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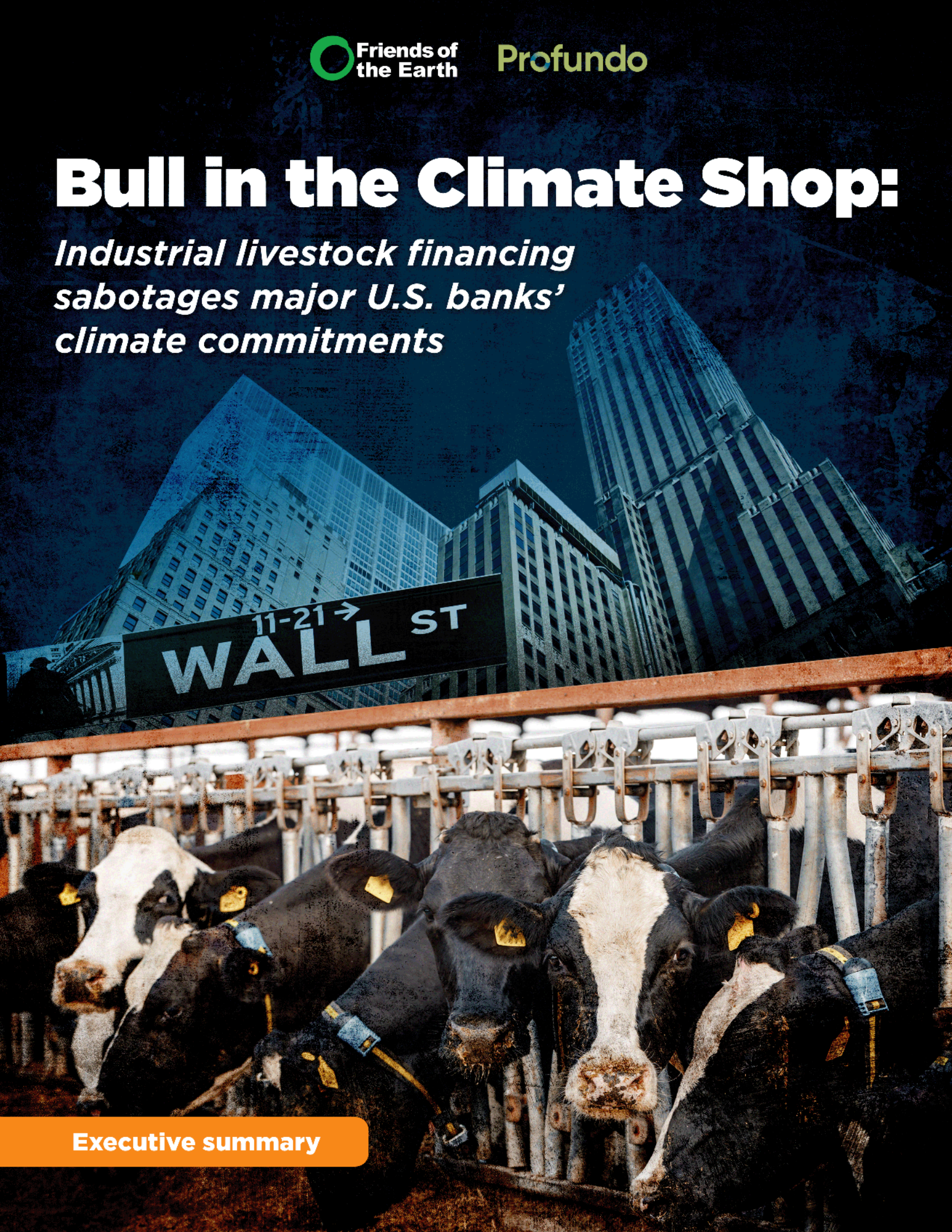
Bull in the Climate Shop:

Industrial livestock financing sabotages major U.S. banks' climate commitments



Executive summary

Acknowledgements

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Friends of the Earth United States, founded by David Brower in 1969, is the U.S. voice of the world's largest federation of grassroots environmental groups, with a presence in 75 countries. Friends of the Earth works to defend the environment and champion a more healthy and just world. We have provided crucial leadership in campaigns resulting in landmark environmental laws, precedent-setting legal victories and groundbreaking reforms of domestic and international regulatory, corporate and financial institution policies. Visit www.foe.org to learn more.

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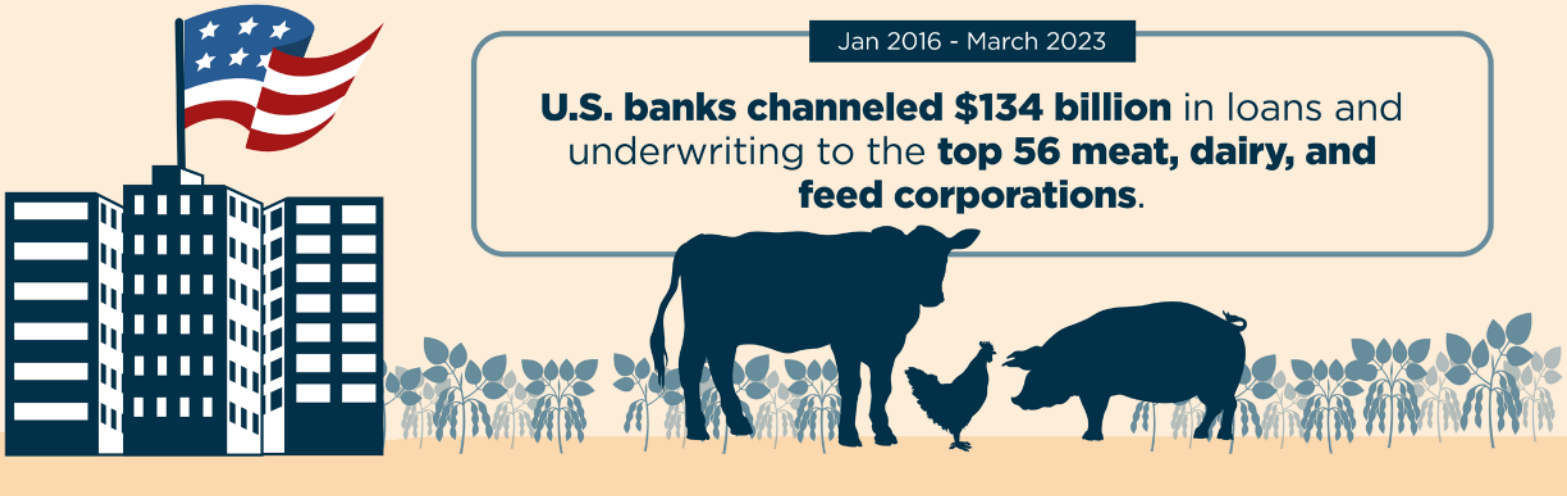


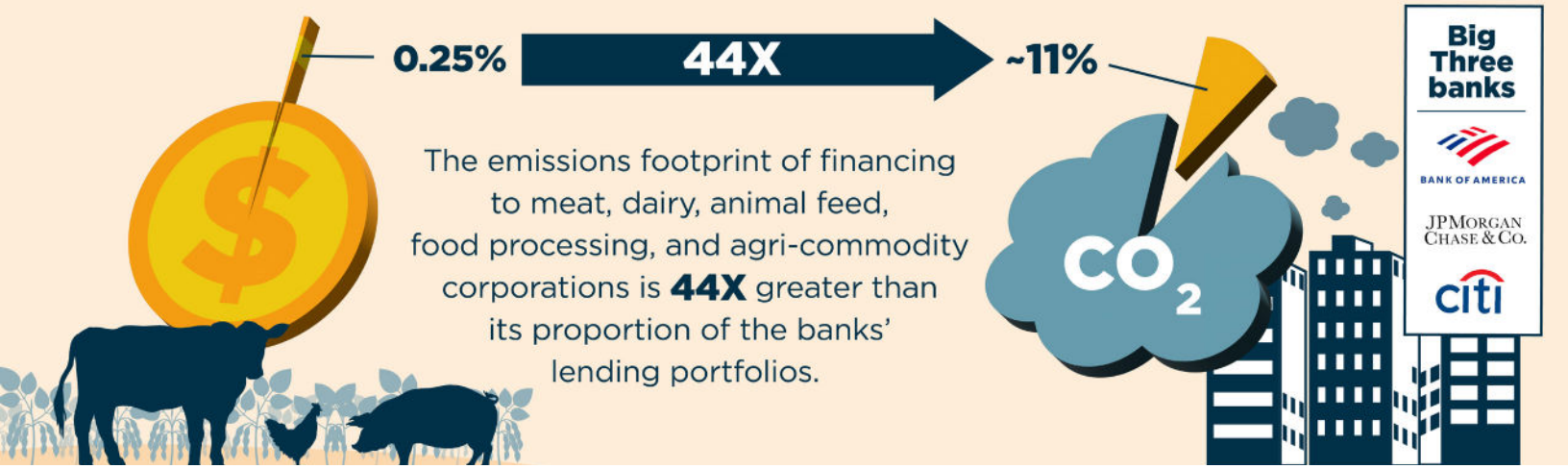
Introduction

As the climate crisis has intensified, U.S. banks have come under increasing pressure from policymakers, shareholders, and civil society to slash the greenhouse gas (GHG) emissions attributable to the loans, underwriting, investments, and other financial services they provide.[i] Three of the largest U.S. banks, **Bank of America, Citigroup, and JPMorgan Chase**, are among the institutions that have responded to these demands by committing to align their lending and investment portfolios with pathways to net zero by 2050 or sooner.[2] While leading U.S. banks have made bold statements regarding the importance of reducing emissions from food and agriculture,[3] such statements have yet to translate into action.

According to our analysis, taking action to reduce financed and facilitated emissions from corporations involved in meat, dairy, and/or feed production could be one of the most effective measures major U.S. banks could take to make progress toward their climate commitments. This is especially true for Bank of America, Citigroup, and JPMorgan Chase — the three largest U.S.-based lenders to these corporations and three of the top four largest global creditors to these corporations.[4]

"Taking action to reduce financed and facilitated emissions from corporations involved in meat, dairy, and/or feed production could be one of the most effective measures major U.S. banks could take to make progress toward their climate commitments."

i The emissions linked to banks' lending services constitute financed emissions while those linked to their underwriting services constitute facilitated emissions. Financed emissions are included in the Greenhouse Gas Protocol as Scope 3, Category 15. (Greenhouse Gas Protocol, Carbon Trust, World Resources Institute, & World Business Council for Sustainable Development. (2013, April). *Category 15: Investments - GHG. Technical Guidance for Calculating Scope 3 Emissions.* https://ghgprotocol.org/sites/default/files/2022-12/Chapter15.pdf)



The cow-shaped hole in banks' climate commitments

This report analyzes the climate impact of U.S. bank financing of corporations involved in meat, dairy, and/or feed production. Drawing on information from financial databases, company reports and filings, and media and analyst reports, the report focuses on the 56 largest corporations by production volume across six industrial livestock subsectors (beef, dairy, pork, poultry, animal feed, and soy trade) and the U.S. bank lending and underwriting provided to these companies during the period 2016-2023. Our analysis finds that 58 U.S. banks provided credit and/or underwriting services to at least one of 29 of these corporations.

Total U.S. financing topped $134 billion, with Bank of America, Citigroup, and JPMorgan Chase accounting for more than half of this amount. These "Big Three" banks' lending to meat, dairy, animal feed, food processing, and agri-commodity corporations[ii] represents ***just 0.25%*** of the banks' loans outstanding but roughly ***11% of their reported[iii] financed emissions.*** [iv] This means the emissions footprint of financing to these companies is 44X greater than its proportion of the banks' lending portfolios. **It also means that removing an already small proportion of these portfolios could reap outsized emissions reduction benefits and propel the banks toward meeting their climate commitments.**

Comparing the Big Three's financed emissions *intensity* (emissions per million US$ in loans outstanding) of meat, dairy, and feed corporations with the emissions intensity of other high-emitting sectors makes it even clearer just how much banks' financing to these companies disproportionately contributes to the lenders' portfolio emissions. Dollar for dollar of the Big Three's loan volume, this financing accounts for up to nine times the emissions of other high-emitting sectors, such as auto manufacturing and energy.

Bank of America's financed emissions intensity of meat, dairy, and feed corporations is more than 2X that of auto manufacturing. Citigroup's financed emissions intensity from these companies is 2.5X that of auto manufacturing and slightly higher than the energy sector. JPMorgan Chase's financed emissions intensity from these companies is almost 4X that of auto manufacturing and almost 9X that of its reported emissions intensity of operational oil and gas.[v]

ii While there are other meat, dairy, animal feed, food processing and agri-commodity companies outside this report's dataset, the report only includes data from the 56 largest global producers and handlers of meat, dairy, animal feed, and soy. In the full report, see Annex 1, Section 3.2 for more information.

iii In our analysis, "financed emissions" and "total financed emissions" refer to banks' self-reported financed emissions (all of which currently excludes agriculture-based emissions) combined with our estimates of the banks' financed emissions from the meat, dairy, animal feed, food processing, and agri-commodity corporations reviewed for this report. Therefore, neither "financed emissions" nor "total financed emissions" should be presumed to account for any bank's *actual* total financed emissions.

iv GHG emissions figures from the meat, dairy, animal feed, food processing, and agri-commodity corporations reviewed for this report represent these corporations' *total* GHG emissions because these companies do not disaggregate emissions by business segment or activity. Thus, the emissions figures for diversified companies that have non-livestock-related emissions, such as agri-commodity traders (e.g., ADM and Bunge) and food processing companies (e.g., Nestlé and Danone), include non-industrial livestock emissions. The financed and facilitated emissions data contained in this report therefore also include non-industrial livestock emissions (as is standard practice when using PCAF methodology, in the full report, see Annex 1, Section 3).

v Emissions intensity is the absolute emissions divided by the loan exposure, which is generally expressed as tCO_2e/millions US$ loans outstanding. The emissions intensity metric can be used to compare financial institutions of different sizes and active in different jurisdictions.

The Big Three's and other banks' financing and underwriting of meat, dairy, and feed corporations such as JBS, Tyson, Cargill, and Nestlé enables the continued global expansion of livestock production. This poses a critical threat to reaching the goals of the Paris Agreement.[5] As we examine in detail in this report, addressing financed and facilitated[vi] emissions from corporations involved in meat, dairy, and/or feed production can be a highly effective way for financial institutions to meet near-term climate reduction targets and align their portfolios with a net zero pathway. Taking action on financing and underwriting of these corporations can also help mitigate climate-related financial risk, preserve the stability of financial markets and the sustainability of long-term returns on which global economic growth ultimately relies.[vii]

Big Three banks' support for meat, dairy, and feed corporations drives GHG emissions

Science tells us that reductions from industrial livestock are particularly critical for meeting the goals of the Paris Agreement.[6] **Industrial livestock — meat, dairy, and animal feed production — drives a majority of global food and agriculture emissions**.[x] Studies estimate livestock will use up *nearly half* the world's 1.5°C emissions budget[xi] by 2030 and 80% by 2050.[7]

According to our research, the global GHG emissions of the 56 largest[xii] corporations involved in meat, dairy, and/or feed production reviewed for this report are higher than the emissions of Japan, the world's eighth largest emitter.[xiii] Between 2016 and 2023, 58 U.S. banks provided US$ 134B+ in lending and underwriting to 29 of these corporations to help fuel expansion. In 2022, total financed and facilitated emissions from this financial support reached 63.1 million metric tons of carbon dioxide equivalent (CO_2e),[xiv]

Defining Industrial Livestock

What is it? "Industrial livestock production" refers to animal breeding, rearing, slaughtering, processing, and/or feed operations involved in the mass production of meat, dairy and eggs. Typically controlled by multinational corporations, this production involves breeding and/or rearing hundreds or thousands of animals in concentrated feeding operations (mostly chickens, dairy cows, and pigs), feedlots (beef cows), or extensive, controlled grazing systems (beef cows) that are vertically integrated into international value chains.

The main sources of GHG emissions from industrial livestock include feed production and processing (including land use change), enteric fermentation from ruminants, and manure storage and processing.

Which players are involved? This report covers the largest 56 companies[viii] by production volume across these six industrial livestock subsectors: animal feed, soy,[ix] beef, poultry, pork, and dairy. Throughout this report, we refer to these corporations involved in meat, dairy, and/or feed production as simply "meat, dairy, and feed corporations." In the full report, see Annex 1, Section 1 for more details on company selection.

A number of the corporations reviewed for this report are involved in non-livestock-related business activities. These include agri-commodity traders (e.g., ADM and Bunge) and food processing companies (e.g., Nestlé and Danone). Because these corporations do not disaggregate their emissions reporting by business segment or activity, their self-reported emissions figures are inclusive of non-livestock-related emissions. Therefore, financed and facilitated emissions data based on these self-reported emissions include non-livestock-related emissions. Financed and facilitated emissions figures based on corporations' *production volumes* exclude non-livestock-related emissions. (In the full report, see Annex 1, Section 3 for more information.)

vi Facilitated emissions calculations reflect banks' estimated contributions to total values of stock or bond issuances. In the full report, see Annex 1, Section 2.5.1 and Section 3.1.1 for more information.

vii According to Swiss Re, one of the world's largest reinsurance providers, the climate crisis could reduce global GDP by 11% to 14% by 2050 — a $23 trillion economic slowdown. Corporations involved in meat, dairy, and/or feed production will not be spared. According to a survey of global investors, 82% agree that climate change presents a material risk to meat and dairy industry-related investments. (Flavelle, C. (2021, April 22). Climate change could cut world economy by $23 trillion in 2050, insurance giant warns. The *New York Times*. https://www.nytimes.com/2021/04/22/climate/climate-change-economy.html; The Shareholder Commons. (2022, September). Climate change & the engagement gap: *Why investors must do more than move the needle, and how they can*. https://theshareholdercommons.com/wp-content/uploads/2022/09/Climate-Change-Case-Study-FINAL.pdf)

viii Refer to Annex 1 for methodology specifics of company selection. The 56 companies are: ACOLID - Arab Company for Livestock Development, ADM - Archer Daniels Midland, Agropur, Amul, Arla Foods, BRF, Bunge, California Dairies, Cargill, China Mengniu Dairy, COFCO Group, Cooperl Arc Atlantique, CP Group, Danish Crown, Danone, DFA - Dairy Farmers of America, DMK Deutsches Milchkontor, Fonterra Cooperative Group, ForFarmers, FrieslandCampina, Fujian Sunner, Glanbia, Groupe Bigard, Guangdong Haid Group, Guangdong Wens Foodstuff Group, Industrias Bachoco, Inner Mongolia Yili, JBS, Koch Foods, Land O'Lakes, LDC Group, Le Groupe Lactalis, Louis Dreyfus Company, Marfrig, Minerva, Muyuan Foodstuff, Nestlé, New Hope Group, NH Foods, Perdue Farms, Pipestone, Sanderson Farms, Saputo, Seaboard, Sichuan Dekon Group, Suguna Farms, Techgank Food, Tönnies Lebensmittel, Triumph Foods, Twins Group (Shuangbaotai Group), Tyson Foods, Vion Food Group, Wellhope Agri-Tech, WH Group, Yangxiang, Zhengbang Group. The 58 U.S. banks have financial relationships with 29 of these 56 meat, dairy, and feed corporations.

ix For soy traders, there is a lack of company disclosure and availability of comprehensive global data. Therefore, a group of leading soy traders were selected using their role in the important trade from Latin America (two-thirds of global exports by volume) as a proxy. In the full report, see Annex 1 for more information on the company selection methodology.

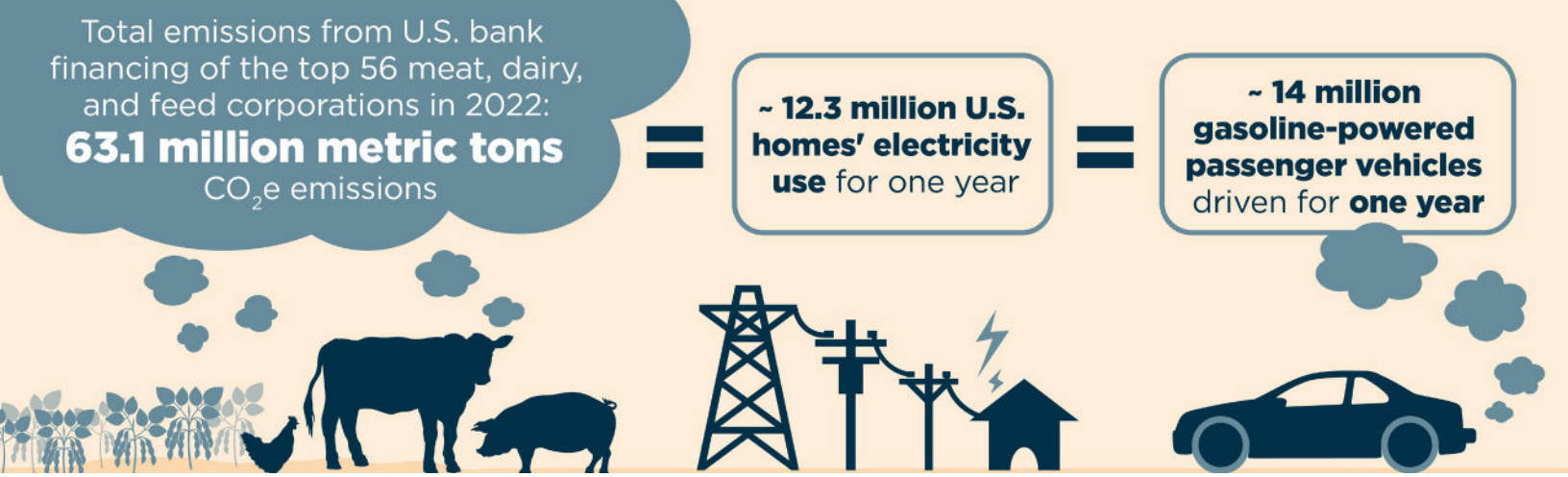
x The main sources of emissions from industrial livestock are feed production and processing (including land use change), enteric fermentation from ruminants, and manure storage and processing.

xi The carbon budget is the maximum amount of carbon emissions that can be released while restricting global temperature rise to the limits of the Paris Agreement.

xii By production volume. In the full report, see Annex 1 for details on company selection.

xiii The total emissions using self-reported Refinitiv data is 1.14B tCO_2e. Japan's emissions were 1.06B tCO_2e in 2020 using https://www.climatewatchdata.org (viewed February 27, 2024).

xiv Carbon dioxide equivalent, or CO_2e, is a metric used to describe the impact of a GHG by articulating it as the amount of CO_2 that would create the same potential warming.



which is comparable to the GHG emissions of roughly 14 million cars driven over a year,[8] the number of cars registered in the state of California. [9]

The Big Three banks accounted for more than half of the total U.S. bank financing of meat, dairy, and feed corporations between 2016 and 2023, totaling US$ 74B+ — and a whopping 24.4 million metric tons CO_2e financed and facilitated emissions. This is equivalent to 27.3 billion pounds of coal burned or the exhaust from 5.4 million cars over the course of a year.[10]

Due to their extensive Scope 3[xv] emissions, agri-commodity traders Cargill, ADM and Bunge, meat giants like JBS, and dairy conglomerate Nestlé are some of the worst climate offenders among the banks' meat, dairy, animal feed, food processing, and agri-commodity clients. According to our calculations, Cargill, ADM, Bunge, and Nestlé account for the bulk of financed emissions from these clients for all three banks (Bank of America, 76%; Citigroup, 92%, and JPMorgan Chase, 86%). The picture is similar for facilitated emissions from issuance underwriting services, with Nestlé, Cargill, and ADM accounting for a dominant proportion for all three banks (Bank of America, 64%; Citigroup, 96%; JPMorgan Chase, 95%).

Even the Big Three are in the dark: underreporting and obscuring of GHG data are rampant among meat, dairy, and feed corporations

The extent of meat, dairy, and feed corporations' contribution to the banks' GHG emissions footprints may remain obscured, even to them. This is because corporations involved in meat, dairy, and/or feed production commonly underreport their emissions. Financiers widely acknowledge that full GHG disclosures (including Scope 3) are critical for making good financial decisions, yet **only 22% of companies reviewed for this report disclose Scope 3 emissions; 56% do not report emissions at all.**[11]

> *"Companies' actual emissions may be up to four times higher than self-reported figures."*

Scope 3 disclosures are particularly important for investors seeking to calculate their financed and facilitated emissions and assess relevant climate-related risks. Scope 3 emissions generally account for 90% or more of meat, dairy, and feed corporations' emissions,[12] which means a lack of transparency masks the true extent of their climate impacts. For example, an analysis of JBS's Scope 3 emissions (as the largest meat producer globally) estimates these at 97%.[13] However, JBS does not disclose these emissions, a failure that is at the center of a current SEC whistleblower complaint.[14]

Even disclosures may not suffice. Research undertaken for this report reveals that self-reported data may reveal an incomplete emissions picture. Our analysis, which leverages production data to calculate the GHG emissions of meat and dairy companies, found that **companies' actual emissions may be up to four times higher than self-reported figures**.[xvi]

xv Scope 3 emissions are the result of activities in a company's value chain. For the 56 companies reviewed in this report, Scope 3 emissions include those resulting from on-farm activities involving livestock as well as off-farm agricultural production activities such as land-use change, processing, distribution, and manufacturing. Where companies have not self-reported Scope 3 emissions, these are estimated according to the methodology described in Annex 1, Section 3. Among the companies reviewed for this report, double-counting of Scope 3 emissions may occur, owing to value chain interdependencies. Due to a lack of supply chain transparency, such double-counting is inevitable and endemic to GHG accounting more broadly. According to the GHG Protocol (GHGP), "Double counting within Scope 3 occurs when two entities in the same value chain account for the Scope 3 emissions from a single emissions source — for example, if a manufacturer and a retailer both account for the Scope 3 emissions resulting from the third-party transportation of goods between them. This type of double counting is an inherent part of Scope 3 accounting. Each entity in the value chain has some degree of influence over emissions and reductions. Scope 3 accounting facilitates the simultaneous action of multiple entities to reduce emissions throughout society." See: Greenhouse Gas Protocol. (2022, June). *Scope 3 Frequently Asked Questions*. https://ghgprotocol.org/sites/default/files/2022-12/Scope%203%20Detailed%20FAQ.pdf

xvi Profundo calculated financed and facilitated emissions for the underlying data in this report (in the full report, see Annex 1 for methodology). Data can be shared upon request.

Methane: the Achilles' heel of banks' net zero ambitions

Omissions and inadequacies in Scope 3 emissions reporting veil the fact that meat and dairy are a methane bomb. In fact, livestock is responsible for over one third of all anthropogenic methane (CH_4) emissions[15]— roughly the same as the methane emissions from oil, coal, and natural gas *combined*.[16] Methane is an extremely potent but short-lived gas with roughly *80X* the global warming potential[xvii] of CO_2 over a 20-year period (GWP20).

According to our research, methane accounts for ~50% of the 58 U.S. banks' financed and facilitated emissions from meat and dairy companies when using the GWP100 metric.[xviii] These banks were responsible for a total of 20.7 million metric tons CO_2e[xix] of methane emissions (12.5 million metric tons CO_2e financed and an additional 8.2 million metric tons CO_2e facilitated, using GWP100[xx]) in 2022. This is already significant, at more than the total methane emissions of Uruguay in 2020.[17] Using the GWP20 metric, methane emissions *more than double* to 48.4 million metric tons CO_2e, representing ~70% of the banks' total emissions from meat and dairy; this is roughly equivalent to Germany's 2020 methane emissions.[18]

Financing from the Big Three accounted for about a quarter, or 12.7 million metric tons CO_2e, of these methane emissions (GWP20), equating to 127 million cows belching for a year.[19] Bank of America's financed and facilitated methane emissions from meat and dairy companies totaled more than Citigroup and JPMorgan Chase's combined, due to Bank of America's relationship with JBS, the world's largest meat producer. Bank of America's underwriting of JBS alone accounted for 87% of its facilitated methane emissions from meat and dairy companies.

A handful of other meat and dairy companies are responsible for the majority of the Big Three's financed methane emissions: for Bank of America 92% are from Cargill, Tyson, Agropur, and Saputo; for Citigroup 82% are from Cargill, Nestlé, and FrieslandCampina; for JPMorgan Chase, 88% are from Cargill, Tyson, and FrieslandCampina. Cargill and Nestlé are responsible for the bulk of facilitated methane emissions for Citigroup (80%) and JPMorgan Chase (75%).

> *"Omissions and inadequacies in Scope 3 emissions reporting veil the fact that meat and dairy are a methane bomb."*

Because methane comprises the bulk of emissions from industrial livestock production, reductions in related financed and facilitated emissions are especially important for any bank that has committed to aligning its portfolio with a net zero pathway. JPMorgan Chase has already acknowledged the importance of addressing methane but has completely ignored the contribution of industrial livestock, opting to engage only with clients in the oil and gas sector on methane reduction strategies.[20] Citigroup and Bank of America also have yet to address methane from meat, dairy, and feed corporations. This collective failure signals a major gap in the Big Three's climate commitments.

xvii Global Warming Potential is a measure of the relative global warming effects of different gases. It assigns a value to the amount of heat trapped by a certain mass of a gas relative to the amount of heat trapped by a similar mass of carbon dioxide over a specific period of time. (Clark, E./OzonAction. (n.d.). *Global Warming Potential (GWP) of Refrigerants: Why are Particular Values Used?*. United Nations Environment Programme. Retrieved December 11, 2023, from https://wedocs.unep.org/bitstream/handle/20.500.11822/28246/7789GWPRef_EN.pdf)

xviii A Changing Markets Foundation and IATP 2022 report highlighted the methane emissions of 15 meat and dairy companies. The research in this report expands the number of meat and dairy companies to 49, and calculates the financed and facilitated methane emissions of U.S. banks tied to the financing of these companies.

xix These numbers are the totals for the 24 meat and dairy companies that received lending or underwriting support from the 58 U.S. banks between 2016 and 2023; these numbers do not include feed or soy trade corporations.

xx GWP100 is the heat trapped by a certain mass of a gas relative to the amount of heat trapped by a similar mass of carbon dioxide over a 100 year timeframe.

Facing the bull in the climate shop: Key recommendations for meeting climate commitments

It is clear that the largest U.S. banks cannot achieve their climate commitments without significant reductions in financed and facilitated emissions from corporations involved in meat, dairy, and/or feed production. Eliminating these emissions is not only strategic, but timely. When the Big Three signed onto the Net Zero Banking Alliance in 2021, they committed to setting GHG emissions reduction targets for priority sectors — including agriculture — by the end of 2024.[21] As Bank of America, Citigroup, and JPMorgan Chase and other global banks prepare to address emissions from agriculture, they must properly address the impact of their lending to and underwriting of corporations involved in meat, dairy, and/or feed production.

To this end, we are calling on the Big Three and all major U.S. banks to treat industrial livestock as a high-emitting sector and set, publish, and implement agriculture sector-specific 1.5°C targets and action plans that include the following:

1 Halt all new financing that enables the expansion of industrial livestock production:

- **a.** No issuance of new corporate or project-based financing or revolving credit facilities to corporations involved in meat, dairy, and/or feed production;
- **b.** No renewals of any such existing loans or facilities;
- **c.** No underwriting of bonds, IPOs, or secondary offerings; and
- **d.** No investment in publicly traded securities.

2 Require meat, dairy, and feed clients to disclose third-party verified 1.5°C targets and action plans that align with IPCC[22] or an equivalent science-based sectoral pathway. At a minimum, banks should require that these clients:

- **a.** Disclose 100% of their disaggregated (CH_4, CO_2, N_2O) GHG emissions across all Scopes (1-3);
- **b.** Set and disclose near-term and long-term timebound absolute reduction targets for CH_4, CO_2, N_2O;
- **c.** Prioritize reduction of CH_4, and adopt absolute CH_4 emissions reductions of at least 30% from 2020 levels by 2030;[xxi] and
- **d.** Achieve emissions reductions by reducing the number of animals in global supply chains and without reliance on carbon offsets, credits or similar mechanisms.[xxii]

3 Address the additional social and environmental harms from industrial livestock production by requiring meat, dairy, animal feed, food processing, and agri-commodity clients (at the corporate group[23] level) to:

- **a.** Halt deforestation and biodiversity loss;
- **b.** Respect human and labor rights, including the rights of Indigenous Peoples and local communities, as well as the right to Free, Prior and Informed Consent;
- **c.** Enact zero tolerance for violence against human rights, land, and environmental defenders;
- **d.** Establish a robust grievance mechanism; and
- **e.** Adopt strong animal welfare criteria.

xxi This aligns with the Global Methane Pledge: https://www.globalmethanepledge.org

xxii Corporations involved in meat, dairy, and/or feed production cannot adequately reduce their GHG footprints by purchasing carbon credits. Issues with carbon credits include: impermanence, double counting, lack of assurance/standards, and an absence of market regulation. (Open Markets Institute & Friends of the Earth. (2023). *Agricultural carbon markets, payments, and data: Big ag's latest power grab.* Friends of the Earth. https://foe.org/wp-content/uploads/2023/02/Carbon-Markets-Report_ExecutiveSummary_Final.pdf)

Given the fierce urgency of the climate crisis, it is incumbent on all financial actors — who themselves rely on a sustainable and relatively stable global economy — to acknowledge the role of industrial livestock production in warming the planet and driving concurrent market-disrupting environmental and social disasters.

The Big Three and other major U.S. banks' financing of corporations involved in meat, dairy, and/or feed production enables these companies to expand production and take up a growing share of the finite amount of GHGs that may be emitted if we are to limit global warming to 1.5°C. Banks' climate goals can be credible only if they treat industrial livestock as a high-emitting sector and take swift and meaningful action to stop supporting its expansion. Taking action on this tiny proportion of their lending portfolios can have an outsized impact on the banks' ability to honor their climate commitments.

Beyond GHG emissions: additional impacts and risks embedded in industrial livestock value chains

Beyond significant GHG emissions, bank financing of meat, dairy, and feed corporations drives many other negative environmental and social impacts including: deforestation; biodiversity loss; freshwater depletion; air, water, and soil pollution; violation of land and labor rights; antimicrobial resistance; the spread of infectious diseases and zoonotic pandemics; and animal cruelty. Any one of these impacts can involve regulatory, reputational, and/or operational risks.

Key findings of our analysis

U.S. bank financing of meat, dairy, and feed corporations and associated emissions:

The GHG emissions of the 56 largest corporations involved in meat, dairy, and/or feed production are higher than the emissions of Japan (in 2020), the world's eighth largest emitter.[xxiii]

Only 22% of the 56 corporations disclose Scope 3 emissions; 56% do not report emissions at all.[24]

Using production data to calculate GHG emissions, our analysis found that individual corporations' actual emissions may be up to 4X higher than self-reported figures.[xxiv]

Between 2016 and 2023, 58 U.S. banks provided US$ 134B+ in lending to and underwriting of major meat, dairy, animal feed, food processing, and agri-commodity corporations to help fuel these companies' expansion.

In 2022, total financed and facilitated emissions from U.S. bank financing of corporations involved in meat, dairy, and/or feed production reached 63.1 million metric tons CO_2e, which is comparable to the GHG emissions from roughly 14 million cars driven over a year, the number of cars registered in the state of California.[25]

Methane accounts for ~50% of major U.S. banks' financed and facilitated emissions from meat and dairy companies (20.7 million metric tons CO_2e) when using a 100-year global warming potential (GWP100) metric.[xxv] Using the GWP20 metric, methane emissions more than double to 48.4 million metric tons CO_2e, representing ~70% of these banks' total CO_2e financed and facilitated emissions from meat and dairy companies and the rough equivalent of Germany's 2020 methane emissions.[26]

Zooming in on the Big Three — Bank of America, Citigroup, and JPMorgan Chase:

Bank of America, Citigroup, and JPMorgan Chase (the "Big Three" banks) are the largest U.S.-based lenders (by volume) to the 56 corporations involved in meat, dairy, and/or feed production that were reviewed for this report. According to our analysis, the Big Three accounted for more than half of the total U.S. bank financing of these corporations between 2016 and 2023, totaling US$ 74B+ — and a whopping 24.4 million metric tons CO_2e financed and facilitated emissions. This is equivalent to 27.3 billion pounds of coal burned or the GHG emissions from 5.4 million cars driven over the course of a year.[27]

Taking action to reduce financed and facilitated emissions from corporations involved in meat, dairy, and/or feed production could be one of the most effective measures the Big Three could take towards achieving their stated climate commitments. The Big Three's lending to meat, dairy, animal feed, food processing, and agri-commodity corporations represents just 0.25% of total loans outstanding but roughly 11% of the banks' reported[xxvi] financed emissions.[xxvii] This means the emissions footprint of industrial livestock-related financing is 44X greater than its proportion of their lending portfolios.

xxiii The total emissions using self-reported Refinitiv data is 1.14B tCO_2e. Japan's emissions were 1.06B tCO_2e in 2020 using https://www.climatewatchdata.org (viewed February 27, 2024).

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xxv A 2022 report by IATP and Changing Markets Foundation highlighted the methane emissions of 15 meat and dairy companies. The research in this report expands the number of meat and dairy companies to 49, and calculates the financed and facilitated methane emissions of U.S. banks tied to the financing of these companies.

xxvi In our analysis, "financed emissions" and "total financed emissions" refer to banks' self-reported financed emissions (all of which currently excludes agriculture-based emissions) combined with our estimates of the banks' financed emissions from the meat, dairy, animal feed, food processing, and agri-commodity corporations reviewed for this report. Therefore, "financed emissions" should not be presumed to account for any bank's *actual* total financed emissions.

xxvii GHG emissions figures from the meat, dairy, animal feed, food processing, and agri-commodity corporations reviewed for this report represent these corporations' *total* GHG emissions because these companies do not disaggregate emissions by business segment or activity. Thus, the emissions figures for diversified companies that have non-livestock-related emissions, such as agri-commodity traders (e.g., ADM and Bunge) and food processing companies (e.g., Nestlé and Danone), include non-industrial livestock emissions. The financed and facilitated emissions data contained in this report therefore also include non-industrial livestock emissions (as is standard practice when using PCAF methodology, in the full report, see Annex 1, Section 3).

Key findings of our analysis (continued)

- Bank of America: lending to these corporations accounts for only 0.28% of the bank's outstanding loans and approximately 14% of its financed emissions.
- Citigroup: lending to these corporations accounts for 0.36% of the bank's outstanding loans and approximately 10% of its financed emissions.
- JPMorgan Chase: lending to these corporations accounts for 0.17% of its outstanding loans and approximately 9.5% of its financed emissions.

Dollar for dollar of the Big Three's loan volume, financing of corporations involved in meat, dairy, and/or feed production accounts for up to 9X the emissions of other high-emitting sectors, such as auto manufacturing and energy.[xxviii]

- Bank of America: financed emissions intensity of these corporations is more than 2X that of auto manufacturing.
- Citigroup: financed emissions intensity of these corporations is 2.5X that of auto manufacturing and slightly higher than the energy sector.
- JPMorgan Chase: financed emissions intensity of these corporations is almost 4X that of auto manufacturing and almost 9X that of operational oil and gas.

Using the GWP20 metric, the Big Three financed 12.7 million metric tons CO_2e of methane emissions per year, equating to 127 million cows belching for a year.[28]

Due to their extensive Scope 3 emissions, agri-commodity traders Cargill, ADM and Bunge, meat giants like JBS, and dairy conglomerate Nestlé are some of the worst climate offenders among the banks' meat, dairy, and feed clients.

- Cargill, ADM, Bunge, and Nestlé account for the bulk of financed emissions from corpo rations involved in meat, dairy, and/or feed production for all three banks (Bank of America, 76%; Citigroup, 92%, and JPMorgan Chase, 86%).
- The picture is similar for facilitated emissions from issuance underwriting services, with Nestlé, Cargill, and ADM accounting for a significant majority across all three banks (Bank of America, 64%; Citigroup, 96%; JPMorgan Chase, 95%).

A handful of corporations are responsible for the majority of financed methane emissions from meat and dairy (using GWP20): for Bank of America, 92% are from Cargill, Tyson, Agropur, and Saputo; for Citigroup, 82% are from Cargill, Nestlé, and FrieslandCampina; for JPMorgan Chase, 88% are from Cargill, Tyson, and Friesland-Campina. Cargill and Nestlé are responsible for the bulk of facilitated methane emissions from the sector for Citigroup (80%) and JPMorgan Chase (75%).

Bank of America's underwriting of JBS *alone* accounted for 87% of its facilitated methane emissions from meat and dairy corporations.

xxviii The energy sector refers to the oil and gas value chain, from upstream exploration and production to downstream refining and marketing. For more detail, see Figure D in the full report.

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