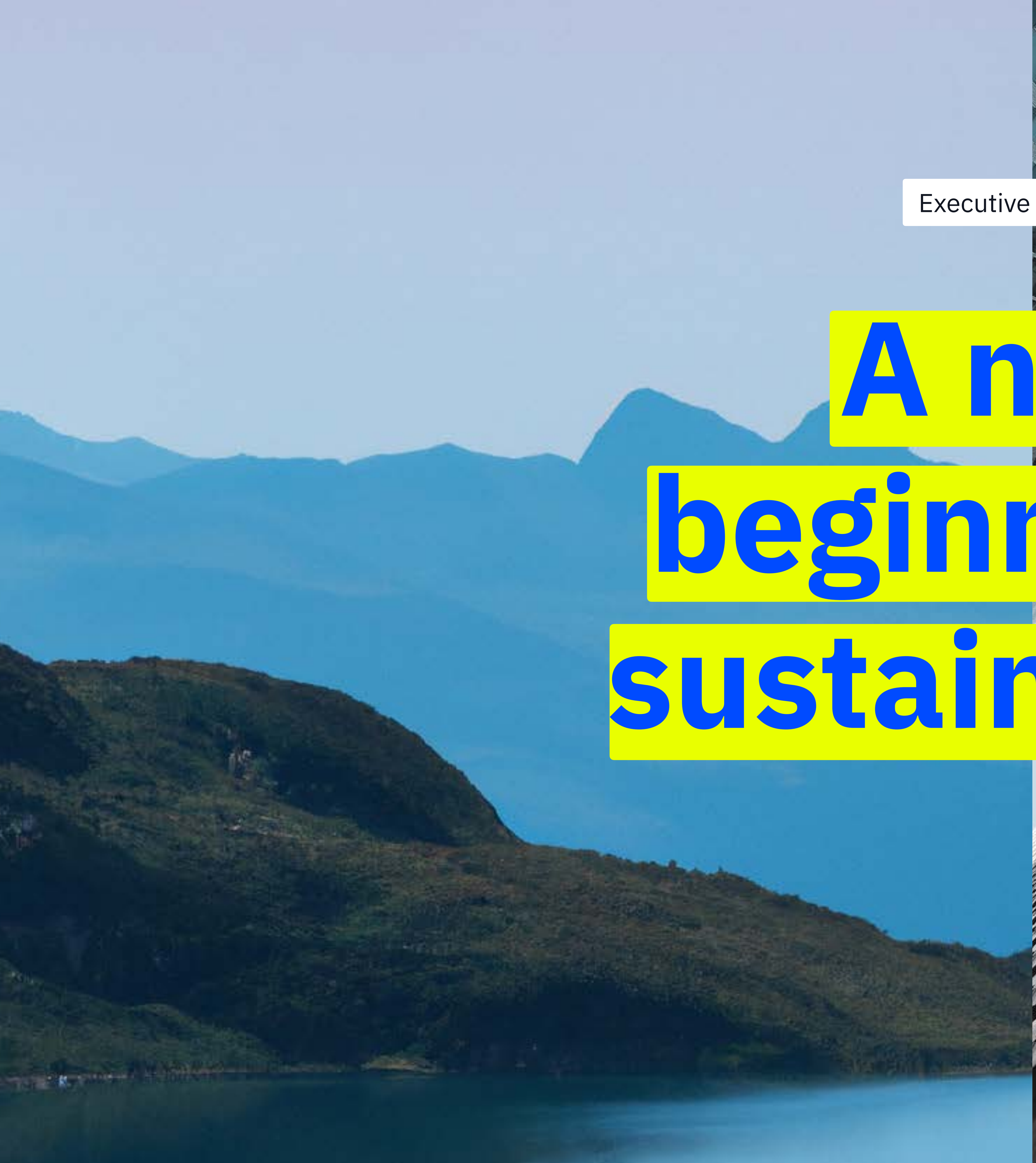
The first step is a mindset change:
Think of a bank like any other supplier and treasury like an extension of procurement. There are a lot of emissions at play here for your full value chain. Your leadership can create unprecedented ripple effects.

Rally your team:
Make sure your treasury team members know they may be the greatest climate heroes you have in your company. Reassure them that this isn't about lessening any of their important requirements. It's about ADDING a sustainability lens.

You don't need to have all the answers:
Across your supply chain, your suppliers are best equipped to know the solutions. The same goes here, so rest easy and work with your treasury team and financial partners to find the best solutions for your company.

Simply expressing demand is a huge lever:
Talk to your banks. Tell them what you want. They want your business and won't meet your climate goals unless they know what you want. Just demonstrating this demand is a big win.

Shift whatever you can:
Explore taking a percentage of cash and deploying it impactfully. The first step may feel small, but every little bit matters and helps build a flywheel of momentum, especially if you share your lessons learned and successes.



Executive Overview

A new beginning in sustainability

The spark that ignites a world:

In 2021, Topo Finance started talking to some of the world's largest companies about how their corporate cash and investments enable substantial emissions. Through this process, we discovered <u>three surprising and consistent truths:</u>

1. **Companies didn't know how big these emissions are:**
   These climate-leading companies did not know that their cash and investments, more often than not, represent their single largest source of indirect emissions.

2. **They weren't working to address them:**
   Despite substantial efforts to mitigate emissions across all their other supply chains, most companies were not addressing the emissions enabled by their "financial supply chain"—essential corporate financial activities including cash management, investing, and pensions.

3. **They didn't have the tools they needed:**
   Companies did not have the data, tools, and strategies they need to analyze and decarbonize their financial management.

Why?

If this is such a large source of emissions, then why has it been so overlooked?

The reason underpinning this long-standing oversight is simple: **We have historically treated our banking and investing as a climate-neutral activity.**

As a result, the climate impact of financial management has existed beneath the radar for all consumers—from companies to universities to foundations to individuals. Accordingly, at Topo Finance, we do not fault anyone for not yet applying a climate lens to their financial management.

Instead, we seek to increase our collective understanding and build solutions that enable action.

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Companies are now embracing this new climate power:

Despite being historically overlooked, a growing wave of companies are now making their financial management a cornerstone of their sustainability and equity work.

In fact, since we published the first *The Carbon Bankroll* report[1] in 2022, along with our partners Climate Safe Lending Network and BankFWD, many prominent companies have started moving from **awareness to action:**

ATLASSIAN

Atlassian is creating a better ROI for the company and the climate by cleaning up its financial supply chain. For example, it no longer uses investment vehicles involving companies deeply tied to fossil fuel extraction and development.

patagonia

Patagonia has spent the last five years reorganizing its banking structure and cash management strategy, all with a focus on eliminating its financed emissions and pushing its banks to align with global climate goals.

Seventh Generation

Seventh Generation has quantified its financial footprint, developed a multipart plan to work with its parent company to reduce its financed emissions, and built a coalition of like-minded businesses to tackle these hidden emissions.

ATLASSIAN

Jessica Hyman
Chief Sustainability Officer

"*Just when you think you've got all your sustainability focus areas humming along nicely, you read* The Carbon Bankroll *report. That was our team last year when we learned how many tech companies' financial assets are contributing to emissions that exceed the company's scope 1-3 emissions combined. Talk about a wake-up call.*

This realization led Atlassian to examine our own financial supply chain, and we collaborated with the finance team to ensure we were taking a long-term view. For example, we no longer use investment vehicles involving companies that get more than 10% of revenue from fossil fuel extraction or development. We're aiming for better ROI for the company ***and*** *the climate.*

This is just the start, and there's more we can do. Here's the best part, though: What began as curiosity has turned into another avenue for building a more sustainable business. Sometimes subtle really can be thrilling."

patagonia

Charlie Bischoff
Treasury Director

"Banks are at the center of every global transaction, including in the fossil fuel industry. As a client to some of the world's largest financial institutions, Patagonia sees an opportunity to leverage its unique position and hold our financial partners accountable to a path toward net-zero financed emissions.

We've spent the last five years reorganizing our banking structure and cash management strategy while continuously engaging with our banks, all with a focus on eliminating the financed emissions that result from Patagonia's cash and pushing our banks to align with global climate goals just like we do with our manufacturing supply chain partners.

A challenge we face in doing this, however, is transparency around the impact of each bank. The Carbon Bankroll *report and Topo Finance's work help solve this problem and enable us to make informed decisions around which banks to work with and how we engage with them."*

Seventh GENERATION

Ashley Orgain
Chief Impact Officer

"I thought Seventh Generation was doing everything we possibly could to act on climate. I was wrong. I had overlooked one of our greatest climate powers—our finances.

With Topo Finance's help, we have quantified the role cash and investments have on our carbon footprint. The analysis and the insights have transformed our strategy and set Seventh Generation on a course of action.

We've published our findings, and by utilizing guidance from *The Carbon Bankroll* report, we have developed a multipart plan to work with our parent company and built a coalition of like-minded businesses to tackle these hidden emissions. Join us!"

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Action

— These examples illustrate the actions necessary to build a better future:

— A future in which it is **standard practice** for companies to integrate their financial management into their core sustainability and social objectives.

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When we published the first *The Carbon Bankroll* report, climate luminary Bill McKibben said we had uncovered **"the largest remaining source of huge and hidden carbon emissions in our economy."**

<u>However, our subsequent research revealed that:</u>

- These hidden emissions are larger and more ubiquitous than we previously believed.
- Companies have even more power to leverage their financial management as a force for climate progress than we thought.

These five critical insights reveal how large and pervasive this problem is, why companies should care, and how much impact they can generate.

Five invaluable insights →

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Five Invaluable Insights

1. The emissions enabled by large financial firms are substantial.

If the largest banks and asset managers in the U.S. were a country, they would be the **third-largest** emitting country in the world, behind China and the U.S.

2. Companies are unknowingly letting their cash fund climate change.

By working with these banks, companies are unknowingly and passively lending up to **20-30%** of their cash to the industries most responsible for fueling climate change.*

3. The scale of corporate cash and its emissions is staggering.

Nonfinancial companies in the U.S. hold about **$7 trillion** in cash and investments, and the total indirect emissions enabled by this money represents more than an estimated 20% of total gross emissions in the U.S

4. The largest companies have the greatest impact and power.

Just 25 multinational companies hold more than **$1 trillion** in cash and investments, and their annual estimated financed emissions cumulatively represent more emissions than the direct emissions generated by all coal mining, iron/steel production, and concrete production in the U.S. every year.

5. The financial system is undermining companies' climate work.

For many of the world's most climate-conscious companies, including Apple, Google, and Microsoft, the emissions stemming from their cash and investments likely either represent **their largest source** of emissions or are larger than all their other emissions combined.

* This analysis assumes that all activities in the included sectors are carbon intensive, despite the fact that, for instance, the energy sector includes renewable-energy activities.

Here's why these findings matter and the impact they can unlock:

A. They illuminate the **central role that the largest financial firms play in enabling emissions throughout the global economy** and underscore why it is essential that they aggressively reduce the emissions stemming from their lending and investing.

B. They demonstrate **corporate cash's immense power as a lever for climate action*** and how collective corporate action could facilitate massive emissions reductions throughout the economy.

C. They underscore how the carbon-intensive financial system **is passively undermining companies' climate goals** as well as their tireless work and major investments in emissions reduction.

* Throughout the report, the terms "corporate cash" and "cash holdings" are used as shorthand for corporate cash and investments.

In this document:
From awareness to action

Understanding this challenge is merely the first step. That's why the report's "Guidance" section provides tools and a high-level overview that will help companies move from awareness to action.

Just remember, companies exercise agency over their supply chains on a daily basis, with multiple objectives. **And companies' financial supply chains are no different.**

Treasurers regularly engage with their financial partners to conduct due diligence and ensure their money is safely deposited with a secure and reliable financial institution.

This work is just a different frame on this fundamental engagement practice.

The only difference is the objective: creating a virtuous circle in which companies and their financial firms work collaboratively to decarbonize their finances and shift investments away from climate drivers and into climate solutions.

We hope this report's resources prove to be helpful. If you need additional help, please know that Topo Finance is here as a resource and can help ensure your engagement efforts with your financial firms prove to be fruitful.

Please contact us at contact@carbonbankroll.com if you would like assistance transforming your financial management into a powerful lever for climate progress.

A note on **equity, justice, and financial supply chains:**

Historically, the financial sector has, in many cases, negatively impacted people of color and marginalized communities.

This harm has manifested in many forms—perpetuating systemic inequities, limiting equitable participation in the accumulation of wealth, and underwriting much of the planet's environmental destruction, which disproportionately impacts marginalized communities.

This unjust system has persisted because it has operated invisibly and has been difficult for consumers to understand its social and environmental injustices.

While this report largely focuses on the emissions that derive from financial firms and corporate treasury operations, **it is important for companies to understand that their financial management also has major social and justice implications.**

Moreover, it is essential that companies understand there is much they can do to ensure their day-to-day financial management is aligned with their companies' social values and that they can leverage this supply chain to create a more equitable and just world.

Evaluating the social impact of financial management can be more challenging than assessing climate impact due to data limitations and lack of agreed-upon, clearly defined social goals, but the Topo Finance team is building new tools that will better enable us to do so.

As a result, in the coming months, we plan to provide companies with a robust suite of tools that will enable them to improve the social equity performance of their finances and drive significant new investment into historically marginalized communities.

Please visit www.topofinance.org/equity-guide to learn about how you can effectively engage with your banks to ensure your finances are aligned with your equity objectives.

A note on **our research approach:**

To calculate the emissions that a company's finances enable, we must first know their banks' and asset managers' financed emissions data.* However, the overwhelming majority of financial firms in the U.S. do not yet comprehensively publish these emissions. To overcome this data gap, we partnered with climate solutions data provider South Pole to assess the financed emissions enabled in 2022 by the largest banks and asset managers based in the U.S.^

This analysis used the same base methodology as the *Wall Street's Carbon Bubble: The Global Emissions of the US Financial Sector* report,[2] which the Center for American Progress and Sierra Club published in December 2021. There were nevertheless changes in this report's analysis, as our understanding, external standards, and data have evolved. These changes are explained in the Methodology section.

Our updated and expanded version of this analysis provides estimates of the absolute emissions financed by the following financial firms as well as the carbon intensity per asset class and institution type in 2022.

Creating insights from financial firms' emissions data:

The data generated by this financial firm analysis was then incorporated into an analysis of the financed emissions generated by some of the largest, most climate-responsible companies in the U.S. This analysis used the same methodology that we applied in *The Carbon Bankroll 1.0* report. Additionally, we used elements of this research to draw new comparisons with the U.S. economy and its GHG emissions as reported by the U.S. government.

Banks

- JPMorgan Chase
- Bank of America
- Wells Fargo
- Citigroup
- US Bank
- Truist
- Goldman Sachs
- Morgan Stanley
- PNC
- Capital One
- Citizens Bank
- Key Bank

Asset Managers

- BlackRock
- The Vanguard Group
- Fidelity Investments
- State Street Global Advisors
- Capital Group
- Goldman Sachs Asset Management
- JP Morgan Asset Management
- BNY Mellon Investment Management
- PIMCO
- Morgan Stanley

* The terms emissions and financed emissions are used throughout the report for simplicity and refer to CO_2e.
^ The purpose of this analysis is to provide a representation of the estimated emissions enabled by financial institutions, using a consistent method across institutions. We welcome more accurate and complete disclosure by financial institutions themselves.

Bank's central role in determining our climate future

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A Fork in the Road

To understand this report's findings, it is essential to first understand the financial sector's role in shaping the real economy.

When a company deposits money in a bank, that money does not just sit in a vault and passively accrue interest. Rather, banks lend and invest this money across the economy, funding everything from energy development to construction projects to home mortgages, all of which enable emissions that banks and companies contribute toward.

Through this lending and investing power, banks play an immensely powerful role shaping the world. Broadly speaking, **the world's largest financial firms can go in either one of two directions:**

1. **Maintain the status quo:**
   They could continue channeling trillions of dollars to fossil fuel expansion and other climate drivers, thereby accelerating the global march toward a climate tipping point.

2. **Align with global climate goals:**
   They could rapidly decrease fossil fuel funding, ramp up investments in climate solutions, set absolute emissions reduction targets, and fund a just transition of essential carbon-intensive industries, all of which would drive massive emissions reductions.

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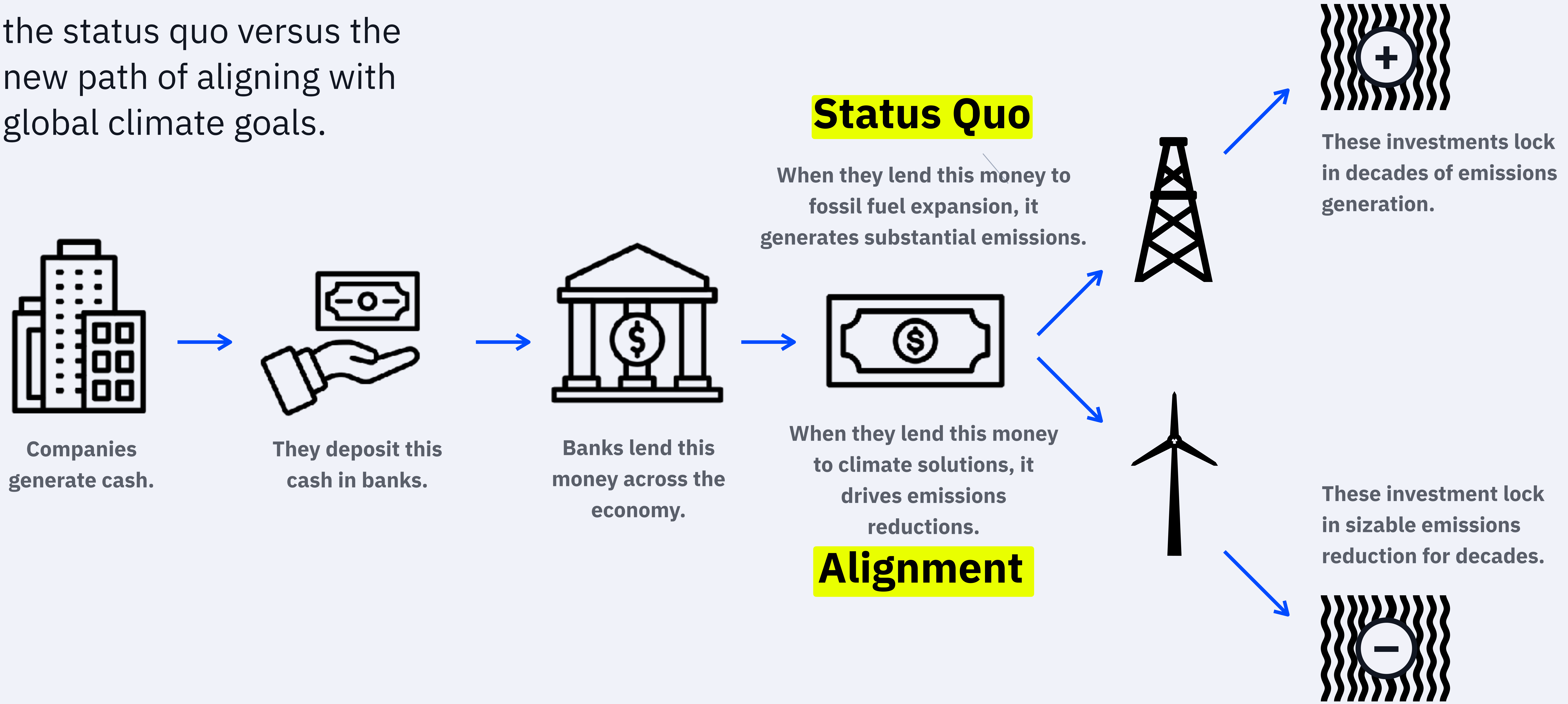
Banks face a critical choice:
the status quo versus the new path of aligning with global climate goals.



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The status quo by the numbers:

$5.5 Trillion

In the seven years after the Paris Agreement was adopted, the world's 60 largest banks provided **$5.5 trillion** in fossil fuel financing.[3]

$22 Trillion

Financial institutions (banks, asset managers, and insurers) in the Group of 20 nations cumulatively have **$22 trillion of exposure** to carbon-intensive industries,* which is equal to about 20% of their total loans and investments.[4]

700x

On average, banks' financed emissions are more than **700 times larger** than their operational emissions, which includes all of the emissions generated by their branches, servers, electronic banking services, and much more.[5]

* This analysis assumes that all activities in the included sectors are carbon intensive, despite the fact that, for instance, the energy sector includes renewable-energy activities.

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We need a holistic approach to decarbonization

Reaching our global net-zero targets requires more than financing an energy transition. It also requires funding a just transition of carbon-intensive sectors like heavy industry, which globally accounts for 24% of emissions.[6]

Financial firms need to work holistically to wind down investments in climate drivers, scale up investments in climate solutions, and decarbonize everything else.

According to the International Energy Agency's *Tracking Clean Energy Progress 2023* report, we are lagging far behind on transitioning heavy industries such as steel, iron, aluminum, and cement production, which are essential for building a greener economy.[7]

Just as they do with energy, financial firms invest in these heavy emitters and can play a powerful role facilitating their decarbonization. Yet, to date, progress on the transition of their customers is slow, and even more levers are required to accelerate the decarbonization of these polluting sectors.

Companies have the power to play a pivotal role accelerating the pace of progress and shaping the financial sector's flow of capital. This power lies in companies' ability to deliver unprecedented financial pressure on banks to align with global climate goals.

In fact, if companies worked to align their banking and investing with their climate goals, they could enable trillions of dollars of new investments in climate solutions.

To catalyze this historic investment in climate solutions, **companies can take two impactful, immediate actions:**

Accountability
Engage with your banks and asset managers and hold them accountable for their climate performance, just as companies do with all other supply chain partners. Encourage them to stop funding fossil fuel expansion, increase investments in green energy, and accelerate a clean and just transition for heavy industry.

Green Products
Work with your financial firms to transition as much of your money as possible into credible green financial products, such as green deposits. If your financial firms are not offering these products, you can work with your financial partners to create them.

Leveraging the power of **green deposits** to drive investment in climate solutions

Currently, climate-conscious companies are only activating a small percentage of their cash and financial influence to realize their climate objectives.

Meanwhile, companies have deposited trillions of dollars in banks, which are financing fossil fuels and other carbon-intensive sectors at an alarming rate. As a result, climate-leading companies are unintentionally undermining their climate values by passively channeling hundreds of billions of dollars into the sectors driving the climate crisis.

Green deposits can be a powerful solution for companies seeking to remedy this problem. These products generally are a fixed-term deposit (or time deposit) for corporate treasurers and investors looking to invest or deposit cash in environmentally friendly projects.

Green deposits specifically emphasize environmental aspects and are earmarked against defined projects and companies on a bank's balance sheet.

Unfortunately, credible green deposits are not offered by most global banks that serve large clients, especially in the U.S. However, banks and asset managers respond to customer demand and in many cases have worked with companies to build tailored green deposits for them. Some examples include Unilever,[8] L'Oreal,[9] and Henkel.[10]

In the near future, Topo Finance will publish a green cash product guide that will provide a framework for structuring high-credibility green deposits and detail how companies can engage with their banks to create them.

In the meantime, if you are interested in learning more about how you can start employing green cash products, please contact us at contact@carbonbankroll.com.

Five invaluable insights

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1. The emissions enabled by large financial firms are substantial.

Insight:

If the largest banks and asset managers in the U.S. were a country, they would be the third-largest emitting country in the world,* behind China and the U.S.[11]

Why this matters:

It illuminates the central role the largest financial firms play in enabling emissions throughout the global economy and underscores why it is essential they aggressively reduce the emissions stemming from their lending and investing practices.

U.S. Financial Firms would be the third-largest emitting country in the world

* The bubbles representing the emissions that each entity generates are not designed to scale.

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1.8b The **12 banks** financed and enabled an estimated 1.8 billion tons of carbon dioxide equivalent (tCO2e),* which would make them the fifth-largest emitting country in the world.

2.9b The **10 asset managers** financed an estimated total of 2.9 billion tCO2e, which would make them the fourth-largest emitting country in the world, ahead of Russia.

4.7b Thus, in 2022, **these 12 banks and 10 asset managers** financed and enabled an estimated 4.7 billion tCO2e.

63,793 vehicles

Looked at another way:

The average carbon intensity per unit of cash deployed by the big 6 Wall Street banks was 293.5 ktCO2e/billion USD, meaning for every $1 billion in cash a bank deploys, **it generates comparable emissions to 63,793 gas-powered vehicles' annual emissions.**[12]

To ensure comparability in the analysis, all financial institutions have been treated using the same calculation methods. As a result, the substantial year-to-year increase is due to several factors: mainly, the update of emissions factors used for carbon calculations, an updated methodology for U.S. Sovereigns in line with the latest PCAF guidance, and other methodological updates.

Further context:

For years, climate finance experts have known that the U.S. financial sector's lending and investing was deeply carbon-intensive. However, the scale of the emissions enabled by the nation's largest financial firms remained a mystery until the *Wall Street's Carbon Bubble: The Global Emissions of the US Financial Sector* report was published in December 2021.

The report illuminates that in 2020, the 8 banks and 10 asset managers analyzed in this study financed at least an estimated 2 billion tCO2e.[13]

We recreated an expanded version of this study that assessed the indicative financed emissions generated in 2022 by 12 of the largest banks based in the U.S. and the same 10 asset managers (listed on page 19).

The study reveals that these financial firms' absolute financed emissions and their corresponding carbon intensity are far larger than previously reported.

In 2020:

The 8 banks (big 6 Wall Street banks plus BNY Mellon & State Street) financed and enabled an estimated **668 million tCO2e.**

The 10 asset managers financed an estimated total of **1.3 billion tCO2e.**

The average carbon intensity per unit of cash deployed by the big 6 Wall Street banks was **150 ktCO2e/billion USD.**

In 2022:

The 12 banks analyzed, financed and enabled an estimated **1.8 billion tCO2e.**

These same 10 asset managers financed an estimated total of **2.9 billion tCO2e.**

The average carbon intensity per unit of cash deployed by the big 6 Wall Street banks was **293.5 ktCO2e/billion USD.**

* All use of "tons" or "t" refer to metric tons.

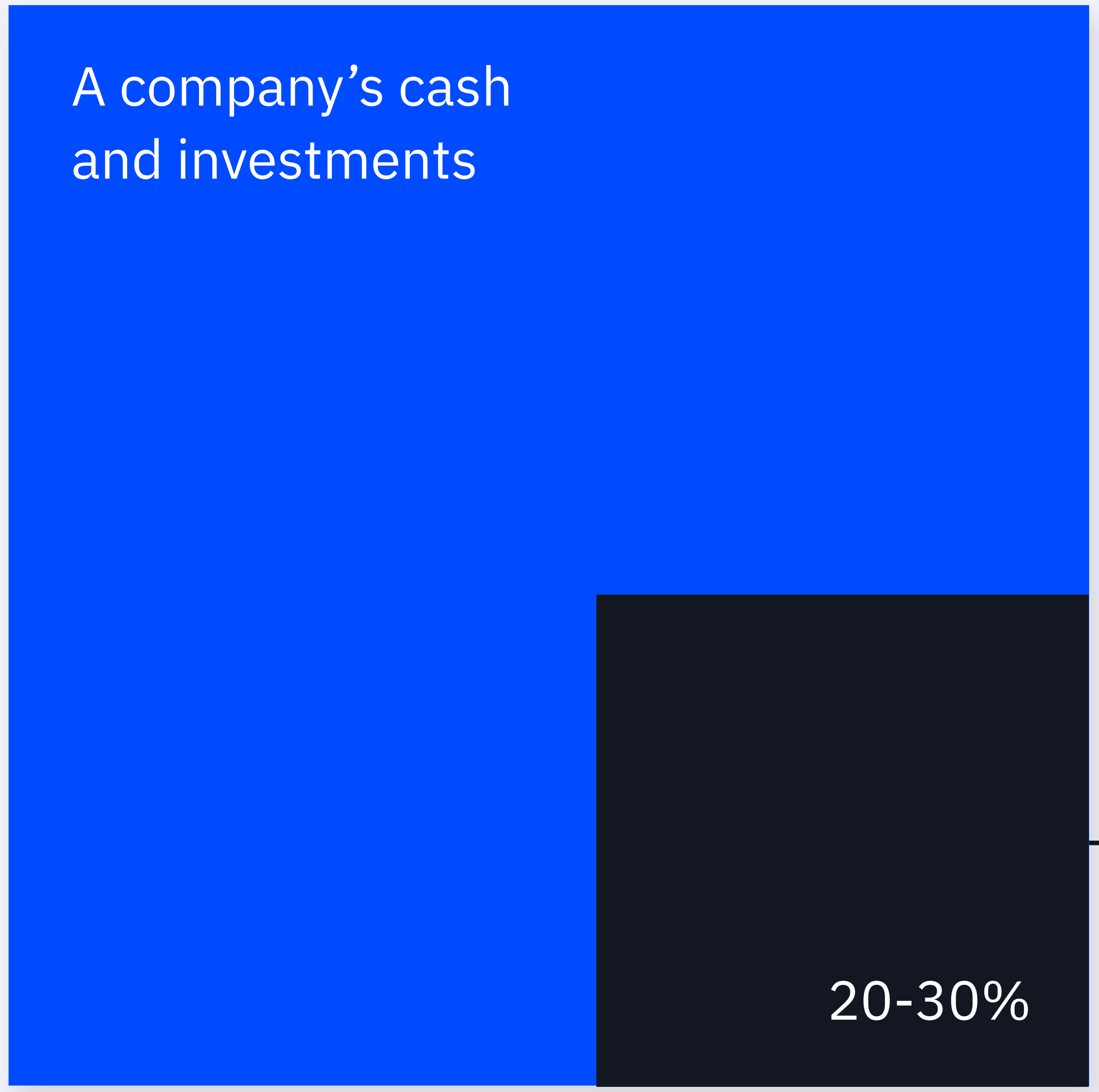
2.
Companies are unknowingly letting their cash fund climate change.

Insight:

By working with these banks, companies are unknowingly and passively lending up to 20-30% of their cash to the industries most responsible for fueling climate change.

Why this matters:

It reveals that collectively, companies are unintentionally enabling hundreds of billions of their dollars to flow to the industries driving climate change. Moreover, it underscores the need for companies to exercise agency and engage with their banks to increase investment in climate solutions as well as work to decarbonize essential carbon-intensive industries, including limiting and quickly stopping fossil fuel expansion.



20-30% of a company's cash and investments unknowingly fund:

Carbon-intensive energy production, utilities, mining, & large-scale manufacturing

* This analysis assumes that all activities in the included sectors are carbon intensive, despite the fact that, for instance, the energy sector includes renewable-energy activities.

Further context:

Across the 12 banks we analyzed, the average exposure to carbon-intensive sectors in 2022 was 19.5% and as high as 30% for one institution.*

Within this 19.5%, energy and utilities represented just 5.8% of the overall lending portfolio. However, that 5.8% represented an estimated 42% of all the financed emissions these 12 banks enabled in 2022, which underscores why it is essential for companies to engage with their banks about their plans to accelerate the decarbonization of these carbon-intensive sectors.

When engaging with banks about this topic, it is important to break down the carbon-intensive classification into **two broad categories, because it informs the strategy that companies take:**

Energy and Utilities:

Of all sectors, energy lending has an outsized impact given that, on average, it is about 8 times more carbon intensive than the overall average of all sectors of bank lending we analyzed. Given this fact and the slow pace of decarbonization, it is prudent for companies to focus their initial engagement here.

Accordingly, companies should encourage their financial firms to stop all funding to fossil fuel expansion—this should extend beyond direct project financing and include all lending to fossil fuel companies that is not earmarked as credible transition finance.

Plus, companies should demonstrate strong demand for increased investments in clean energy as well as credible green cash management products that will enable them to ensure their money is being used to finance a more sustainable future (see page 25 for more).

Heavy Industry:

Many industries such as steel, iron, aluminum, and cement production generate substantial emissions, but they are also essential for building a new, greener economy. Fortunately, all these key materials can now be produced using cleaner energy, which will dramatically reduce their carbon-intensity.

As a result, companies need to ensure their financial firms are requiring their heavy industry clients to have credible transition plans in place, which provide a clear pathway for decarbonization that aligns with what the science dictates.

By doing so, companies can ensure that all "transition finance" is tightly defined so that it is not just a nudge in the right direction but rather a robust intervention that accelerates low-carbon solutions.

* This analysis assumes that all activities in the included sectors are carbon intensive, despite the fact that, for instance, the energy sector includes renewable-energy activities.

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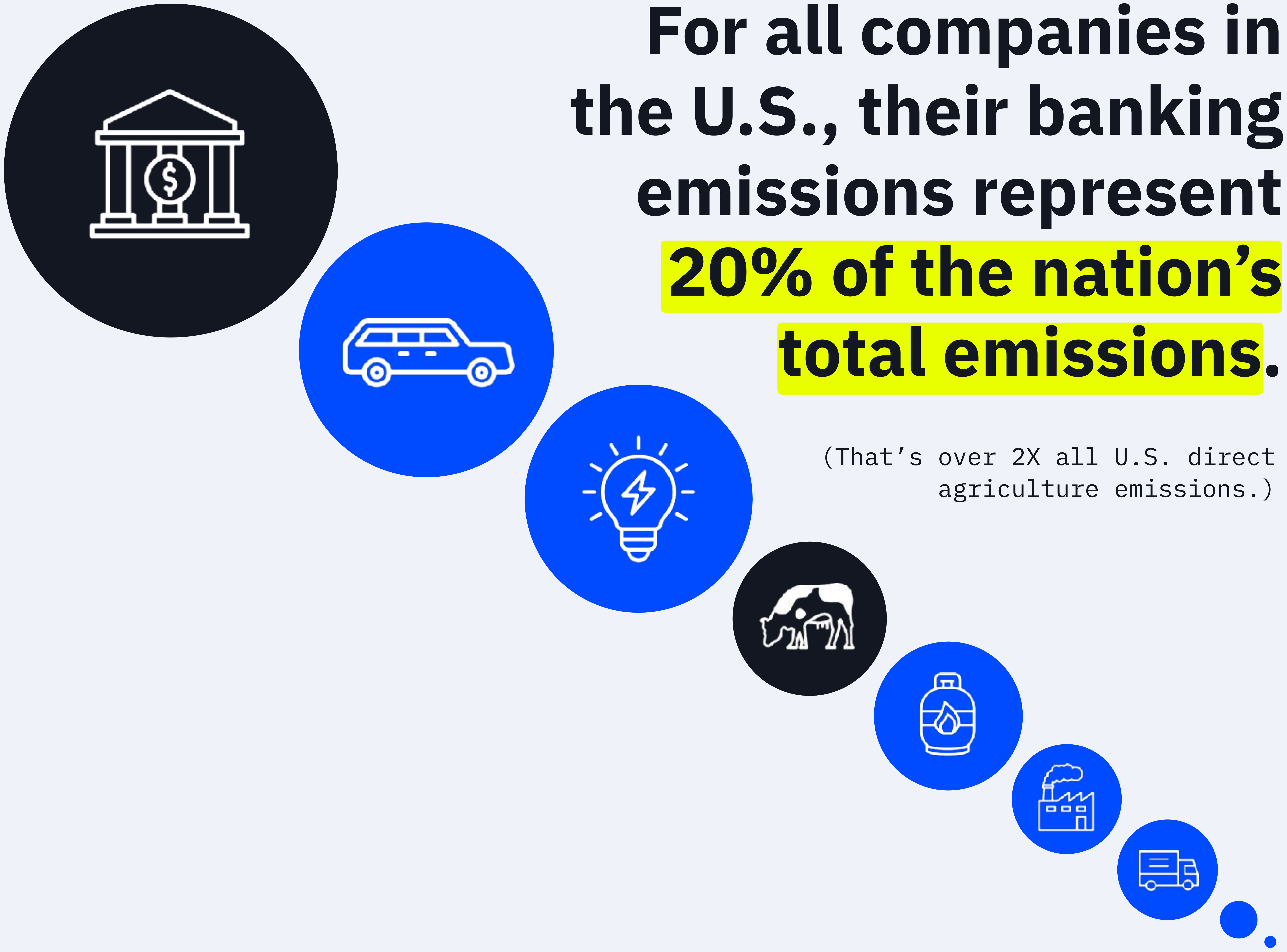
3.
The scale of corporate cash and its emissions is staggering.

Insight:
Nonfinancial companies in the U.S. hold about $7 trillion in cash and investments, and the total indirect emissions enabled by this money represents more than an estimated 20% of total gross emissions in the U.S.*

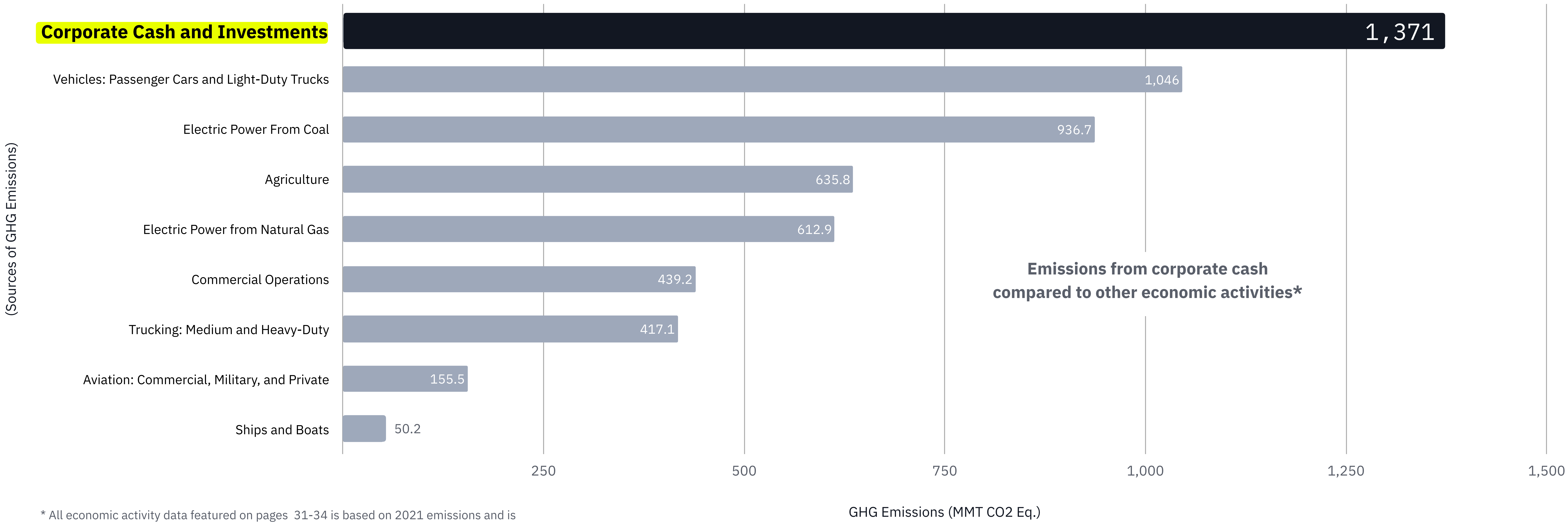
Why this matters:
It demonstrates corporate cash's immense power as a lever for climate action. If every company engaged with its financial firms and worked to decarbonize its financial management, this collective action could facilitate massive emissions reductions throughout the economy.



For all companies in the U.S., their banking emissions represent **20% of the nation's total emissions.**

(That's over 2X all U.S. direct agriculture emissions.)

* The bubbles representing the emissions that each entity generates are not designed to scale.



* All economic activity data featured on pages 31-34 is based on 2021 emissions and is sourced from U.S. EPA's, "Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2021."

Further context:

Companies in the U.S. are accruing the deepest cash reserves in history, and this money is enabling the generation of substantial emissions.[14]

As a result, now more than ever, it is essential companies start engaging with their financial firms about how they can align their financial management with global climate goals.

Accordingly, we set out to assess the cumulative emissions generated by every nonfinancial corporate business in the U.S. Using Federal Reserve data that breaks down the balance sheets of nonfinancial corporate businesses on an asset-class level, we determined that:

- In Q3 of 2023, these businesses collectively held $7 trillion in cash and investments.[15]
- The indicative cumulative emissions enabled by these cash and investments is an estimated 1.4 billion CO_2e, which represents more than 20% of total estimated gross emissions in the U.S. in 2021.[16]

When evaluating companies' financed emissions, it is important to remember these are indirect emissions that are generated by financial firms lending and investing money to activities and industries that are generating direct emissions.

However, to demonstrate companies' collective power to decarbonize the real economy by reducing this historically overlooked indirect emissions source, this graph shows how companies' cumulative financed emissions compare to entire sectors of the American economy.

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4. The largest companies have the greatest impact and power.

Insight:

Just 25 multinational companies hold more than $1 trillion in cash and investments, and their annual estimated financed emissions cumulatively represent more emissions than the direct emissions generated by all coal mining, iron/steel production, and concrete production in the U.S. every year.

Why this matters:

It reveals the outsized impact that just 25 companies could have if they collaborated with their financial firms and worked to decarbonize their corporate treasuries.

25 U.S. companies' financed emissions are equivalent to approximately 1.4X all direct aviation emissions in the U.S.

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Companies (U.S. based)	**Total cash holdings** (million $USD)	**Financed emissions** (ktCO2e/year)
Apple	169,109	26,421
Google/Alphabet	113,762	21,153
Microsoft	111,256	28,093
UnitedHealth Group	71,921	12,796
Amazon	70,391	14,697
GE	60,919	9,154
Ford	44,070	10,666
Meta (Facebook)	40,738	9,353
Elevance Health	35,044	5,594
CVS	34,246	6,057
GM	31,302	7,089
Intel	29,679	6,589
Cisco	25,715	5,466
Pfizer	25,967	4,957
Johnson & Johnson	23,519	6,576
Tesla	22,185	6,326
Discover	21,042	5,881
Visa	17,456	4,984
Boeing	17,222	4,981
Costco	15,234	4,467
Paypal	14,046	3,285
Nvidia	13,296	2,880
Salesforce	12,508	2,756
Coca-Cola	11,631	3,025
Oracle	10,187	2,990
Total:	**1,042,445**	**216,236**

1.042 Trillion

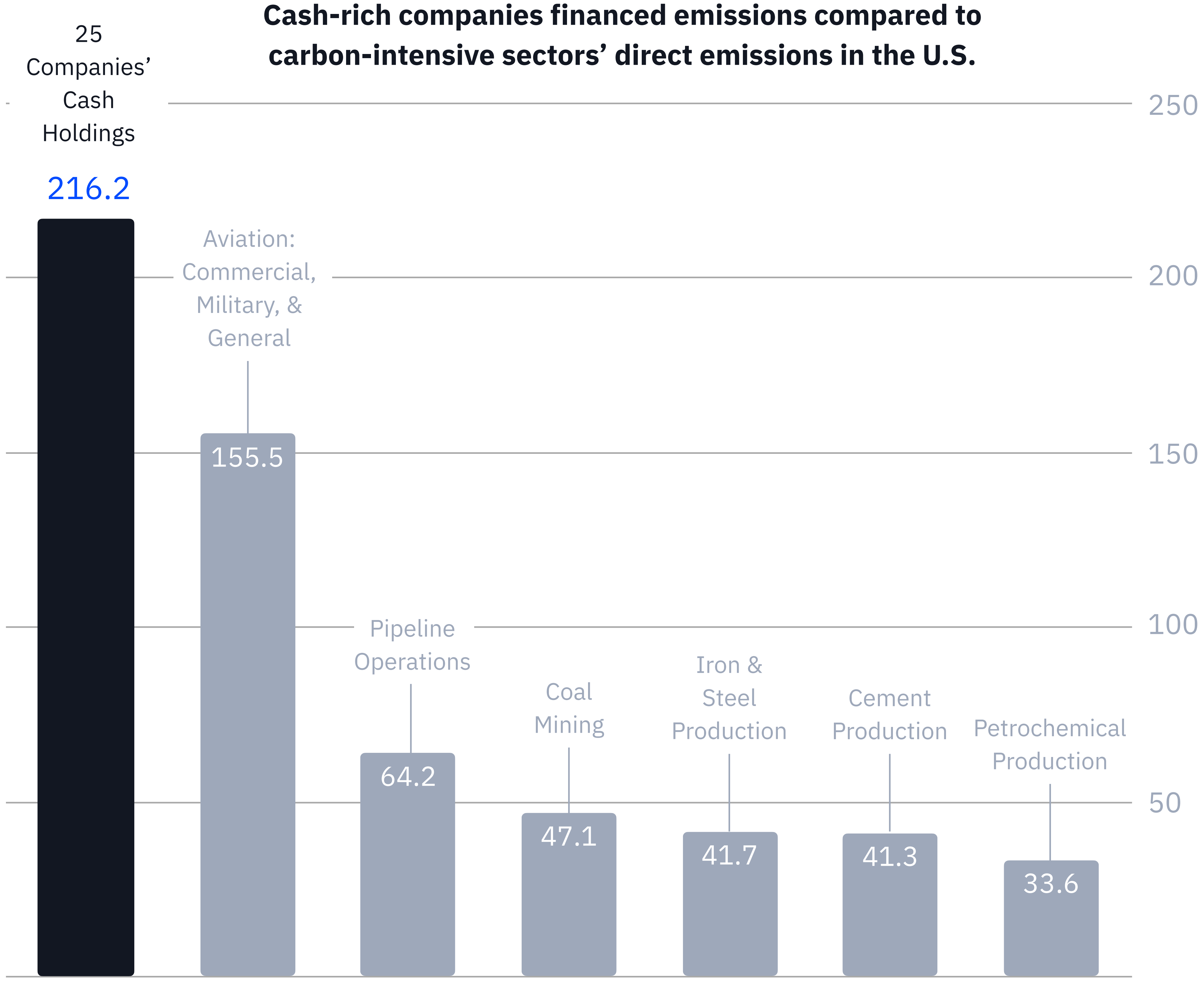
U.S. dollars held in cash and investments resulting in approximately:

216,236 ktCO2e/year

< This chart utilizes corporate cash and investment data from each company's most recent annual SEC filing, as of Sept. 30, 2023. It features a selective list of 25 companies that all had more than $10 billion in reported cash holdings as of their last annual SEC filing.

^These companies' financed emissions were estimated using an aggregated carbon intensity for each asset class. The analysis gives an indication of the size of the customer holdings and enabled emissions. This analysis is purely for illustrative purposes, and it does not incorporate any emissions reductions companies may have achieved by working to decarbonize their cash and investments.

Cash-rich companies financed emissions compared to carbon-intensive sectors' direct emissions in the U.S.



Emissions Generated by Economic Activity (MMT CO2 Eq)

Further context:

Of the $7 trillion in cash & investments held by U.S.-based nonfinancial companies, a substantial percentage belongs to a handful of the largest, wealthiest public companies. By analyzing the most recent SEC filings of some of the most cash-rich companies, we compiled a list of 25 nonfinancial companies, whose cumulative assets exceed $1 trillion dollars. We then analyzed each company's financed emissions, as of their most recent annual SEC filing.

We discovered that, for just these 25 companies, their cumulative indicative financed emissions was 216.2 million tCO2e in 2022. To put that number in perspective, these companies' cumulative estimated financed emissions represent a figure larger than the direct annual emissions generated by some of the most carbon-intensive industries in the U.S., including aviation, coal mining, and iron/steel production, which financial institutions continue to finance.[17]

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5.
The financial system is undermining companies' climate work.

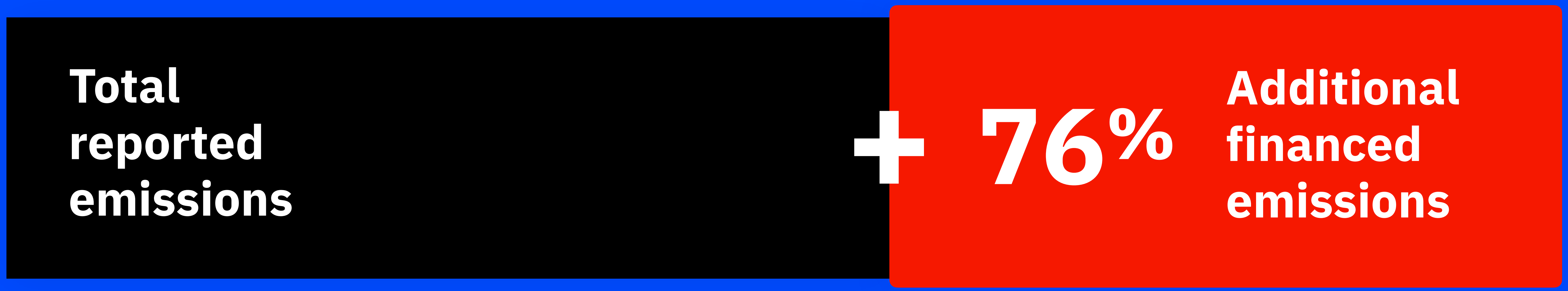
Insight:

For many of the world's most climate-conscious companies, including Apple, Google, and Microsoft, the emissions stemming from their cash and investments likely either represent their largest source of emissions or are larger than all their other emissions combined.

Why this matters:

It confirms why it is essential that companies make decarbonizing their financial management a high-priority sustainability practice. By not doing so, companies are passively undermining their climate goals as well as their tireless work and major investments in emissions reduction.

For these climate-leading companies, their estimated **financed emissions** are equivalent to 76% of their total reported emissions.



Companies* (U.S. based)	**Reported Scope 1, 2 and 3 emissions** (KtCO2/year)	**Total cash holdings** (Billion USD)	**Financed emissions** (KtCO2/year)	**Increase from financed emissions**
Airbnb	328.10	9,602	2,600	**792.3%**
Amazon	71,270.00	70,391	14,697	**20.6%**
Apple	20,600.00	169,109	26,421	**128.3%**
Atlassian	129.45	2,104	617	**476.9%**
Cisco	22,805.30	25,715	5,466	**24.0%**
Etsy	532.60	1,201	327	**61.5%**
Google/Alphabet	10,183.40	113,762	21,153	**207.7%**
Johnson & Johnson	18,526.00	23,519	6,576	**35.5%**
Mastercard	562.58	7,679	2,122	**377.1%**
Meta (Facebook)	8,533.50	40,738	9,353	**109.6%**
Microsoft	12,998.00	111,256	28,093	**216.1%**
Netflix	1,146.22	6,059	1,778	**155.1%**
PayPal	517.1	14,046	3,285	**635.3%**
Salesforce	1,338.00	12,508	2,756	**206.0%**
Visa	471.20	17,456	4,984	**1057.7%**

Companies* (U.S. based)	**Financed emissions size^** (Compared to other emissions)
Airbnb	8X total emissions
Amazon	3rd-largest emissions source
Apple	1.25X total emissions
Atlassian	5X total emissions
Cisco	3rd-largest emissions source
Etsy	2nd-largest emissions source
Google/Alphabet	2X total emissions
Johnson & Johnson	3rd-largest emissions source
Mastercard	4X total emissions
Meta (Facebook)	1X total emissions
Microsoft	2X total
Netflix	1.5X total emissions
PayPal	6X total emissions
Salesforce	2X total emissions
Visa	10X total emissions

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This chart reveals that for all these companies, their financed emissions would be, at a minimum, their **third-largest** source of emissions.

**Each charts show how these companies' financed emissions compare to their other emissions sources. The data for each company's emissions breakdown was taken from its most recent emissions reporting, as of Sept. 30, 2023.*

^Financed emissions size for each company is rounded.

Further context:

The emissions that corporate cash and investments enable are directly tied to the emissions their financial institutions generate via their lending and investing practices. Because the emissions enabled by banks and asset managers are substantially larger than previously understood, so too are the financed emissions that corporate cash and investments enable.

As a result, when we conducted an expanded and updated version of *The Carbon Bankroll 1.0* analysis, which measures the emissions enabled by corporate cash holdings, we discovered:

- The emissions enabled by companies' cash holdings are larger and more ubiquitous than we previously reported.
- Decarbonizing corporate cash is one of the most powerful companies have to reduce emissions and drive progress.

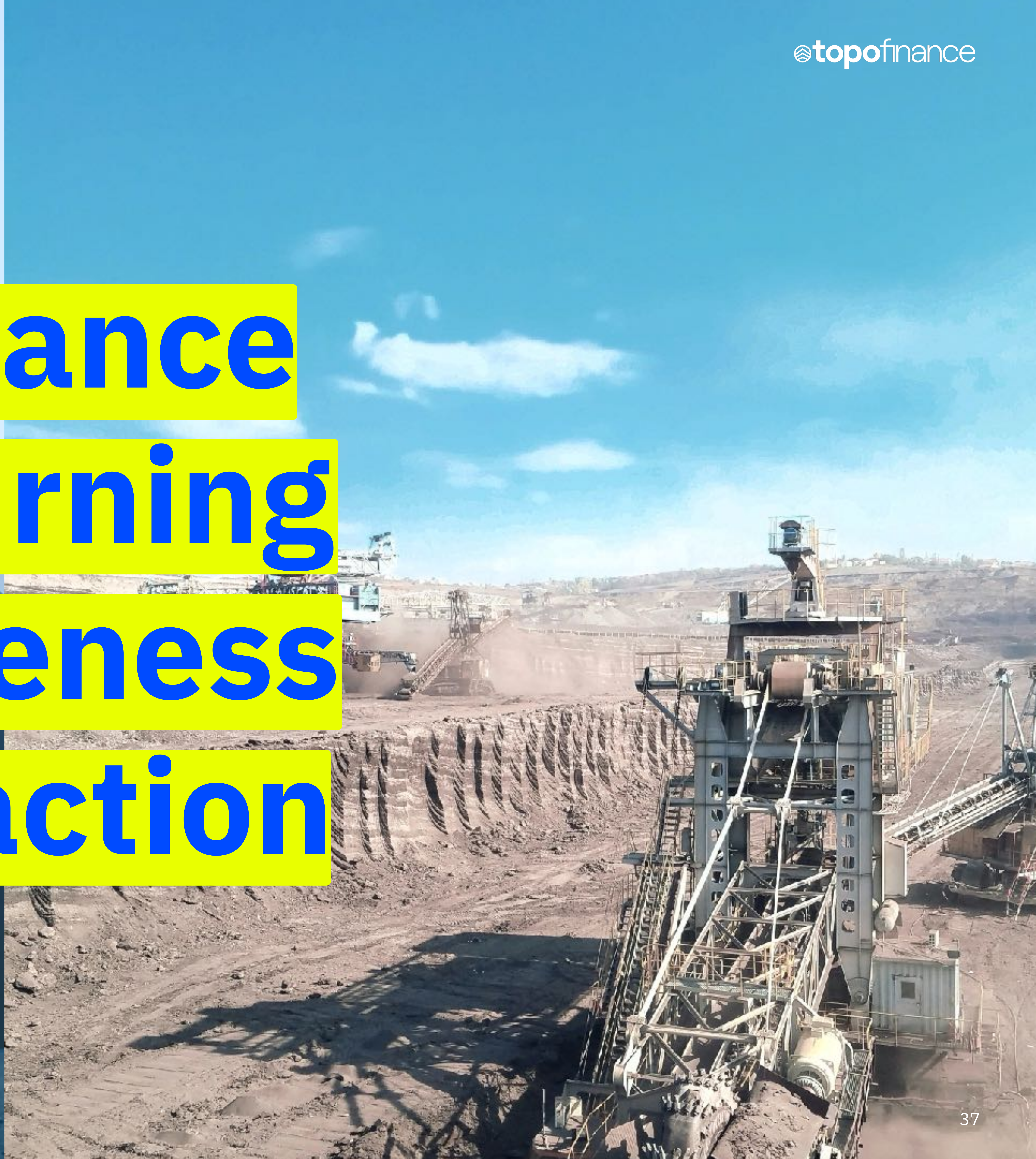
Important notes on how to interpret the corporate cash data

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 publicly disclose.

Despite the magnitude of the featured financial footprints, these figures constitute a potential underestimation of the actual emissions generated by financial supply chains. Although when viewed at the aggregate level, there is potential for some double counting.

See Appendix for more information.



Guidance for turning awareness into action

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As a nonprofit dedicated to helping businesses leverage their banking and investing to drive climate progress, we are committed to helping companies navigate this journey. As part of this commitment, we work hand in hand with companies to help them maximize their financial management's positive impact.

Through this collaborative process, we can advise companies through any and all of the **following activities:**

Start
Meet with key members of the sustainability and treasury teams to answer any questions, explain why the company should apply a climate lens to its financial management, and discuss how they can most effectively get started.

Align
Help forge internal alignment within the company by providing guidance about how to best start moving from awareness to action.

Measure
Calculate the company's financed emissions using our proprietary data and tools, which allows the company to understand the scale of its financed emissions and set a baseline for measuring future progress.

Engage
Provide engagement guidance and the key questions companies should ask their financial firms to effectively evaluate their existing climate policies/practices as well as to encourage them to accelerate their decarbonization.

Green Products
Assess the green products offered by the company's financial firms and provide advice on how to work with their firms to create new green products for them, if the existing market offerings are insufficient.

Decarbonize
Develop a tailored list of strategies the company can employ to reduce its financed emissions while driving real-world impact.

Plan for the future
Co-create a comprehensive road map for how the company can decarbonize its finances and position itself for long-term impact.

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5 key principles to know before you begin:

Given that working on corporate finances involves some unique factors and challenges, **here are five key principles to keep in mind**:

A growing solution set

There are clear steps companies can take today to generate impact, such as engaging with their banks and prioritizing the use of green deposits. However, given the emerging nature of this field, the suite of solutions is incomplete, and some companies may not be able to immediately achieve all their objectives. That said, we are rapidly building and scaling the next generation of strategies and solutions, so this work will become increasingly streamlined and impactful over time.

A new collaboration

Integrating climate into corporate financial management is a new field that will require deep collaboration between treasury departments and sustainability teams. As companies work to integrate a climate lens to their financial practices, it is pivotal to respect corporate treasurers' needs for liquidity, security, services, and returns.

Think holistically

When aligning your financial management with your sustainability goals, it is important to think about climate objectives holistically. This work is about more than divestment. The frame should be to ramp down investments in climate drivers, scale up investments in climate solutions, and work to decarbonize everything else.

Show demand

A major reason why most large financial firms in the U.S. offer an inadequate suite of low-carbon banking and investing options is because their largest customers rarely request these products. Financial firms will work hard to satisfy their customers, but they do not know what their customers want unless they demonstrate this demand, which is why it is essential to signal strong demand.

Prioritize impacting the real world

There are steps companies can take to "reduce carbon on their accounting books" but that have minimal or no real-world emissions impact, such as share buybacks. As such, it is essential companies prioritize solutions that have a real-world emissions impact, such as prioritizing working with their most climate responsible banks.

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A seven-step guide for approaching this work

In 2023, we worked with Exponential Roadmap Initiative, Race to Zero, BankFWD, and Fair Finance Guide to develop the "Greening Cash Action Guide," which provides a road map for the steps companies should take to reduce the financed emissions from their banking.[18]

The following is an overview of the process outlined in the guide.*

1: Create internal alignment

The sustainability and finance teams, ideally with the support of top-level executive management, need to work together to forge internal alignment around key climate objectives and essential financial management needs.

2: Evaluate the financial supply chain

Once this alignment exists, these teams should work together to evaluate their financial supply chain, which includes examining their financial firms' current emissions profile, the credibility of their climate policies, and how their performance is progressing over time.

3: Calculate financial footprint

To fully understand the climate impact of a company's financial management and set a baseline for future assessments, companies should then calculate the emissions enabled by their corporate cash and investments.

4: Engage with financial firms

Next, companies should engage with financial firms about their climate practices and climate transition plans. By urging them to improve their climate performance, you can demonstrate how important it is to your company that they align with both global climate goals and your company's goals.

5: Prioritize green products

Companies can start decarbonizing their financial operations by asking their banks to shift some of the company's cash into green financial cash management products such as green deposits. Many global banks do not yet offer these products at scale, but these products are becoming more widely available through growing customer demand.

6: Shift money

If the financial firm evaluation and engagement process illuminate that some or all of the company's current banks are not taking sufficient climate action, consider moving a portion or all of the company's finances to firms with better climate practices. For many companies, there are several strategies to do so without disrupting core business needs.

7: Create and share status, targets, and progress

It is important companies codify this work in a plan that sets specific time-bound targets, outlines expected impacts, and details the resources needed to achieve this impact. Companies should then share their insights, learnings, and results to motivate and enable other companies to catalyze greater impact.

* You can access the complete "Greening Cash Action Guide" at www.exponentialroadmap.org/greening-cash-action-guide.

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A note on aligning your 401(k)s with corporate climate goals:

While this report focuses on the treasury components of companies' financial supply chains, another key aspect of this overlooked supply chain is companies' 401(k)s. Just as they need to with their short-term investments, companies can meaningfully engage with their asset managers and encourage them to accelerate their decarbonization of the real economy by working to align their 401(k)s with their climate objectives.

As this report shows, the largest asset managers in the U.S., which are the predominant service providers for corporate 401(k)s, financed nearly 3 billion tCO_2e in 2022. These emissions represent nearly half of total gross emissions in the United States.

This data underscores the massive opportunity companies have to leverage their 401(k)s to encourage the largest asset managers to accelerate the decarbonization of the $37 trillion they have in fixed income and equities under management.

Later in 2024, Topo Finance will publish guidance outlining the steps companies can take to engage with their 401(k) providers and work to implement a climate lens to their retirement plans.

In the meantime, we recommend companies explore resources developed by entities such As You Sow,[19] which provide helpful tools and guidance about how companies can align their investing with their values.

A special thanks

A special thanks to these individuals and organizations that helped make this report and all of our *Carbon Bankroll* work possible.

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Appendix

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Methodology

The methodology used to estimate and allocate corporate financed emissions is based on the process we used for the preparation of *The Carbon Bankroll* report as published in May 2022 and is outlined in that report's methodology section. This updated report analyzes each companies' most recent 10K financial report as of Sept. 30, 2023.

This methodology also relies on prior financed emissions research undertaken by our data partner South Pole to calculate the financed emissions of U.S. carbon-intensive banks and assets managers as featured in the *Saving (for) the Planet*[20] and *Carbon Bubble*[21] reports. Detailed descriptions of the methodologies adopted are included in these reports. To avoid excessive duplication, embedded links are provided to access this information.

Over the last two years, from a financed emissions perspective, things have evolved—including our understanding, external standards, and data. The main changes compared to the *Carbon Bubble* report are:

- U.S. Sovereign's calculation has been updated to help reflect the updated Partnership for Carbon Accounting Financials (PCAF) standard (i.e., territorial approach).
- Emissions factors have been updated from a range of sources, including Exiobase.
- Where financial institutions have allocated exposure to into "other" industry categories, this is assumed to be carbon intensive.

Seawolf Sustainability Consulting supported the production of this report and undertook reviews and spot-checks.

Limitations, estimations, and assumptions have mostly been listed in prior publications. Central to these limitations is the fact that the figures in this report are not intended to be precise calculations but rather a consistent representation of the estimated emissions enabled by companies' financial institutions. As a result, we welcome more accurate and complete disclosure by financial institutions or corporations themselves.

Likewise, the analysis is conducted on a best efforts basis using a consistent approach across institutions based on public data. Figures are estimated and indicative in nature. There is potential for double counting across emission types at the aggregate level. However, some emissions are potentially underestimated, such as scope 3 elements of financed emissions, which are not incorporated as well as capital markets' activity for banks (facilitated emissions). To have the most accurate and comprehensive data, it is recommended that companies and financial institutions complete their own climate disclosures.

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Thank you for your valuable time and thoughtful consideration.

For more information regarding this report or if you want help leveraging this new climate power, please reach out to:
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To learn more about Topo's work and the solutions we are developing to enable everyone to maximize the positive impact of their finances, please visit:
topofinance.org

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