PROJECT DRAWDOWN

SAVING (FOR) THE PLANET:
THE CLIMATE POWER OF PERSONAL BANKING

By Jamie Beck Alexander, Paul Moinester, and Julian Kraus-Polk

DECEMBER 2023

SAVING (FOR) THE PLANET

The climate power of personal banking

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Special thanks to: Aiyana Bodi, Jonathan Foley, James Gerber, Daniel & Lindsey Growald, Mary Hoff, Kapok Fund, Stephan Nicoleau, Chidi Oti Obihara, Park Foundation, Rakhim Rakhimov, Brandon Schauer, Rebecca Self, Marilyn Waite, Quinn Williams, and The William and Flora Hewlett Foundation.

Primary Partner: Topo Finance

Bank Emissions Data Partner: South Pole

PROJECT DRAWDOWN

TopoFinance

Project Drawdown is the world's leading resource for climate solutions. By advancing science-based climate solutions, fostering bold climate leadership, and promoting new narratives and voices, the 501(c)(3) nonprofit, nonpartisan organization is helping the world stop climate change as quickly, safely, and equitably as possible.

Topo Finance is dedicated to transforming the financial sector into a force for creating a more just, equitable, and regenerative world. TOPO is actualizing this future by building foundational data, tools, strategies, and solutions that enable all consumers – companies, organizations, and individuals – to leverage their banking and investing as a vehicle for climate and social progress.

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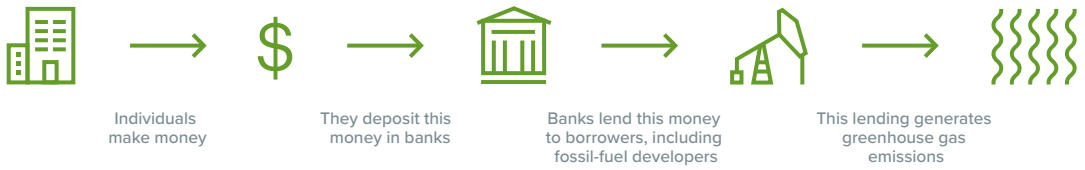
SUMMARY

To help address climate change, people around the world are taking steps to reduce their personal climate impact – including replacing conventional cars with electric vehicles (EVs), swapping gas furnaces for electric heat pumps, adopting climate-friendly diets, reducing airline travel, and more. But there is a powerful undercurrent at play that, quietly but actively, is either undermining or accelerating your climate efforts: what your money does in your bank accounts.

When you deposit money into a checking or savings account, that cash does not sit idly in the bank[i] accruing interest. Rather, your bank lends and invests your money across the economy – to finance everything from new businesses, to construction projects, to new energy (including fossil-fuel) development. And some of these projects enable the continued release of greenhouse gases into the atmosphere. In fact, **banks in the United States lend as much as 20–30% of their portfolio to carbon-intensive sectors driving climate change,**[ii] such as energy production, mining, and large-scale manufacturing.



Through their lending and investing power, banks play an immensely powerful role ***determining our climate future,*** including by financing infrastructure that locks in greenhouse gas emissions or climate solutions that yield reductions in emissions for decades to come. To build a future that is livable, resilient, and equitable, you can take steps to ensure your bank directs your money *today* to building the world you want *tomorrow*: renewable energy, sustainable agriculture, green buildings, public transportation, healthy ecosystems, flourishing communities, and other climate-friendly enterprises.

i In this report we use the term "bank" as a broad bucket that also includes credit unions, community development financial institutions (CDFIs), and online banking platforms (commonly called "neo-banks").

ii While, for the purposes of this report, we define "carbon-intensive sectors" as energy production, utilities, mining, and large-scale manufacturing, it is important to note that the production, processing, and use of fossil fuels – across the electricity, transportation, building, industry, and energy processing sectors – constitute about 65% of global greenhouse gas emissions. The remainder of emissions come from agriculture and land use (~25%) and industrial products and processes outside of fossil energy (~10%).

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This report reveals new data showing that ***where* you bank is one of the most important consumer decisions you make, and how you *engage* your bank is a powerful lever to catalyze systemic change.** And since 95% of adults in the United States have a bank account,[1] climate-responsible banking is a widely accessible climate action.

The power of banking as a climate intervention is rooted in the fact that it can be harnessed at both the individual and systemic level. For example, in 2022 the median transaction account[iii] balance of a person living in the United States was US$8,000.[2] Based on the bank sample we analyzed, moving US$8,000 from a "carbon-intensive"[iv] bank to a "climate-responsible"[v] bank would achieve a larger annual reduction in indirect emissions than the direct annual emissions reductions that would be achieved by adopting an all-vegan diet, and two times the annual emissions reduction impact of adopting a vegetarian diet. And when *many* people make this switch and communicate about it to their banks, it sends a signal to the global market with the power to tilt the entire financial system away from the industries fueling the climate crisis and toward those contributing to a thriving future.

> And when *many* people make this switch and communicate about it to their banks, it sends a signal to the global market with the power to tilt the entire financial system away from the industries fueling the climate crisis and toward those contributing to a thriving future.

To be clear, you don't need to choose *between* climate-responsible banking decisions and other activities that reduce greenhouse gas emissions. You can do them all! Climate-responsible banking practices, like engaging your bank and moving your money, can *complement* other

iii A transaction account refers to the account you use for day-to-day banking such as receiving income and paying bills. For many people, checking and savings accounts are combined, so both would be included in this definition.

iv For purposes of this report, a carbon-intensive bank is defined as a large bank that has been officially designated as either a Global Systemically Important Bank or Domestic Systemically Important Bank, which tend to have significant exposure to carbon-intensive sectors.

v For purposes of this report, a climate-responsible bank is defined as one that does not lend to or underwrite fossil fuel projects and companies (unless direct finance for a green project), has limited exposure to other carbon-intensive sectors, and prioritizes lending to climate solutions. A list of resources for finding these banks is included in the Appendix.

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efforts, not replace them. Also, it is important to remember that banking practices contribute to emissions generation *indirectly*. Rather than emissions being directly controlled by the customer, it is the financial institutions that invest in and loan money to other activities that generate emissions. As a result, moving your money is distinct from climate actions you might take that reduce or avoid emissions *directly*. **But moving your money is an action you can take to send a signal to the system and help shift the flows of capital away from banking institutions that fund carbon-intensive sectors and toward banks that do not.** In so doing, this may encourage carbon-intensive banks to change their practices also.

This report is designed to educate and empower you to embrace climate-responsible banking practices, and it illuminates four key research findings:

1. **Your banking practices may be a large source of *indirect* greenhouse gas emissions, depending on where you bank and how much money you have in your account.**
2. **If you bank with a U.S. carbon-intensive bank, you may be indirectly lending up to 20–30% of your money to the industries most responsible for fueling the climate crisis.**
3. **Moving your money from a carbon-intensive bank to a climate-responsible bank could reduce the greenhouse gas emissions it generates by an average of 76%.**
4. **Decarbonizing your banking is a powerful climate action, and getting started is relatively easy, accessible, and cost effective.**

It is important to note that the financed emissions estimates in this analysis were produced using publicly available information. They should not be seen as conclusive or final, nor do they cover the full range of activities by the selected institutions. This analysis also does not delve into the funding models of different banks nor the detailed technical regulations that banks are subject to, including regulations surrounding capital and liquidity. **This report does not provide or constitute financial advice.** All featured bank data are estimates based on external disclosures and a number of assumptions detailed in the methodology section of the Appendix. The authors strongly encourage additional transparency and emissions reporting from banks, which at this time are quite limited.

> Decarbonizing your banking is a powerful climate action, and getting started is relatively easy, accessible, and cost effective.

Addressing climate change requires that every person take every action and pull every lever of influence at their disposal. And with more privilege, influence, and money in the bank come more opportunities – and more responsibility – to do so. You can implement climate solutions directly by changing how you eat, power your home, and more. But just as important are the ways that you can use your influence to intervene in a much bigger system, with the potential to have a larger and more catalytic impact.

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1

INTRODUCTION

Given our current economic system, money is necessary for mitigating the climate crisis. Public and private investment can stimulate and sustain efforts to solve climate change. Divestment is also powerful, shifting capital away from sources of the problem.[3] Currently, not nearly enough money is being diverted from fossil fuels and redirected into the technologies and infrastructure needed to mitigate climate change.[4]

Central to this issue are the world's banks, which are currently on track to fund the production of greenhouse gases that would likely cause global warming to exceed 1.5°C – the temperature increase scientists say cannot be passed if we want to avoid the worst effects of climate change.[5] Despite having pledged to align their practices with a 1.5°C scenario, none of the biggest U.S. banks is on track to meet its emissions reduction targets.[6] Investment continues to be directed toward fossil-fuel expansion and carbon-intensive sectors; meanwhile, solutions that mitigate climate change are perennially underfunded.[7] **Between 2016 and 2022, only 7% of global banks' energy financing went to renewable energy.**[8]

Fortunately, in recent years some large institutions – including corporations, universities, and governments – have begun leveraging their banking and investing to shift capital away from industries that are driving the climate crisis and toward innovative climate solutions.

Individuals can now do the same with the money sitting in their bank accounts. This report shows why climate-responsible banking is a powerful individual action you can take to exert climate influence. And the real power of this action extends well beyond reducing your carbon footprint: Moving your money can also be a *climate solutions accelerator* that sends a powerful signal to banks that they must rapidly transition the flow of capital away from carbon-intensive sectors and into climate solutions.

This report aims to provide the tools and resources you need to transform your banking into a positive climate influence. We seek to achieve this goal by:

1. detailing research on the estimated emissions generated by individual banking and the emissions benefits that can accrue from moving money from carbon-intensive banks to climate-responsible banks

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2. offering tools you can use to analyze the climate performance of your current bank, evaluate the climate performance of potential new banks, engage with your banks about improving their climate performance, and effectively leverage your banking to advance your personal and global climate goals.

Research Overview

In recent years, climate-conscious consumers have become increasingly aware of the financial sector's role fueling the climate crisis. However, due to substantial data gaps, it has not been possible for most individuals to understand the climate impact of their banking and how their money can influence a financial system measured in billions and trillions. This report aims to help fill these gaps and provide U.S. bank customers with the information they need to leverage their banking practices as a force for climate progress.

To accomplish this goal, we had to first overcome an important hurdle: Very few of the more than 4,000 U.S.-based banks comprehensively report the greenhouse gas emissions generated by their lending and investing activities (their "financed emissions," see Text Box 1). Considering that, **on average, banks' financed emissions are more than 700 times larger than their direct emissions,** financed emissions data are essential for understanding a bank's climate impact[9] (see Text Box 2).

TEXT BOX 1

Types of Emissions: Direct, Indirect, and Financed

Greenhouse gas emission reductions attributable to changing banking practices are *indirect* and therefore distinct from those attributable to actions you can take to *directly* avoid or reduce your emissions. To help explain the different types of emissions referenced in this report, here is a quick overview.

Direct Emissions: Direct emissions consist of greenhouse gas pollution that comes from things you own or control, such as combustion from cars, furnaces, and hot water heaters in your home. Climate solutions that reduce or avoid these emissions directly include swapping a gas-powered car for an EV, making your home more energy efficient, and reducing your air travel.

Indirect Emissions: Indirect emissions consist of greenhouse gas pollution that results from activities, purchases, or decisions that you do not directly control. Indirect emissions also stem from material extraction and deforestation that occur as a result of the goods and services you buy and consume.

Financed Emissions: Financed emissions are a subset of indirect emissions that are generated by financial institutions when they invest and loan money to activities and industries. As this report shows, the scale of banks' financed emissions varies dramatically and is determined by each bank's lending and investing practices.

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Of the more than 4,000 U.S. banks, Topo Finance selected a subset that represents two broad categories: carbon-intensive banks and climate-responsible banks. We then conducted the following two-stage analysis:

1. **Calculate the financed emissions of carbon-intensive banks.** Topo Finance partnered with climate solutions data provider South Pole to assess the financed emissions generated by 11 U.S.-based banks that lend to carbon-intensive sectors (energy production, utilities, mining, and large-scale manufacturing). These banks are JPMorgan Chase, Bank of America, Wells Fargo, Citigroup, US Bank, Truist, Goldman Sachs, Morgan Stanley, PNC, Capital One, and Citizens Bank (listed in order based on total portfolio size).[vi]

2. **Analyze climate-responsible banks' reported financed emissions.** Topo Finance partnered with South Pole to analyze the financed emissions of the four U.S.-based climate-responsible banks that, at the time of this analysis, had reported their emissions through the Partnership for Carbon Accounting Financials (PCAF): Amalgamated Bank, Beneficial State Bank, Clearwater Credit Union, and Sunrise Bank. This report defines a climate-responsible bank as one that does not lend to or underwrite fossil-fuel projects and companies (unless direct finance for a green project), has limited exposure to other carbon-intensive sectors, and prioritizes lending to climate solutions. A list of resources for finding these banks is included in the Appendix.

TEXT BOX 2

Understanding Banks' Emissions

For years, banks have been marketing green initiatives like "paperless statements" that save trees and "greener bank branches" that run on renewable energy. However, a recent analysis[10] by the nonprofit CDP shows that the emissions banks generate through lending and investing are 700 times larger than their operational emissions – the emissions that derive from essential business activities such as operating their branches and business travel.

Given the scale of these emissions, it is critical that banks accurately and thoroughly report their financed emissions. Fortunately, progress is being made on this front. As of 2023, more than 420 financial institutions representing US$93 trillion of assets under management have committed to disclose these data via the Partnership for Carbon Accounting Financials (PCAF). However, this data reporting is still not universal and is not consistent enough to allow for adequate comparison across banks.

Often, banks that focus their lending locally – such as community banks or credit unions – are a better climate choice than carbon-intensive banks. However, **this report does not explicitly endorse these banks or any others.**

vi The analysis uses calculations based on assumptions of the market-leading carbon accounting methodology from the Partnership for Carbon Accounting Financials (PCAF), which is underpinned by the Greenhouse Gas (GHG) Protocol.

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After conducting these analyses, we aggregated existing research on the emissions reductions generated by popular individual consumer actions, such as adopting a meat-free diet or switching to an EV. We then compared the benefits generated by these consumer actions to the climate impact of switching from a carbon-intensive bank to a climate-responsible bank. For more information on this report's methodology and the limitations surrounding financed emissions accounting, refer to the Appendix.

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2 KEY FINDINGS

When reviewing this report's findings, please treat the banking emissions figures as estimates rather than a precise accounting, due to the shortcomings involved with financed emissions data for banks that are detailed in the Appendix. The figures in this report are conservative and likely *underestimate* the actual emissions generated by banking because they do not include the full life cycle of the emissions generated by the businesses banks lend to.

1. Your banking practices may be a large source of *indirect* greenhouse gas emissions, depending on where you bank and how much money you have in your account.

Every dollar you deposit in a bank has an associated carbon footprint, and this footprint will vary depending on how the bank lends and invests that dollar.

We estimate that for 11 of the largest U.S.-based banks, the average estimated carbon intensity of lending is 0.24 metric tons of carbon dioxide equivalent greenhouse gas emissions (tCO_2-eq) per US$1,000 per year. This means that, **on average, every US$1,000 you have in savings is roughly equivalent to the direct emissions generated by flying from New York to Seattle every year.**[11] For the largest four banks – Bank of America, Citigroup, JPMorgan Chase, and Wells Fargo – this figure is higher: 0.29 tCO_2-eq per US$1,000 per year.

> [On] average, every US$1,000 you have in savings is roughly equivalent to the direct emissions generated by flying from New York to Seattle every year.

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Figure 1: Average emissions generated by individual activities (US)

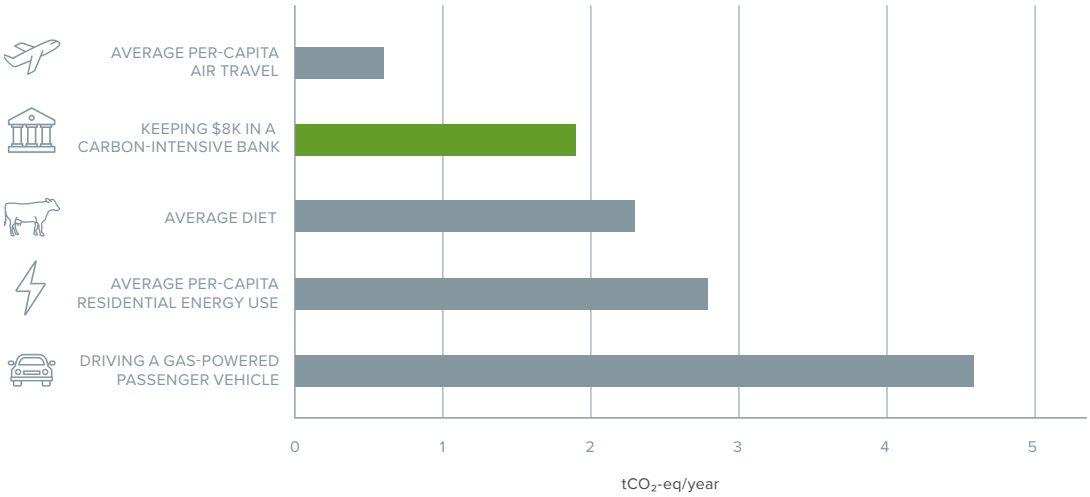

Figure 1. The climate impact of banking with a carbon-intensive bank can be compared with that of other activities, using the median amount that a person living in the U.S. has in a transactional account. It is important to note that moving your banking has an indirect connection with emissions, not a direct one. See Appendix for details and data sources.

2. If you bank with a U.S. carbon-intensive bank, you may be indirectly lending up to 20–30% of your money to the industries most responsible for fueling the climate crisis.

Banks lend customer deposits across the global economy, including to fossil-fuel companies and other carbon-intensive companies to expand their business and infrastructure. In fact, across Group of 20 (G20) members, banks have US$13.8 trillion of exposure to carbon-intensive sectors, roughly 19% of all the loans reported on their balance sheets.[12] This report's findings similarly reveal that across the 11 banks analyzed, the average exposure to carbon intensive sectors in 2022 was 19.44% and as much as 30%. This figure represents the percentage of these banks' overall portfolio lent to carbon-intensive sectors in 2022, which includes energy production, utilities, mining, and large-scale manufacturing.

It is important to treat these percentages as a snapshot in time that reflects each bank's 2022 lending activities and not their overall, long-term exposure to carbon-intensive sectors. The percentages are calculated based on the banks' own financial filings and are relative to the other sectors they lend to and should not be viewed as a complete analysis of each bank's exposure to carbon-intensive sectors. In addition, this analysis assumes that all activities in the sectors included are carbon intensive despite the fact that, for instance, the energy sector includes renewable-energy activities. We encourage improved disclosure to increase transparency so consumers can make more informed decisions.

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3. Moving your money from a carbon-intensive bank to a climate-responsible bank could reduce the greenhouse gas emissions it generates by an average of 76%.

Given the substantial differences in banks' lending practices, the climate impact of your money can vary dramatically depending on where you deposit it. But on average, we estimate the carbon intensity of the loans made by the carbon-intensive banks analyzed for this report to be **0.24 tCO_2-eq per US$1,000 per year.** Meanwhile the average carbon intensity of the loans made by the climate-responsible banks analyzed for this report is an estimated **0.057 tCO_2-eq per US$1,000 per year.**

That means that, based on the sample analyzed, the average U.S.-based adult with a bank account can reduce their estimated annual banking footprint by **76%** by moving their money from the average carbon-intensive bank to the average climate-responsible bank. When you compare these data to the average *direct* emissions carbon footprint of an individual living in the United States (16 tCO_2-eq per year), the results demonstrate why climate-responsible banking is a powerful climate lever.

And whether or not you ultimately decide to switch banks, engaging your current bank sends a signal that you want your money directed toward the climate-friendly enterprises of the future, not the carbon-intensive sectors of the past.

> [T]he average U.S.-based adult with a bank account can reduce their estimated annual banking footprint by **76%** by moving their money from the average carbon-intensive bank to the average climate-responsible bank.

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4. Decarbonizing your banking is a powerful climate action, and getting started is relatively easy, accessible, and cost effective.

By comparing the estimated carbon reduction achieved by switching from a carbon-intensive bank to a climate-responsible bank with the emissions reductions generated by other climate-responsible consumer actions, the data show that where an individual decides to bank can be an impactful consumer choice (Figure 2). Remember, these comparisons are only intended to highlight the power of switching from a carbon-intensive bank to a climate-responsible bank, and there is no need to choose *between* moving your money and these other activities.

Figure 2: Average emissions reductions by individual climate action

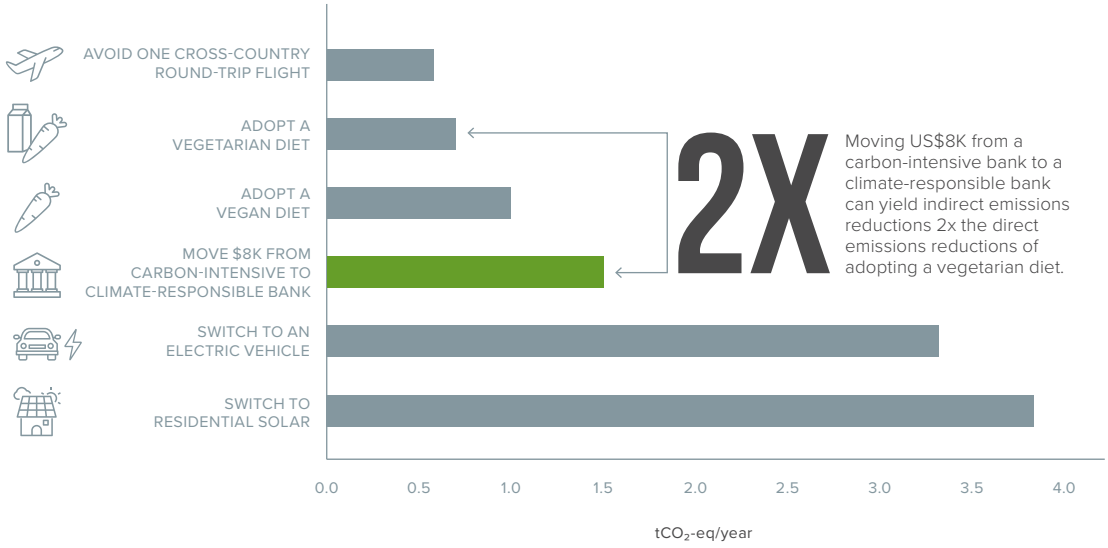

Figure 2. The climate impact of moving your money from a carbon-intensive bank to a climate-responsible bank can be compared to widely adopted and impactful consumer climate actions. For comparison purposes, we used the median amount that an adult living in the United States in 2022 had in their transaction accounts. Note that moving your money has an indirect connection with emissions, not a direct one, as with the other five actions. See Appendix for details and data sources.

Switching banks is not only a powerful climate action, but it can also be easy, accessible, and cost effective. With numerous climate-responsible banking options available today, including many that provide quality online banking, you can switch at least part of your banking within an hour. See the Appendix for resources to find a climate-responsible bank. Since 95% of adults in the U.S. have a bank account,[13] climate-focused banking is a widely accessible climate action. Moving your money to a responsible bank can be a no-cost or low-cost climate action, depending on which bank you move to.

Although beyond the scope of this report, retirement plans such as 401(k)s can also contribute significantly to financing carbon-intensive sectors. You can also take finance-related climate action by choosing climate-friendly investment options and encouraging your employer to provide climate-friendly 401(k)s or pensions. For more on the carbon emissions associated with corporate retirement plans, please see the Appendix.

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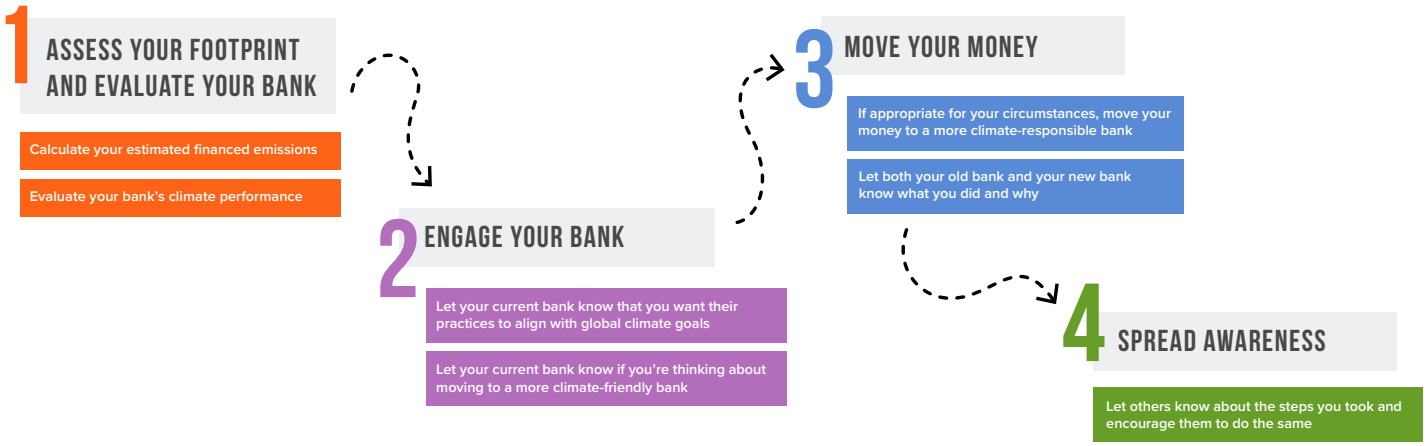
3

HARNESSING YOUR BANKING CLIMATE INFLUENCE

No matter whether you have US$100 or US$100,000 in your bank account, you can use your banking to influence climate change. And you can catalyze even greater impact by communicating with your bank and inspiring your friends, family members, and employers to do the same.

If you want to evaluate your existing banking footprint and maximize the positive climate impact of your banking, we recommend following this four-step process:



Remember that this report is only intended to help you harness the climate power of your banking practices. Nothing in this report is intended to serve as financial advice or to endorse specific financial institutions. It is the responsibility of all individuals to determine how to best ensure their financial needs are being met as they work to apply a climate lens to their banking practices.

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Assess Your Footprint and Evaluate Your Bank

It can be hard to determine how to best align your banking with your climate values because the information you need to evaluate banks' climate performance is often not readily available. For example, none of the carbon-intensive banks we analyzed for this project reported more than a small fraction of their financed emissions in 2022. Furthermore, many of these banks also provide little, if any, information about their future lending and underwriting policies for high-carbon industries as well as the progress they are making toward meeting their climate targets.

The sheer number of banks also makes evaluation difficult. The U.S. has more than 4,000 banks, and there are more than 5,000 banks operating in the European Union.[14] Most are community banks[vii] that could be a great climate option for consumers, but many of these banks lack the ability to disclose their climate performance and thus do not market themselves to climate-conscious consumers.

Every US$1,000 in savings in a carbon-intensive bank generates about 0.24 tCO_2-eq per year. You can use this basic formula to get a rough sense of your financed emissions:

$$\frac{\text{US\$ you have in the bank (in thousands)}}{} \times 0.24\ tCO_2\text{-eq} = \text{Your estimated financed emissions}$$

This figure is one data point you can use to understand the ballpark of emissions your banking creates. To understand your bank's climate performance, a more comprehensive analysis is needed. That is because carbon intensity is a snapshot of a bank's lending emissions at one point in time, so it does not factor in other things such as whether your bank is net-zero aligned, the trajectory of their emissions, and the climate-friendly lending policies they have in place.

You can use many factors to evaluate your bank's climate performance, but we recommend the following five. These factors could also be a useful script for conversations you may have with your bank (see "Engage Your Bank" below).

vii Although community banks have no universal definition, they are often described by two characteristics: their small size and their focus on the communities in which they are located. Because these two characteristics tend to go together – and because size is easy to measure – community banks are commonly defined as those with assets below a certain threshold. Consistent with this approach, we define a community bank as a commercial bank with less than US$10 billion in total assets.

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1. **Financing carbon-intensive sectors, including fossil-fuel expansion:** Has the bank committed to stop financing fossil-fuel expansion or other carbon-intensive sectors? If not, what, if any, company-wide restrictions on financing these sectors does it have in place?

   Best option: banks that have committed to stop funding fossil fuels and other carbon-intensive sectors.

   Good option: banks that have implemented some exclusion policies for financing fossil-fuel expansion and other carbon-intensive sectors. If a bank is still financing these sectors, it is important to know how much financing they are providing and the trajectory of this financing. The lower the financing number the better, and better banks will be reducing this financing over time.

Photo by Anete Lusina | Pexels

   Poor option: banks that do not have a fossil-fuel exclusion policy and continue to finance fossil-fuel expansion and other carbon-intensive sectors. Banks that are maintaining or increasing their financing of fossil fuels are a particularly poor option.

2. **Net-zero commitment:** Does the bank have a 2050 (or earlier) net-zero commitment that includes its Scope 3 financed emissions and is aligned with Paris Agreement goals?

   Best option: purpose-driven banks that have a credible 2050 (or earlier) net-zero commitment and have demonstrated a viable, science-based approach to reaching this milestone. Importantly, these banks include the greenhouse gas emissions they generate through lending in their net-zero commitment and have absolute emissions targets.

   Good option: banks that have a credible 2050 (or earlier) net-zero commitment and have demonstrated a viable, science-based approach to reaching this milestone (e.g., using the Science Based Targets method for financial institutions).[15] This includes the emissions they generate through their lending but might not include their full underwriting activities.

   Poor option: banks that have not committed to reaching net zero by 2050 or have a net-zero commitment they are undermining by not publishing a credible net-zero pathway, failing to significantly reduce fossil-fuel financing, or lobbying to weaken net-zero requirements.[16]

3. **Short-term objectives:** Does the bank's net-zero commitment include short-term benchmarks for financed emissions reductions? If so, are those targets for reducing the absolute *volume* of emissions or just the *intensity* (emissions per dollar) of emissions?

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Best option: banks that have established short-term benchmarks for all their emissions, including their financed emissions. The best banks will also make it clear that their 2030 goals are based on reducing absolute emissions (the total emissions they generate) and not just the emissions intensity (the emissions they generate per dollar of financing).

Good option: banks that are setting short-term benchmarks and have demonstrated progress toward reducing absolute emissions.

Poor option: banks that have not established short-term benchmarks and show no clear, credible pathway to reaching net zero by 2050 by making meaningful reductions in the near term.

4. **Disclosing financed emissions:** Does the bank measure and disclose its Scope 1, 2, and 3 emissions in alignment with PCAF's Global GHG Accounting and Reporting Standard for the Financial Industry? If so, what percentage of their lending are they evaluating and disclosing?

   Best option: banks that report their emissions through PCAF, with reporting covering all their lending activities. This reporting includes all their lending to carbon-intensive sectors and extensive details on methodology and assumptions.

   Good option: banks that report at least 65% of their lending activities, including emissions generated by all their lending to carbon-intensive sectors.

   Poor option: banks that do not report at least 65% of their lending activities and the total emissions generated by lending to carbon-intensive sectors.

5. **Climate solutions financing:** Has the bank made a public commitment to provide a specific amount of financing to climate solutions? Does the bank provide more financing to climate solutions than to financing to carbon-intensive sectors?

   Best option: banks that have established a large externally validated climate-solutions financing commitment, have demonstrated progress reaching this objective, and currently provide more climate-solutions finance than finance to carbon-intensive sectors.

   Good option: banks that have established a large climate-solutions financing commitment and demonstrate a trajectory in which climate-solutions financing will soon overtake financing of carbon-intensive sectors.

   Poor option: banks that have not set green financing targets and fund carbon-intensive sectors at a higher rate than they fund projects and companies that are mitigating climate change.

If you conclude after analyzing your bank's climate performance that your bank is not taking sufficient climate action, read on for some suggestions about actions you can take to help maximize your direct and systemic impact.

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Engage Your Bank

Before you take any steps to move your money, you might take advantage of the opportunity to engage with your existing bank as a concerned customer. This is your opportunity to communicate that you want to see their practices align with the above "best" or "good" options, ultimately aligning their practices with our global climate goals. And when many people engage their bank, it can send a powerful demand signal to carbon-intensive and climate-responsible banks alike: Customers want to see their dollars aligned with the climate-friendly enterprises of the future, not the carbon-intensive sectors of the past.

As a valued customer, your feedback and requests should carry some weight, so it might be more impactful to conduct this outreach before you switch banks. Additionally, if appropriate you can notify your bank that you are considering moving some or all your business to a bank with a stronger climate track record.

You can contact your bank's customer services team via the contact information on their website. When you reach them, you can ask about your bank's environmental performance and long-term climate plans, and you can advocate for the bank to adopt the climate-friendly policies and practices detailed above.

Contacting Your Bank

Contact your customer services team via the contact information on your bank's website. Sustainability or environmental, social, and governance (ESG) reports may also have relevant contact information for customers. Here is contact information for the 11 carbon-intensive banks featured in this report:

- JPMorgan Chase – (800) 935-9935
- Citigroup – (888) 248-4226
- Bank of America – (800) 432-1000
- Goldman Sachs – (800) 419-2595
- Morgan Stanley – (888) 454-3965
- Wells Fargo – (800) 869-3557
- US Bank – (800) 872-2657
- Truist – (844)-487-8478
- PNC – (888) 762-2265
- Capital One – (877) 383-4802
- Citizens Bank – (800) 922-9999

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Move Your Money

If you decide moving your money to a more climate-responsible bank is the right climate and financial decision for you, you can employ several strategies, phasing them in over time, to ensure all your banking needs are being met.

- **Break up your banking:** If you currently bank with a carbon-intensive bank but you do not want to fully leave this bank, you can move some of your money to a more climate-responsible bank.
- **Prioritize more climate-responsible banks:** If you are already banking with multiple banks, you can work to ensure that your most responsible bank(s) are your primary bank(s) and house the bulk of your money.
- **Switch banks:** You can move all your money and banking business to the most environmentally and socially responsible banks that also meet your banking needs.

Once you have moved some or all of your money to a climate-responsible bank, you might consider contacting the customer services team at both your old bank and your new bank to inform them that you have taken this action. This sends two powerful signals:

- It lets the carbon-intensive bank know that their insufficient climate performance matters and that they stand to lose business if they don't improve their climate policies and practices.
- It lets the climate-responsible bank know that their strong climate policies and practices are generating business for them and that they stand to gain more business by continuing to lead on this important issue.

Spread Awareness

You can multiply the impact of your actions by letting others know about the steps you took and encouraging them to do the same. This outreach can include friends, family members, coworkers, your employer, and any organizations you are a part of, such as a community nonprofit or a religious institution. As is true with most climate-related actions, every individual action helps, but when organizations, institutions, and corporations engage their banks, the impact is even greater.

Photo by georgeclerk | iStockphoto

Simply put, more voices and more committed actors will lead to a greater and faster impact by pushing all banks – both the leaders and the laggards – to more quickly and dramatically improve their climate policies and practices, and make these improvements permanent.

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CONCLUSION

The world is already experiencing grave and serious impacts from climate change, and the window for averting the worst effects is quickly closing. **But just as the effects of climate change seem to be growing around us, so too are our tools for addressing it.**

Perhaps one of our greatest opportunities to assert our climate influence – leveraging the influence of our banking – has been hiding in plain sight. By not applying a climate lens to banking decisions, many people have been unintentionally funding a future they want to prevent. It is our hope that this report will add another tool that we can use to help build the world we want.

Achieving our climate goals and coming back into balance with the planet's living systems will require every person to pull every lever of influence at our disposal. And with more privilege, influence, and wealth come more opportunities – and more responsibility – to do so. You can implement climate solutions directly in your own life by changing the way you eat, travel, power your life, and more. But just as important are the levers that can help intervene in a much bigger system, with the potential to have a larger and more catalytic impact.

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Now that you know more, it is time to do more. It is time to embrace the power of this climate intervention and engage your banking as a force for decarbonizing the global economy and building a thriving future.

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APPENDIX

Resources

Tools:

- **Bank for Good** – provides resources for learning more and a list of banks that are good for people and the planet
- **Bank.Green** – offers resources for finding ethical and sustainable banks in your area
- **BankFWD** – offers support for engaging with your bank
- **ThirdAct** – shares a Banking on Our Future pledge
- **Invest Your Values** – explores the carbon exposure of 401(k) plans and investments

Reports:

- **The Carbon Impact of U.S. Company-Sponsored 401(k) Plans**, Business Climate Finance and CFA Institute, September 2022 – shows the carbon emissions of corporate retirement plans
- **Banking on Climate Chaos** (& **YouTube short**), Rainforest Action Network, 2022 – tallies fossil-fuel finance from the 60 largest banks in the world
- **The Carbon Bankroll**, Climate Safe Lending Network, Topo Finance, BankFWD, May 2022 – illuminates the impact of corporate cash and investments and reveals a new avenue for corporate climate action
- **Wall Street's Carbon Bubble**, December 2021 – shows that the U.S. financial sector is responsible for more emissions than most countries
- **In Debt to the Planet**, ShareAction, December 2022 – ranks European banks on climate and biodiversity; provides leading practice examples and a list of recommendations
- **Finance and Climate Change**, Influence Map, March 2022 – provides a comprehensive climate assessment of the world's largest financial institutions
- **What Are Large Global Banks Doing About Climate Change**, Federal Reserve, 2023

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Process Overview

This report is designed to help customers of banks headquartered in the United States better understand the emissions indirectly generated by their banking and why climate-conscious banking can be a priority climate action. To accomplish this objective, we conducted a three-stage research process to fill critical data gaps about the financial sector's climate impact and aggregate existing research on the emissions reductions achieved by popular individual consumer actions.

We conducted this research in partnership with climate solutions provider South Pole and with support from numerous climate change experts.

Step 1: Topo Finance Calculated the Financed Emissions of Carbon-Intensive Banks

In December 2021, the Center for American Progress and Sierra Club published *Wall Street's Carbon Bubble: The Global Emissions of the US Financial Sector* (hereafter referred to as the "U.S. report"). This report, which features research South Pole conducted, provides estimates of the absolute emissions financed by the United States' largest banks and asset managers, as well as the carbon intensity per asset class and institution type in 2020. The U.S. report followed the same methodology used to calculate the greenhouse gas intensity of the U.K.'s lending and investment portfolios highlighted in *The Big Smoke: The Global Emissions of the UK Financial Sector.*

To calculate the financed emissions of carbon-intensive banks, Topo Finance partnered with South Pole to conduct an updated version of the underlying investigation of financial institutions' financed emissions featured in the U.S. report. This analysis examines an expanded universe of banks' financial activities in 2022.

The carbon-intensive banks analyzed were selected based on their importance and size in terms of assets under management. All entities are headquartered in the U.S., and the global emissions associated with these entities are included in the analysis (e.g., all of Citigroup's global lending as a bank is included in the assessment).

To estimate emissions from lending and investment activities by the selected entities, Topo Finance and South Pole followed and applied the methodological principles of the **Greenhouse Gas Protocol's Category 15: Investments** and the application guidelines provided by PCAF in the Global GHG Accounting and Reporting Standard for the Financial Industry (the Standard). All financial data were sourced from public disclosures such as regulatory disclosures for banks (10-K forms and Pillar 3 disclosure).

As outlined by the Standard and based on data availability from 10-K disclosures, this analysis employed the use of data from Energy Efficient Internet of Things (EEIoT) datasets, providing region/country and industry-specific emission factors per unit of economic activity (e.g., kilograms CO_2-eq per US$ of revenue) to estimate the exposure of each bank's lending

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activity on a global scale. Asset turnover ratios were employed per the Standard's guidelines to estimate turnover per industry and geography and enable the attribution of emissions per institution (i.e., financed emissions).

For this assessment, South Pole collected geographical and industry credit exposure data reported by banks, including mortgages where these were relevant, in their 10-K reports for 2022. It is worth noting that to calculate the share of overall credit exposure per industry and geography for each bank's exposure, given limitations in the 10-K and Pillar 3 disclosures, it was assumed that banks have credit exposure in every industry and within each geography disclosed.

The initial steps in the assessment carried out by South Pole included:

1. Map the classification of activities outlined by banks in their 10-K and Pillar 3 reports to the Global Industry Classification Standard (GICS), an industry taxonomy.
2. Map these activities to the EEIoT activities, providing greenhouse-gas emission factors per sector.
3. Based on the industrial classification mapping, identify the asset turnover per industry and country.
4. Attribute overall emissions based on the outstanding investment or loan provided to a sector or activity and the use of an asset turnover ratio specific to the country and industry.

Step 2: Topo Finance Analyzed the Financed Emissions of Climate-Responsible Banks

To ascertain the financed emissions and carbon intensity of U.S.-based climate-responsible banks, Topo Finance partnered with South Pole to evaluate the financed emissions reported to PCAF by a select cohort of commercial banks. While 22 U.S.-based commercial banks had committed to disclose their emissions via PCAF at the time of this analysis, only four banks had disclosed their financed emissions.

This analysis paired emissions data from these PCAF reports with financial data disclosed through 10-K forms:

- Total credit exposure – extracted from 10-K/Pillar 3 reports
- Analyzed credit exposure – extracted from annual reports as linked through PCAF
- Coverage percentage – percentage of overall exposure covered by financed emissions, as reported by each institution
- Carbon intensity reported – extracted from annual reports as linked through PCAF.

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Step 3: Project Drawdown and Topo Finance Aggregated Existing Climate Action Research

To compare the estimated emissions reduction that could be achieved by bank switching with other climate-conscious consumer actions, we coalesced data for each baseline activity as follows:

- In the U.S. the average person emits 386 kilograms of CO_2 each year from domestic flights and 198 kilograms of CO_2-eq per year for international flights, for a total of 0.584 metric tons. Source: **Our World in Data**
- Carbon footprint of a roundtrip economy-class flight from New York to San Francisco is 0.576 metric tons. Source: **International Civil Aviation Organization**
- Average carbon footprint of the American diet is 2.27 metric tons per year. Source: **Shrink That Footprint**
- Average per capita residential energy use emissions in the U.S. are 2.83 metric tons per year. Source: **PNAS**
- Emissions from a typical passenger internal combustion engine (ICE) vehicle in the U.S. are 4.6 metric tons per year. Source: **U.S. Environmental Protection Agency**
- Average carbon footprint of an individual living in the U.S. is 16 metric tons per year. Source: **UCAR Center for Science Education**

Once these baseline data were established, we then researched the emissions benefits derived from the corresponding climate-conscious consumer action.

- Adopt a vegetarian diet – average carbon footprint of a vegetarian diet in the U.S. is 1.54 metric tons per year. Source: **Shrink That Footprint**. Switching from an average U.S. diet to a vegetarian diet saves 0.73 metric tons per person per year.
- Adopt a vegan diet – Average carbon footprint of a vegan diet in the U.S. is 1.36 metric tons per year. Source: **Shrink That Footprint**. Switching from an average U.S. diet to a vegan diet saves 1.0 metric tons per person per year.
- Switch to an EV – Emissions from a typical passenger all EV in the U.S. per year are 1.28 metric tons. Source: **U.S. Environmental Protection Agency**. Therefore, switching from an average internal combustion engine vehicle to all EV saves 3.32 metric tons per year.
- Switch to residential solar – An average Boston residential solar installation produces about 10,000 kWh per year. Given that a kWh of electricity produced in Massachusetts is responsible for 0.846 pounds of carbon, the average 9 kW solar system would save 8,460 pounds or 3.84 metric tons per year. Source: **Boston Solar**

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Methodological Limitations

The work presented in this report was carried out in alignment with the guidelines set by the Global GHG Accounting and Reporting Standard for the financial industry to the greatest extent enabled by the data. This created limitations for the scope and coverage. Although PCAF has provided a global standard with options to account for financed emissions, it still has gaps. Methodologies to date note that capital providers and owners generate financed emissions but consider that service providers do not. As a result, and as can be evidenced in PCAF, guidance on accounting for service provision, such as underwriting and mergers and acquisitions, is not yet provided.

This created a significant limitation in the coverage of the assessment because key activities for banks could not be assessed. For example, coverage of sovereign bonds is particularly low due to current methodological limitations and data availability. Sovereign emissions data are available for developed country issuers but notably limited for emerging markets, municipalities, and cities.

Datasets are only available for a limited number of countries and regions. Annual updates are not provided, meaning that the dataset does not always reflect the latest changes in sectoral and country carbon intensities. Related, the industrial classification provided by EEIoT datasets does not map easily with those of more generic industry classification standards. This creates challenges to industry mapping; for example, mapping the disclosed industries in 10-K filings to the EEIoT datasets required subjectivity. Finally, EEIoT datasets have a degree of inaccuracy that stems from applying macroeconomic data to specific activities, which, although useful as an estimate, lack the resolution of bottom-up data collection. This can lead to markedly high numbers in some instances and require calibration, such as the redistribution among geography/industry categories or assigning a similar emission factor from a similar geography or industry as a proxy.

A final but important limitation is the use of averaged data (EEIoT datasets in particular) across most of the assessment, which required economic activity–based emissions factors. These data were used extensively not only in the calculation of emissions for bank credit exposure but also for estimates for asset manager equity investments where no public data were available. To align with the external standards, our researchers maintained use of EEIoT data despite substantial limitations.

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Glossary

Absolute Emissions: The total quantity of greenhouse gas emissions an entity emits over a period of time.

Carbon-Intensive Bank: A large bank that has been officially designated as either a Global Systemically Important Bank or Domestic Systemically Important Bank, which tend to have significant exposure to carbon-intensive sectors.

Carbon-Intensive Sectors: The energy production, mining, and large-scale manufacturing sectors.

Climate-Responsible Bank: A bank that does not lend to or underwrite fossil fuel projects and companies (unless direct finance for a green project), has limited exposure to other carbon-intensive sectors, and prioritizes lending to climate solutions.

Carbon Intensity: The emissions generated annually per unit of cash deployed (lent or invested) by a financial institution. For this report, the unit of measurement used for carbon intensity is metric tons of carbon dioxide equivalent greenhouse gas emissions (tCO_2-eq) per US$1,000 per year (**PCAF**).

Direct Emissions: Emissions that come from things you own or control, such as combustion from cars, furnaces, and hot water heaters in your home. Climate solutions that reduce or avoid these emissions directly include swapping a gas-powered car for an EV, making your home more energy efficient, and reducing your air travel.

Financed Emissions: A subset of indirect emissions that are generated by financial institutions when they invest and loan money to activities and industries.

Indirect Emissions: Emissions that result from activities, purchases, or decisions that you do not directly control. Indirect emissions also stem from material extraction and deforestation that occur as a result of the goods and services you buy and consume.

Net Zero: A target that proposes to negate the amount of greenhouse gases produced by an entity by reducing emissions and employing methods that remove emissions from the atmosphere.

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