

International Private Bank Climate Report

June 2025

Table of contents

Foreword	03
Executive summary	05
Governance	10
Board and Committee oversight	10
Management oversight	12
Strategy	14
Understanding our business environment	14
Educating and advising clients	16
Offering investment strategies	16
Developing portfolio climate analytics and reporting capabilities	16
Risk management	19
How we identify and assess climate-related risks and types of risk we manage	19
Identifying and managing climate-related risks through three lines of defense	19
Engagement activities with investee companies	21
Metrics and targets	23
Historical metrics	23
Forward-looking metrics	24
GHG emissions of our assets under management	25
Emissions data coverage and limitations	26
Our sustainability initiatives	26

Foreword

In 2024, we published our inaugural Climate Report for the International Private Bank (“IPB”). This milestone marked the beginning of our journey to provide a transparent perspective on our approach to evaluating and managing the risks and opportunities associated with climate change. This year’s report builds on the foundation laid by our initial publication, offering an updated account of the progress we have made in enhancing our understanding and management of climate-related risks for our business.

At the IPB, we are fiduciaries and trusted partners of clients in more than 30 countries. Our dedication to fulfilling our responsibilities includes deepening our comprehension of the financial implications of climate change on our overall business landscape. Additionally, we are committed to educating our clients, empowering them to future-proof their investment portfolios against the evolving challenges posed by climate change.

To achieve these objectives, we periodically monitor macroeconomic, technological, and competitor trends related to climate change, which serves as one of the inputs in shaping our business strategy. We also focus on using a data-driven approach to educate and advise our clients on the climate-related attributes of their investment portfolios. For example, our newly introduced climate reporting capabilities allow our advisors to provide a portfolio x-ray of our clients’ investment holdings, facilitating more in-depth and meaningful conversations about portfolio decarbonization and climate impact. This feature, in conjunction with our extensive suite of investment offerings, enables our clients to translate their aspirations into tangible actions. The ongoing portfolio analytics and reporting that we

offer enables our clients to monitor progress and help maintain alignment with their goals.

Furthermore, we leverage our position within the financial ecosystem to educate our clients through the publication of regular thought leadership content on our websites. We have been publishing an [Annual Energy Paper](#) for 15 consecutive years. Our latest 15th Annual Energy Paper discusses the speed of the transition, electrification, the changing planet, the high cost of decarbonization in Europe, nuclear power, the Los Angeles fires, US energy policies, renewable aviation fuels, superconductivity, methane tracking and the prospects for the hydrogen economy.

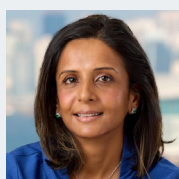
Our annual flagship Long-Term Capital Market Assumptions (“LTCMA”) publication also highlights the impact of climate change, including potential macro or asset class implications. The LTCMA forecasts provide a 10- to 15-year outlook across various asset classes and serve as a foundational element of how we advise our clients. This multi-asset research encompasses multiple regions, including Europe, the Middle East and Africa, Latin America, the United States, and the Asia Pacific. It is also aligned with long-term investment objectives, offering a multi-year shelf life. The LTCMAs are integral to our goals-based planning, allowing us to develop customized wealth plans that align with our clients’ desired outcomes.

We sincerely hope that you will read this report with interest and continue to engage with us in meaningful conversations around the topic of climate-related risks and opportunities. Your engagement and feedback are invaluable as we collectively navigate the challenges and opportunities presented by climate change.

Sincerely



Pablo Garnica
CEO, EMEA
Private Bank



Harshika Patel
CEO, Asia
Private Bank

Harshika



Neha Coulon
Head of ESG,
International
Private Bank



Executive summary

Executive summary

About the International Private Bank

The International Private Bank (“IPB”, “Company”, “we” or “our”) is part of J.P. Morgan Global Private Bank (“GPB”) operating within the Asset and Wealth Management (“AWM”) business of J.P. Morgan Chase & Co. (“the Firm”, “JPMorganChase”, “Firmwide”). The IPB includes the Europe, Middle East and Africa (“EMEA”), Asia Pacific (“APAC”) and Latin America (“LATAM”) regions, in addition to the Global Families Group businesses¹.

The IPB sits across various JPMorganChase entities. These entities are either wholly-owned indirect subsidiaries or branches of wholly-owned indirect subsidiaries of JPMorganChase.

Our clients are primarily ultra-high net worth individuals, charities, endowments, and foundations. The IPB maintains a strategic focus on diversification in order to provide our clients with holistic advice and solutions on wealth management.

The IPB’s offering can be broadly classified into Investment, Credit and Banking services as follows:

1. Investment services through:

- **Entrust:** a fully managed investment approach where we make discretionary investment management decisions on behalf of our clients (“Investment Management” (“IM”))
- **Engage:** an Advisory service which entails a collaborative investment approach
- **Execute:** a Self-Directed Investment approach (“SDI”)

2. Credit services: lending offered primarily as Securities Based Lending (“SBL”), or against Mortgages, Specialized Collateral (Art, Airplanes and Yachts) and occasionally on an unsecured basis.

3. Banking services: providing a full range of cash management options.

Purpose of this Climate Report

This report will focus on our platform across our EMEA and APAC regional businesses² as well as the part of our Latin America business that is booked into our JPM Suisse SA entity. In this

report, we outline how we consider climate-related risks and opportunities within the IPB. While we continue to work towards integrating climate considerations across our business, the IPB Climate Report focuses on our discretionary management activity within our Investment Management business.

In considering our credit business, the IPB Credit Book is limited to operating companies to which our current exposure is immaterial. Therefore, the focus of this report will be on our investments business.

Although there is broad alignment across the Firm regarding the approach to assessing climate-related risks and opportunities, the IPB’s approach is specific to its business, for example, where we consider these risks and opportunities from a fiduciary lens across the assets that we manage on behalf of our clients. Therefore, in certain instances, this may differ from the approach taken by JPMorganChase.

All data in this report is as of 31st December 2024 unless otherwise noted, with a reporting period of 1st January 2024 – 31st December 2024.

Structure of this Report

In line with the Task Force for Climate-related Financial Disclosure (“TCFD”) recommendations, this report is structured into four sections.

- 1. Governance:** discusses how climate-related risks and opportunities feature in our governance and management structures.
- 2. Strategy:** focuses on the key climate-related components of our strategy; understanding our business environment, educating and advising clients, offering investment strategies, and developing portfolio climate analytics and reporting capabilities.
- 3. Risk Management:** explores how we identify and manage climate risks through our three lines of defense.
- 4. Metrics and targets:** discloses the data and metrics of our 2024 carbon emissions, in comparison to the previous year, across our assets under management for our discretionary business.

¹ The Global Families Group serves both U.S. families living abroad and international families who have business and personal interests in the U.S.

² JPM Suisse, JPMSE, JPM Chase Bank HK and JPM Chase Bank SG.

In this Executive Summary, we present the key highlights of the report and provide a summary of our disclosures for each of the TCFD recommendations (where applicable).

Summary of disclosures informed by the TCFD guidance for all sectors and supplemental guidance for Asset Managers³

Governance	
Describe the board's oversight of climate-related risks and opportunities.	<p>Legal entity boards (or appropriate governance-related committees) within the IPB business oversee senior management and challenge business activities and controls, which include, where appropriate, climate-related matters.</p> <p>The Firm's Line of Business ("LOB") Risk Committees (including the AWM Risk Committee) are responsible for providing the Firmwide Risk Committee with information on climate-related risks and climate-related initiatives, as appropriate.</p>
Describe management's role in assessing and managing climate-related risks and opportunities.	<p>Senior management, including certain members of the Firm's Operating Committee ("OC") and relevant leaders within each LOB, are responsible for strategy and execution on environmental, social and governance ("ESG") matters (including climate-related risks and opportunities) across the Firm.</p> <p>The OC is the senior management body for the Firm and includes the Chief Executive Officer ("CEO") of AWM. Subsidiary level executive management bodies tasked with overseeing progress towards strategic AWM business objectives include the J.P. Morgan Asset & Wealth Management Operating Committee and the J.P. Morgan Global Private Bank Operating Committee.</p> <p>Business units and functional groups are responsible for overseeing climate-related risks and opportunities as part of oversight in their respective roles.</p>
Strategy	
Describe the climate-related risks that the organization has identified over the short, medium, and long term.	<p>Climate change is viewed as a driver of risk that may impact existing types of risks (credit & investment, market, operational and strategic) and is categorized into physical risk and transition risk.</p> <p>Physical risk involves economic costs and financial losses due to a changing climate, while transition risk involves the financial and economic consequences of society's shift toward a lower-carbon economy. We recognize that climate-related risks and opportunities can manifest over different time horizons. Therefore, we consider these risks and opportunities over the short term (1-3 years), medium term (3-5 years), and long term (5+ years). Our approach to identifying climate-related risks and opportunities is consistent with the firm-wide strategy; however, the time horizons differ from the firm-wide approach due to regional obligations.</p> <p>In the short- and medium-term, we expect transition risks to be most relevant to our business and clients, with variation across sector and geography. Investments in relatively high-emitting sectors⁴ may be at a greater risk from the transition to a low-carbon economy model and experience knock-on effects on individual assets, particularly in jurisdictions with stronger carbon pricing policies or clean technology incentives. Acute risks from extreme weather events (e.g. floods and wildfires) may increase in frequency and severity over the medium-term, potentially leading to business disruptions for some of our clients, with second order⁵ impacts on their assets with us.</p> <p>At the same time, physical risks, particularly those that are chronic in nature (e.g. sea level rise or average temperature increases), would be expected to increase in prominence over a longer time horizon, playing an important role in the regions in which the IPB businesses operate. These could negatively impact GDP growth, lower consumption levels, and therefore have an impact on the overall economy and our business.</p>

³ This constitutes our investments services across Discretionary/Investment Management business where we conduct Portfolio Management activity (also known as our Entrust business).

⁴ Such as the sectors involved in a fossil fuel value chain; for example, companies within the oil and gas sector.

⁵ The term "first order impacts" refers to impacts that directly affect an individual company, property, or consumer. The term "second order impacts" refers to secondary impacts to financial markets, local economies, or other businesses.

Strategy (continued)

Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.

Our climate-related strategy is built around four key components:

1. Understanding our business environment
2. Educating and advising clients
3. Offering investment strategies
4. Developing portfolio climate analytics and reporting capabilities

The revenues within the IPB across our investments business are driven by the quantum of assets on our platform, which in turn are affected by inflows of new assets and the financial performance of all assets. In addition, our assessment of the impact of climate change on our business environment includes our ability to manage our margins effectively. Exhibits IV-V provide a non-exhaustive list of examples for these dimensions.

Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C increase or lower scenario.

We are developing portfolio and risk management tools and research focused on assessing products for climate-related risk exposure and resilience. In view of this, we currently do not use climate scenario analysis to manage clients' portfolios and/or in any of our governance processes for our discretionary offering. We also do not report these metrics at the aggregate assets under management ("AUM") level. We continue monitoring this analytics landscape to better inform ourselves and our clients.

Risk management

Describe the organization's processes for identifying and assessing climate-related risks.

JPMorganChase's Climate Risk Framework (the "Framework") outlines the capabilities the Firm employs to identify, assess, manage, and quantify the potential impacts of physical and transition risk, which are viewed as drivers of the four risk types (credit and investment, market, operational, and strategic).

The IPB uses the industry standard approach to risk management of a 'Three Lines of Defense' model to create segregation of duties and minimize conflicts of interest. Climate risk is considered among other risks in this approach across relevant areas of the business. With an aim to identify climate-related risks in our investments on behalf of clients, we continue to develop our management information, portfolio and risk management tools, and research focused on assessing companies' climate-risk exposure and resilience.

Describe the organization's processes for managing climate-related risks.

Across the three lines of defense within the IPB, the first line of defense (as primary risk owners), i.e. Client advisors, Due Diligence teams (Manager Solutions, Investment Director Team ("IDT")), Investments Governance Team, Portfolio Managers, and ESG teams, are responsible for identifying, assessing, managing, and monitoring risks, including climate-related risks. The risk and compliance teams act as the second line of defense. These independent functions provide oversight and effective challenge(s) to the first line of defense, including with respect to sustainability-related disclosures. The third line of defense is made up of our Internal Audit team, which provides independent oversight on risk management across the IPB, including climate-related risks where relevant.

Various processes, such as conducting due diligence on platform strategies, managing climate-related risks within discretionary strategies, and handling regulatory requirements related to climate change, are integrated within respective functions. Each team mentioned above holds accountability for these processes.

Risk management (continued)

Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

At the IPB, the Independent Risk Management Function is responsible for providing credible challenge across risk management activities of first line of defense.

Climate change is viewed as a risk driver that may impact existing types of risks managed by the Firm.

Metrics and targets

Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

Where information is available, the due diligence teams aim to monitor sustainability-related risks, including climate-related risks, as part of the qualitative due diligence process, recognizing that these risks can be potentially material to the performance of an investment strategy. The team uses a range of data and tools to conduct this analysis, including the potential use of an annual due diligence survey. The due diligence survey provides information on fund managers' approach to ESG considerations where applicable, including climate.

The teams also gather carbon footprint and other ESG data (where available) to aid in the analysis of potential climate-related risks and to better understand how third-party fund⁶ managers with specific climate-related objectives are performing against these objectives. In the discretionary space, insights into the carbon profile of specific holdings within a fund manager's portfolio can inform discussions regarding their engagement and voting objectives and management of climate-related risks.

In addition to the above, we continue to develop our climate analytics capabilities, datasets and tools to assess and manage climate-related risks associated with our clients' investment portfolios containing strategies for investing in the public markets. We also aim to identify and monitor investment opportunities related to the transition to a low-carbon economy.

Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.

Our carbon exposure metrics for our assets under management for 2024 are:

- Scope 1+2 Emissions: 3 MtCO₂e
- Scope 3 Emissions: 19 MtCO₂e
- Carbon footprint: 345 tCO₂e/\$million invested
- WACI (Corporate): 903 tCO₂e/\$million revenue
- WACI (Sovereign): 261 tCO₂e/\$million GDP

A CO₂ equivalent (CO₂e) is a unit of measurement that is used to standardize the warming effect of different greenhouse gases (over 100 years) in comparison to CO₂. For more information, please refer to our Metrics section which discloses our Scope 1, 2 and 3 GHG emissions.

Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

As of 2024, we have not set emissions targets for our overall assets under management. We continue to evaluate appropriate metrics that reflect our efforts across the entirety of our business.

⁶ Third-party managers also include funds which are onboarded to our platform from J.P. Morgan Asset Management.



Governance

Governance

Governance oversight at the IPB aims to foster an effective risk and control environment. Our goal is to have decision-making processes and responsibilities that are clear, consistent, and aligned with our key business principles, including exceptional client service and operational excellence. This also includes our approach to considering sustainability and climate-related risks. Our governance oversight promotes a culture of accountability and ethical conduct at every level.

Board and Committee oversight

The Firm's Board of Directors (the "Board") oversees the business and affairs of the Firm. Oversight of ESG matters, including those related to climate and nature, is an important part of the Board's work. The Board Risk Committee also receives information on climate-related risks and initiatives, as appropriate.

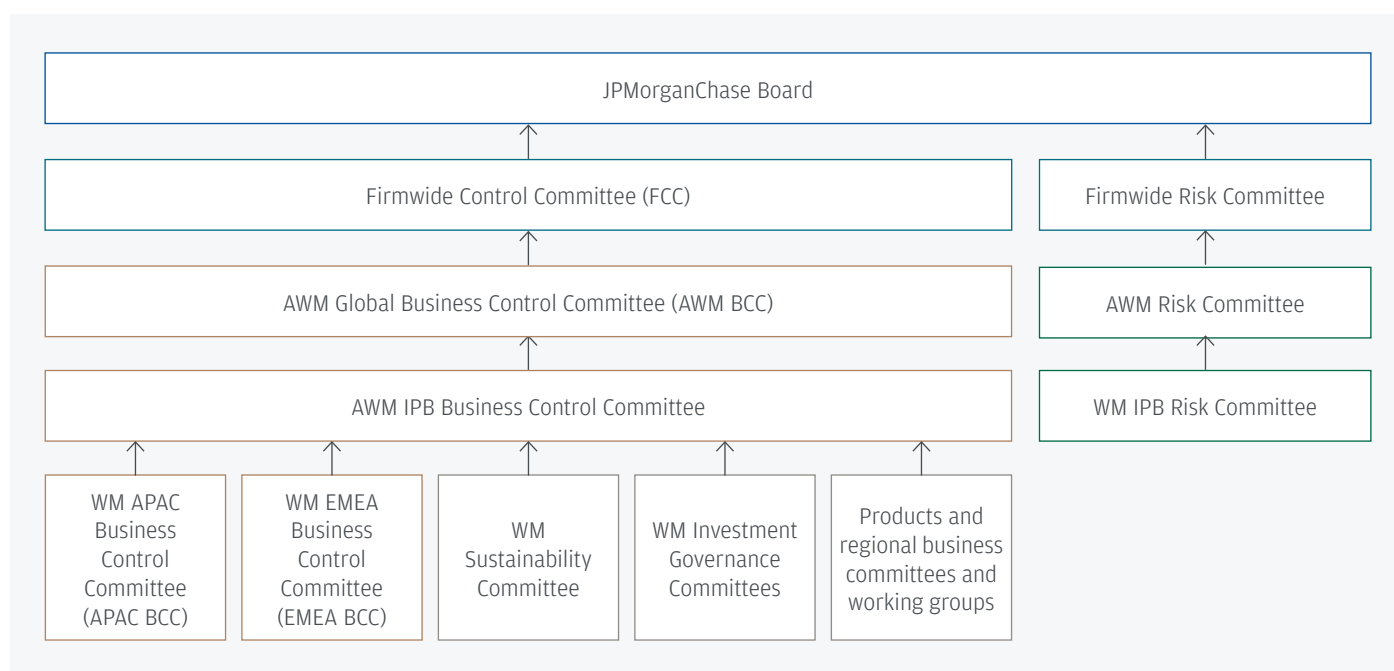
The AWM Risk Committee provides oversight of risks, including climate, in the AWM and JPM Wealth Management ("WM")

businesses. Any item deemed material would be escalated to Firmwide Risk Committee of the Board.

Exhibit I illustrates the governance structure and Exhibit II provides detail on the roles and responsibilities of each of the governance committees.

The boards of the legal entities in which the IPB operates oversee senior management, who are responsible for setting business strategy aligned to long-term value creation for our clients.

EXHIBIT I - GLOBAL PRIVATE BANK FIDUCIARY GOVERNANCE HIERARCHY



In some instances, the boards or senior management committees may create sub-forums that promote the advancement of sustainability initiatives across our in-scope legal entities and branches within the IPB. For example, our EU business that operates out of J.P. Morgan SE ("JPMSE") has implemented a governance structure on ESG matters, including

climate and nature risks. This includes the monthly JPMSE ESG Committee, chaired by the JPMSE Chief Executive Officer (CEO). The JPMSE ESG Committee reports and escalates to the JPMSE Management Board. The IPB Head of ESG serves as a member of the JPMSE ESG Committee.

- In Asia, our business operates out of J.P. Morgan Chase Bank, N.A., Hong Kong and Singapore branches. The branch committees of these two entities are responsible for the oversight of their business affairs. Oversight of climate-related matters is an important part of their work and as such, on a regular basis, they are provided with updates on relevant climate-related matters.

See Exhibit II for a list of some of the various relevant management committees

EXHIBIT II – DESCRIPTION OF GOVERNANCE COMMITTEES

Governance body	Responsibilities	Frequency ⁷
The Asset and Wealth Management Business Control Committee	The GPB is part of the Firm's AWM LOB. The AWM Business Control Committee ("BCC") defines and monitors the AWM-wide control framework in adherence with Firmwide guidelines and assists the AWM CEO in providing relevant control oversight for the global AWM business.	Monthly
International Private Bank Business Control Committee	The IPB BCC provides oversight of the operational risk and control environment for the IPB business, inclusive of Operational Risk, Compliance, and Conduct Risks, for proper identification, management and monitoring of existing and emerging risks, control issues, errors, remediation actions, and trends.	Monthly
Wealth Management ("WM") Investments Governance Committees	The WM Investment Governance Committees serve as oversight to the onboarding and ongoing monitoring of WM-managed and third-party product offerings and their related attributes (such as ESG-related designations). These Committees escalate into WM Fiduciary Committee, which escalates into IPB Business Control Committee.	
	The WM Investment Review Committee ("IRC") is responsible for reviewing and approving non-WM managed offerings, such as third-party managed funds.	IRC: Weekly
	The WM Investment Performance Governance Committee ("IPGC") is responsible for the ongoing review of the investment performance of these third-party managed offerings.	IPGC: Quarterly
	The WM Internal Product Oversight Committee ("IPOC") is responsible for reviewing and approving internal products managed by WM.	IPOC: Ad-hoc
	The WM Portfolio Governance Committee ("PGC") is responsible for the ongoing oversight of these WM-internally managed products.	PGC: Quarterly
	These committees (collectively, "WM Investment Governance Committees") are business-owned with representatives across Business (First Line of Defense) and Second Line (e.g. Risk and Compliance).	
Wealth Management Sustainability Committee	<p>The Wealth Management Sustainability Committee is responsible for reviewing, assessing, and providing ongoing oversight of key sustainability activities and provides strategic direction regarding the Sustainable Investing platform for Wealth Management globally.</p> <p>The committee focuses on five pillars of information:</p> <p>Regulations, Data and Insights, Marketing, Strategic Solutions, and News/Updates.</p>	Ad-hoc

⁷ Each of the governance bodies/committees meets with such frequency and at such times as it is determined in their respective charters (which may allow for additional ad hoc meetings).

Management oversight

Senior management, including certain members of the Firm's Operating Committee ("OC") and relevant leaders within each of the Firm's LOBs, are responsible for strategy and execution on ESG matters (including climate-related risks and opportunities) across the Firm.

The OC is the senior management body for the Firm and includes the CEO of AWM. Subsidiary level executive management bodies are tasked with overseeing progress towards strategic AWM business objectives include the J.P. Morgan Asset & Wealth Management Operating Committee and the J.P. Morgan Global Private Bank Operating Committee.

EXHIBIT III – MANAGEMENT COMMITTEES

Management committees	Responsibilities
JPMorganChase Operating Committee	<p>The most senior firmwide management body, responsible for developing and implementing corporate strategy and managing operations.</p> <ul style="list-style-type: none"> The OC is comprised of the Firm's CEO, Chief Risk Officer (CRO), Chief Financial Officer (CFO), General Counsel (GC), CEOs of each of the LOBs and other senior executives. The AWM CEO is a member of the JPMorganChase Operating Committee. The OC and Board of Directors receive updates from the CRO, the Global Head of Sustainability, the Global Head of the Corporate Advisory, LOB CEOs, and other senior leaders on climate-related initiatives, as appropriate.
J.P. Morgan Asset & Wealth Management Operating Committee	<ul style="list-style-type: none"> A senior management body overseeing business segment operations and strategy across J.P. Morgan Asset Management and J.P. Morgan Wealth Management businesses. The committee is led by the CEO of AWM.
J.P. Morgan Global Private Bank Operating Committee	<ul style="list-style-type: none"> Led by the CEO of J.P. Morgan GPB business segment, the GPB Operating Committee sets the GPB's priorities and business vision. This body of senior leaders receives periodic updates on sustainability and climate-related initiatives.

The IPB ESG team conducts periodic training for senior management, covering topics such as understanding climate risk, scenario analysis and the various approaches used to assess climate risk across the Private bank and other lines of business. Exhibit III provides an overview of the various relevant management committees.



Strategy

Strategy⁸

Our climate strategy continues to be structured around the following core components:

- **Understanding our business environment**
Assessing the impact of climate-related risks and opportunities on our business and the business environment in which we operate, as well as training senior management around these risks.
- **Educating and advising clients**
Educating clients about climate-related risks and opportunities in their portfolios and offering strategies to meet their climate-related investment needs.
- **Offering investment strategies**
Offering ESG, sustainable, and climate-related third-party investment strategies and WM-managed portfolios (i.e. portfolio of funds managed on a discretionary basis).
- **Developing portfolio climate analytics and reporting capabilities**
Improving our understanding of climate-related risks in our investment portfolios.

Understanding our business environment

We recognize that climate-related risks and opportunities can manifest over different time horizons. We therefore consider climate-related risks and opportunities over the short-term (1-3 years), medium-term (3-5 years), and long-term (5+ years).

Climate risk includes both transition risk and physical risk as outlined below.

Transition risk involves the financial and economic consequences of society's shift toward a lower-carbon economy. Transition risk drivers include possible changes in public policy, adoption of new technologies and shifts in consumer preferences. Transition risks may also be influenced by changes in the physical climate.

Physical risk involves economic costs and financial losses due to a changing climate. Acute physical risk drivers include the increased frequency or severity of climate and weather events, such as floods, wildfires, and tropical cyclones. Chronic physical risk drivers include more gradual shifts in the climate, such as sea level rise, persistent changes in precipitation levels and increases in average ambient temperatures. Indirect physical risk includes the second-order effects of these acute and chronic risks, such as supply chain disruptions or changes to property valuations.

In the short- and medium-term, transition risks may impact our business and clients, varying by sector and geography. Investments in relatively high-emitting sectors⁹ may be at a greater risk from the transition to a low-carbon economy model, and experience knock-on effects on individual assets, particularly in jurisdictions with stronger carbon pricing policies or clean technology incentives.

At the same time, physical risks, particularly those that are chronic in nature (e.g. sea level rise or average temperature increases), would be expected to increase in prominence over a longer time horizon, playing an important role in the regions in which the IPB businesses operate. These could negatively impact GDP growth, lower consumption levels, and therefore have an impact on the overall economy and our business.

Acute risks from extreme weather events (e.g. floods and wildfires) may increase in frequency and severity over the medium-term, potentially leading to business disruptions for some of our clients, with second order¹⁰ impacts on their assets with us.

Revenues in our investments business are driven by the quantum of assets on our platform, which in turn are affected by inflows of new assets and the financial performance of all assets. In addition, our assessment of the impact of climate change on our business environment includes our ability to manage our margins effectively. Exhibits IV-V provide a non-exhaustive list of examples for these dimensions.

⁸ The focus of this section is primarily assessing climate risk. For more information on the wider IPB ESG strategy please see our [IPB ESG Report - May 2024](#).

⁹ Such as the sectors involved in a fossil fuel value chain; for example, companies within the oil and gas sector.

¹⁰ The term "first order impacts" refers to impacts that directly affect an individual company, property, or consumer. The term "second order impacts" refers to secondary impacts to financial markets, local economies, or other businesses.

EXHIBIT IV – EXAMPLES OF POTENTIAL RISKS AND OPPORTUNITIES DIRECTLY IMPACTING OUR MARGINS AND ABILITY TO CAPTURE NEW FLOWS

Climate risk drivers	Potential risk example
Type – Transition	
Policy and Legal	Risk associated with increased regulatory requirements for private banks globally or increased litigation risk through additional legal requirements
Reputation risks	Risk associated with the perception of how the IPB is responding to climate-related risks
Markets and customer preferences	Risk that changing client preferences result in clients choosing to move to a private bank which is more aligned to their climate objectives
Type – Physical	
Acute risks	Risk that extreme weather events could affect IPB business operations
Chronic risks	Risk that chronic effects of climate change could have a negative impact on IPB business operations
Climate-related opportunities	
Product and services	There is an opportunity to develop products which align to existing and potential clients' climate objectives

EXHIBIT V – EXAMPLES OF POTENTIAL RISKS AFFECTING OUR INVESTMENTS BUSINESS AND CLIENTS

Climate risk drivers	Risk example and potential portfolio impact ¹¹
Transition risk	
Policy and Legal Tightening climate policies and regulations aimed to aid the transition to the low-carbon economy	Portfolio company impact: Increased regulation compliance costs for investee companies affecting profit and loss (“P&L”) Portfolio impact: Decreased portfolio valuation and AUM
Reputation Portfolio companies in certain sectors could be affected by negative or positive media coverage and public perception of their climate efforts	Portfolio company impact: Business/revenue loss due to negative reputation Portfolio impact: Decreased portfolio valuation and AUM
Consumer preferences Changes in consumer behavior and preferences, e.g. increasing demand for low-carbon electricity or low-emission manufacturing products	Portfolio company impact: Reduced revenues from declining demand for the portfolio company's goods and services, e.g. coal mining companies in the face of peaking demand for coal Portfolio impact: Decreased portfolio valuation and AUM
Technology Innovation and improved commercial viability of new technology solutions	Portfolio company impact: Increased cost of implementing new low-carbon technology solutions or loss of market share due to new technologies/solutions Portfolio impact: Decreased portfolio valuation and AUM
Physical risk	
Physical climate change Acute: Impacts of extreme weather events on investee companies	Portfolio company impact: Disruptions to employee travel and productivity impacting company's P&L, increasing insurance premia Portfolio impact: Decreased portfolio valuation and AUM
Chronic: Sustained long-term climate impacts on investee companies	Portfolio company impact: Increased costs of adapting to climate impacts, reduced employee productivity from sustained higher temperatures, increasing insurance premia for real assets in the areas with rising sea levels Portfolio impact: Decreased portfolio valuation and AUM

In light of these risks, we believe the next section of our climate strategy is important.

¹¹ The impact on specific portfolios will depend on factors such as the investment strategy, size of exposure to portfolio companies subject to positive/negative impacts (as summarized in the table) and the level of diversification within each portfolio. See the Risk management section ('Managing climate risks in discretionary strategies') for more information.

Educating and advising clients

Our clients encompass ultra-high net worth individuals (“UHNW”), charities, endowments, and foundations. For many of them, there is a growing curiosity about the latest developments in climate change, the low carbon transition, and the expected impact that this may have on their investment portfolios.

Education and advice on these topics is a key priority for us to help our clients navigate the complexity of investing through the transition to a low-carbon world and in light of the potential physical risks from climate change. We regularly publish thought leadership on a variety of topics related to climate change, the energy transition, and the impact of rising temperatures on investment portfolios. We have also been publishing an Annual Energy Paper for 15 consecutive years. Our 15th [Annual Energy Paper](#) discusses the speed of the transition, electrification, the changing planet, the high cost of decarbonization in Europe, nuclear power, the Los Angeles fires, US energy policies, renewable aviation fuels, superconductivity, methane tracking and the prospects for the hydrogen economy.

Climate change is also featured in the annual flagship [Long-Term Capital Market Assumptions](#) (“LTCMA”) report. This report provides a 10- to 15-year outlook across asset classes and serves as a foundation for how we advise our clients on their strategic asset allocation, in order to construct diversified and resilient portfolios for a world in transition. This multi-asset research covers multiple regions and is aligned to long-term investment objectives with a multi-year shelf life.

Offering investment strategies

Our Sustainable Investing¹² product offering in the IPB includes third-party investment strategies and WM-managed portfolios (i.e. portfolio of funds managed on a discretionary basis), and includes equity, fixed income, alternative, and multi-asset class products. These strategies are subject to our proprietary due diligence process outlined in the Risk management section of this report. Our investment strategies (i.e. third-party investment strategies and WM-managed portfolios) are considered to incorporate ESG characteristics in their investment process or target sustainable outcomes if they satisfy our internal IPB criteria¹³.

Since 2015, we have been evolving our sustainable investing product offering to reflect the opportunity set and the evolving climate product offering in the market. The IPB fund platform

includes a range of climate-related strategies, focused on companies contributing to the low-carbon transition by decarbonizing their businesses and/or providing solutions for climate change mitigation or adaptation. These strategies are selected based on their intentionality, with support from third-party data sources. For alternative investments, the strategies are selected based on intentionality, as well as the ability, for impact investment strategies, to report on outcomes.

We aim to continue building out the selection of offerings available on our platform for clients interested in gaining exposure to both climate solutions (mitigation and adaptation), as well as decarbonization strategies, whether on a standalone basis or as part of our discretionary offerings.

Developing portfolio climate analytics and reporting capabilities

The IPB continues to make progress to better understand climate-related risk in our investment portfolios. Over the past year, we have evaluated multiple third-party ESG data providers to assess their climate-related data offerings and incorporate it into our client and corporate reporting. We continue to work with these third-party data providers to enhance data coverage and metrics to help drive strategic decision-making.

In doing so the IPB also considers applicable regulatory and legislative requirements as part of its decision-making process by which it delegates various functions or services.

Our research and data strategy is key to improving our understanding of climate-related risks in our investment portfolios. This will enable our portfolio managers to monitor climate-related risk in their investments, allow our Manager Selection teams to monitor the investment and research practices of the third-party managers that we offer on our platform, and to identify relevant climate metrics to share with our clients to enable them to better understand the impact of their portfolios on climate change and vice-versa.

Our centralized team of research experts collaborates with our investment, due diligence, legal and risk professionals to develop an ESG research agenda, with a focus on:

- better understanding climate and sustainability risks¹⁴ and opportunities in our investment portfolios,
- keeping up to date with the evolving ESG data landscape; and
- responding to regulatory and client reporting requirements

¹² Sustainable Investing is an umbrella term we use to describe investment approaches that incorporate financial as well as social and environmental objectives.

¹³ The IPB internal ESG criteria for individual funds and investment solutions are grounded on the product's regulatory disclosures (e.g. EU Sustainable Finance Disclosure Regulation “SFDR” Article 8 or 9 status for the underlying funds) with an additional assessment by our due diligence team, and, for WM-managed investment solutions (our portfolio of funds discretionary offering), there is a requirement for 80% of the portfolio to be invested in Article 8 or 9 products.

¹⁴ Sustainability Risks (SFDR Article 2(22) definition): A sustainability risk refers to an environmental, social or governance event or condition that, if it occurs, could cause a negative material impact on the value of the investment.

We also have two efforts underway to improve our clients' and our internal understanding of climate-related topics.

Client reporting: In 2024, we launched new climate-related client reporting for our clients invested in Investment Management portfolios in the UK. The report allows our advisors and clients to understand the carbon-related characteristics of their portfolios. Historical metrics include measures such as absolute carbon emissions, carbon footprint, and weighted average carbon intensity. Future temperature alignment of the portfolio is also presented through Implied Temperature Rise (ITR) metric. We expect to extend similar reporting to clients of our European and Asian platforms across our various investment services in 2025.

Climate scenario analysis: We are exploring the current range of data and climate scenario analysis approaches offered by different external providers. However, we also acknowledge that this is an evolving space with data and methodology limitations, so we currently do not use climate scenario analysis metrics at the overall entity level reporting. We will continue to monitor this analytics landscape to better inform ourselves and our clients.

Emissions data beyond listed equities, corporate bonds and sovereign debt is limited due to still-developing methodologies, the lack of disclosures (e.g. private equity funds, securitized bonds), and challenges associated with data collection (e.g. hedge funds). Our private markets team continues to be in dialogue with fund managers on our platform to improve data capture and disclosures for underlying portfolio assets.



Risk management

Risk management

How we identify and assess climate-related risks and types of risk we manage

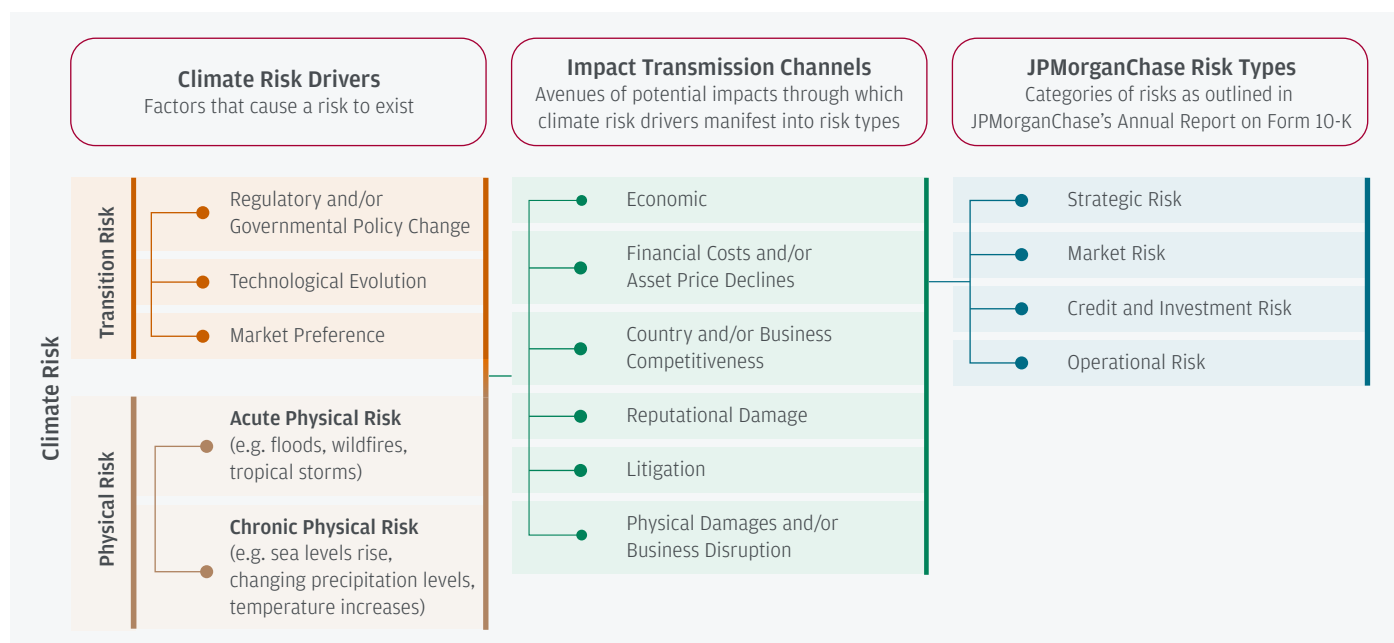
JPMorganChase's climate risk framework outlines the capabilities the Firm employs to identify, assess, manage, and quantify the potential impacts of physical and transition risk.

Climate change is viewed as a driver of risk that may impact existing types of risks (credit and investment, market,

operational and strategic) managed by the Firm. Climate risk is categorized into physical risk and transition risk.

As part of the Framework, the LOBs and Corporate functions are responsible for the identification, assessment, and management of climate risks present in their business activities and for adherence to applicable climate-related laws, rules, and regulations.

EXHIBIT VI - TRANSLATING CLIMATE RISK DRIVERS INTO POTENTIAL RISKS TO THE FIRM¹⁵



Identifying and managing climate-related risks through three lines of defense

The IPB uses a 'Three Lines of Defense' model to manage risks, create segregation of duties, and minimize conflicts of interest. Climate risk is considered among other risks in this approach across relevant areas of the business.

First line of defense

The first line of defense ("First Line") is comprised of client advisors, due diligence teams (Manager Solutions, Investment Director Team ("IDT")), Investments Governance Team, Portfolio Managers and ESG teams. These teams are responsible for identifying, assessing, managing, and monitoring risks, including climate-related risks, in line with the Firmwide framework outlined in exhibit VI. In the next section, we discuss examples of how different teams manage climate-related risks within the First Line.

¹⁵ List is not exhaustive. We continue to refine our taxonomy based on an evolving understanding of how climate-related risk drivers may manifest as risks to the Firm.

Conducting due diligence of investment strategies on the platform

The IPB considers sustainability-related risks as part of its qualitative due diligence processes. This is in place for:

- Funds held in its Investment Management strategies.
- Selection of third-party providers of investment advice or discretionary investment management services in relation to such strategies
- Certain Undertakings for Collective Investment in Transferable Securities funds (“UCITS”) over which investment advice is provided
- Certain Alternative Investment funds (“AIFs”) over which investment advice is provided

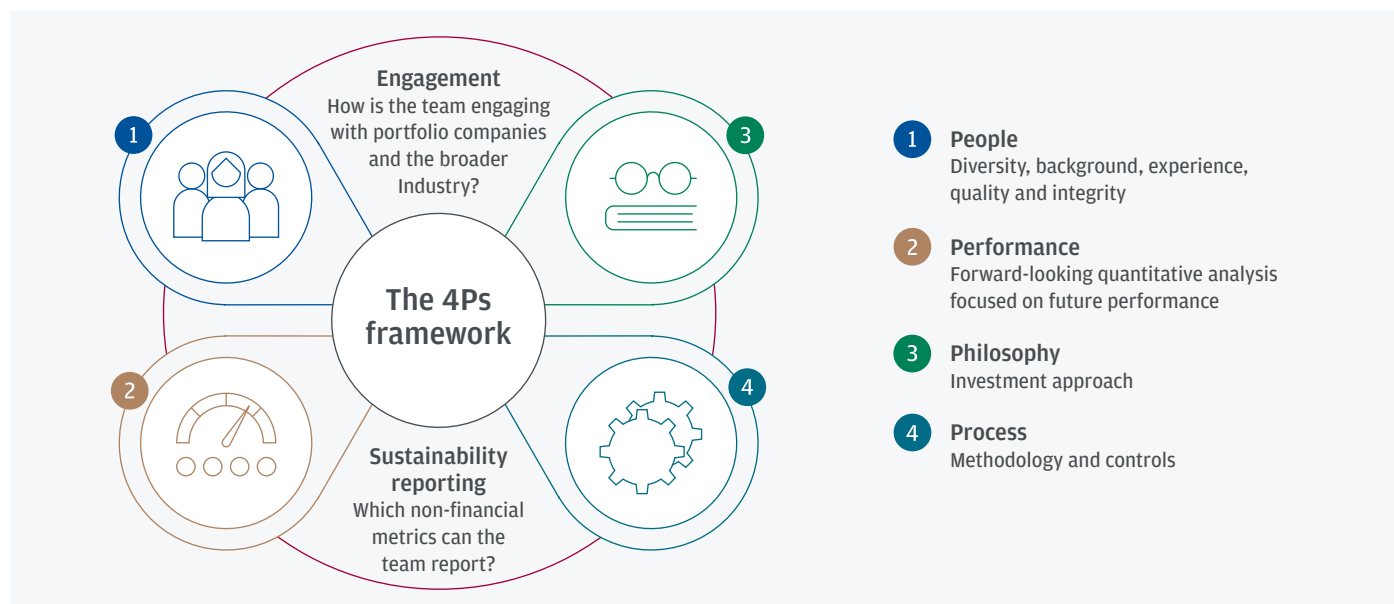
As part of this qualitative due diligence process, third-party managers¹⁶ and WM-managed strategies undergo a “4P” (exhibit VII) due diligence process. This aims to determine if a strategy has the people, philosophy, process and performance in place to deliver competitive returns in line with its investment objective. It also includes a review and evaluation of the investment managers’ processes regarding ESG broadly, as applicable and as cited in their materials and disclosures.

Where information is available, the due diligence teams aim to monitor sustainability-related risks, including climate-related risks, as part of the qualitative due diligence process, recognizing that these risks can be potentially material to the performance of an investment strategy. The team uses a range of data and tools to conduct this analysis, including the potential use of an annual survey, that provides information on fund managers’ approach to ESG considerations where applicable, including climate.

The teams also gather carbon footprint and other ESG data (where available) to aid in the analysis of potentially material climate-related risks and to better understand how third-party fund managers with specific climate-related objectives are performing against these objectives. In the discretionary space, insights into the carbon profile of specific holdings within a fund manager’s portfolio can inform discussions regarding their engagement and voting objectives and management of climate-related risks.

Finally, the teams consider regulatory disclosures like those from the SFDR (where available) in their assessments. Additionally, in private markets, a selection of climate-related strategies are offered as part of our impact investing product offering. The impact designation of a strategy is based on our proprietary Impact Management Framework, which facilitates a consistent evaluation and relative comparison of individual investment opportunities from an impact perspective.

EXHIBIT VII – THE “4P” DUE DILIGENCE PROCESS



¹⁶Third-party managers also include funds which are onboarded to our platform from J.P. Morgan Asset Management.

Managing climate-related risks in discretionary strategies

As part of our established ongoing monitoring processes, we have developed a framework to identify and assess potential climate and nature-related risks for our discretionary strategies invested in public markets¹⁷. This framework consists of a quarterly quantitative assessment of a portfolio's carbon footprint compared to its respective benchmark index, where data is available, supplemented by further qualitative due diligence assessment for cases flagged for potential nature risk. Such cases are then presented to the respective WM Investment Governance Committee along with a due diligence recommendation, as it relates to the strategy's status on the platform (to remain open and available for investment, to temporarily close to further investments or to remove it from the platform).

Due Diligence teams may recommend either a change in the strategy's status on the platform (as described above) or to keep the strategy's platform status unchanged, while continuing to monitor the respective manager's processes for managing the climate-related risks highlighted.

The respective Committee is the final approver of the status assigned to a strategy. Note that where a quantitative assessment cannot be completed (e.g. due to insufficient data coverage), a qualitative assessment is carried out on an annual basis.

Managing regulatory requirements related to climate change

The IPB monitors the development of global and regional requirements related to climate change and sustainability through the GPB Future Regulations Forum. This forum is responsible for identifying new regulations, including ESG regulations, and maintaining a horizon scanning tracker.

Any regulations or consultation papers relevant to ESG or climate require a review which entails mapping our current operating model to identify any necessary enhancements for compliance.

Stakeholders and functional groups across the business assess and manage any changes required to their business activities in order to meet these regulations. As a global company, we are subject to a range of regulatory requirements which we consider collectively in the context of our wider global ambitions. We focus on implementing these regulations in a manner consistent with our business strategy and climate risk management process.

Second line of defense

The second line of defense is the Independent Risk Management ("IRM") function, which is separate from the first line of defense and is responsible for independently measuring risk, as well as assessing and challenging the risk management activities of the first line of defense. IRM is also responsible for the identification of risks within its organization, its own adherence to applicable laws, rules and regulations, and for the development and implementation of policies and standards with respect to its own processes. Information on Risk Governance is described in the Governance section.

Third line of defense

Internal audit is the third line of defense, providing independent oversight on risk management across the IPB, including climate-related risks where relevant. Internal audit conducts testing and evaluation of processes and controls across the Firm, assessing their effectiveness. This scrutiny and testing are intended to verify that procedures are robust and aligned with business principles set by senior leadership.

Engagement activities with investee companies

The GPB does not directly undertake shareholder engagement activities with investee companies (because of the nature of its private wealth business and client base). However, GPB engages with third-party portfolio managers¹⁸ both before and during the period of investment as part of the selection and ongoing monitoring processes, including requesting information about third-party portfolio managers' approaches to engagement with investee companies.

Due diligence teams collect information on third-party portfolios via requests for information and questionnaires. These questionnaires may include requests for information on ESG integration and on engagement/stewardship, as well as other ad hoc or thematic questionnaires.

The GPB does not have asset class or sector-specific guidelines or exclusions based on ESG for investments because of the nature of its business.

¹⁷ Our publicly listed Investment Management strategies are inclusive of third-party advised SMAs investing in single line equity and fixed income securities, as well as our PB WM internally managed fund-of-fund strategies.

¹⁸ Third-party fund managers are inclusive of funds which are onboarded to our platform from J.P. Morgan Asset Management.



Metrics and targets

Metrics and targets

We are developing our climate analytics capabilities including assessing datasets and tools to allow us to manage climate-related risks associated with our clients' investment portfolios, as well as to identify investment opportunities related to the transition to a low-carbon economy.

In line with TCFD recommendations, climate metrics broadly fall into two categories:

- Historical metrics
 - Absolute GHG emissions
 - Absolute GHG emissions normalized by portfolio's market value
 - Portfolio's exposure to carbon intensive companies or economies
- Forward-looking metrics
 - Stress tests that measure the impact of a transition to a low-carbon economy or physical impacts of climate change on a portfolio's holdings based on specific scenarios
 - An estimate of future emissions trajectory of portfolio companies and the associated modeled impact on temperature increase in the future

Despite improvements in companies' climate-related disclosures and the data available to financial institutions, several data quality and coverage issues remain. In this IPB Climate Report, we disclose carbon exposure metrics associated with our discretionary AUM. We also discuss the use cases for other forward-looking climate metrics.

Historical metrics

A number of metrics are needed to provide comprehensive insights into a portfolio's carbon exposure, as each metric can offer a unique perspective and address a distinct use case. Equally, each metric also has its own limitations.

Exhibit VIII on the next page provides a summary of the key carbon exposure metrics based on the current recommendations from the Partnership for Carbon Accounting Financials ("PCAF") and the TCFD.

EXHIBIT VIII – USE CASES AND SHORTCOMINGS OF DIFFERENT CARBON EXPOSURE METRICS

Metric	Description	Use case	Shortcomings
Total financed emissions (tons CO ₂ e)	Absolute GHG emissions associated with a portfolio	<ul style="list-style-type: none"> Set baselines, assess and track changes in portfolio emissions Conduct portfolio decomposition and company attribution analysis based on ownership 	<ul style="list-style-type: none"> Less useful to compare portfolios as emissions data is not normalized in this metric Subject to changes in the underlying companies' market capitalization
Carbon footprint (tons CO ₂ e/USD million invested)	Total carbon emissions for a portfolio normalized by the market value of the portfolio	<ul style="list-style-type: none"> Compare portfolios to one another and/or to a benchmark Conduct portfolio decomposition and attribution analysis 	<ul style="list-style-type: none"> Does not consider differences in the size of companies (i.e. does not reflect companies' carbon efficiency) Subject to changes in the underlying companies' market capitalization
Weighted average carbon intensity (WACI) (tons CO ₂ e/USD million revenue)	Portfolio's exposure to carbon-intensive companies	<ul style="list-style-type: none"> Assess portfolio's exposure to carbon-intensive companies Consider carbon efficiency of companies, reflecting differences in their size Conduct portfolio decomposition and attribution analysis Apply across asset classes, e.g. public listed and private equity, corporate bonds, since does not rely on equity ownership approach 	<ul style="list-style-type: none"> Sensitive to short-term fluctuations in product pricing driving changes in revenues May favor companies with higher pricing levels relative to peers
Weighted average carbon intensity of sovereign debt issuers (tons CO ₂ e/USD million nominal GDP)	Portfolio's exposure to carbon-intensive economies	<ul style="list-style-type: none"> Assess portfolio's exposure to carbon-intensive economies 	<ul style="list-style-type: none"> Nominal GDP in the denominator is less useful to compare the real sizes of economies because it is sensitive to exchange rates¹⁹

We have developed a framework to identify and assess potential climate and nature risks using Total Carbon footprint at a portfolio level. (See the Risk Management – Managing climate risks in discretionary strategies section of this report for more information). This metric allows us to compare portfolios to each other and their benchmarks. It is a useful tool to identify outliers and implement a broader climate product strategy.

Forward-looking metrics

In addition to carbon exposure metrics, we have started exploring use cases for forward-looking climate metrics based on scenario analysis, to develop an understanding of the potential impact of climate change on investment portfolios.

We use scenarios developed by the Network for Greening the Financial System (NGFS), a coalition of central banks and

financial supervisors. These scenarios are designed to help investors understand the potential impact of different climate futures on their investment portfolios through metrics such as Climate Value-at-Risk (Climate VaR). They can also help to benchmark a portfolio to a specific temperature outcome to understand its alignment, for example, to the business-as-usual or a net-zero scenario and the impact on climate change, for example, through the ITR analysis.

However, we note that the application of these metrics to portfolio construction or risk management in an investment context is still an evolving space. These metrics are complex, and both the underlying data and the methodologies are continuing to evolve. As a result, there tends to be a considerable variation in values across different data providers and consequently differences in their appropriate interpretation and use case.

¹⁹ PPP-adjusted GDP would be a better measure for the denominator, based on the most recent recommendations by PCAF (PCAF, The Global GHG Accounting and Reporting Standard Part A: Financed Emissions, 2022).

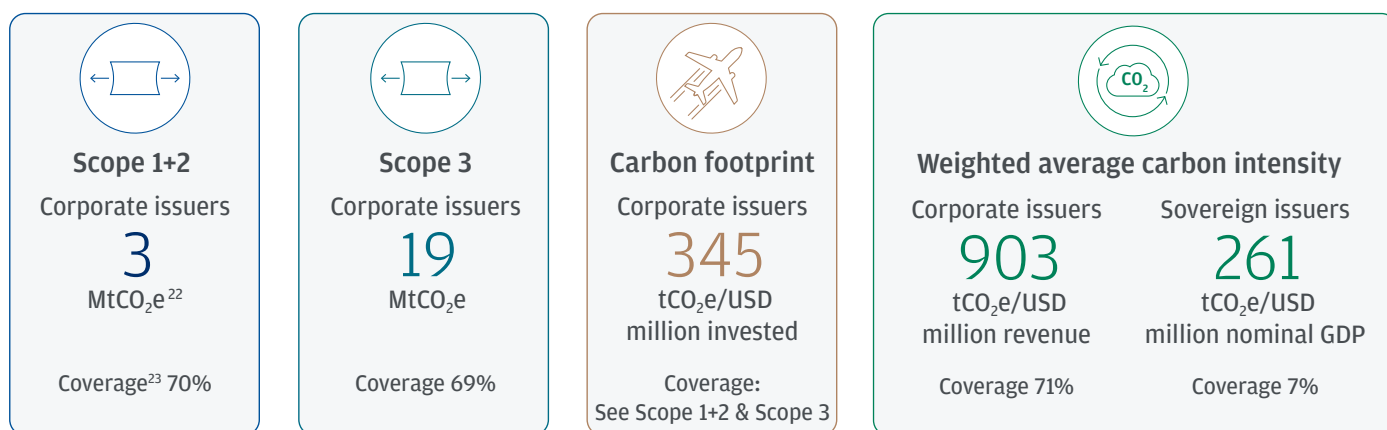
In view of this, we do not disclose Climate VaR and ITR metrics in this IPB Climate Report. Currently, we only use these metrics for regulatory reporting requirements, such as those required by the U.K.'s Financial Conduct Authority's Environmental, Social and Governance Sourcebook regarding disclosures of climate-related financial information consistent with TCFD Recommendations and Recommended Disclosures. To this end, we have gone through the process of onboarding Climate VaR and ITR data provided by MSCI at the fund and individual issuer and/or security level. We will continue monitoring the evolving landscape of climate scenario analysis methodologies and evaluating which approaches may be most appropriate to inform our clients, meet regulatory reporting requirements and, possibly over time, also inform our investment decisions.

As we continue to develop our climate analytics capabilities and the industry standards and data quality evolve, we expect to continue to explore potential use cases for various climate metrics.

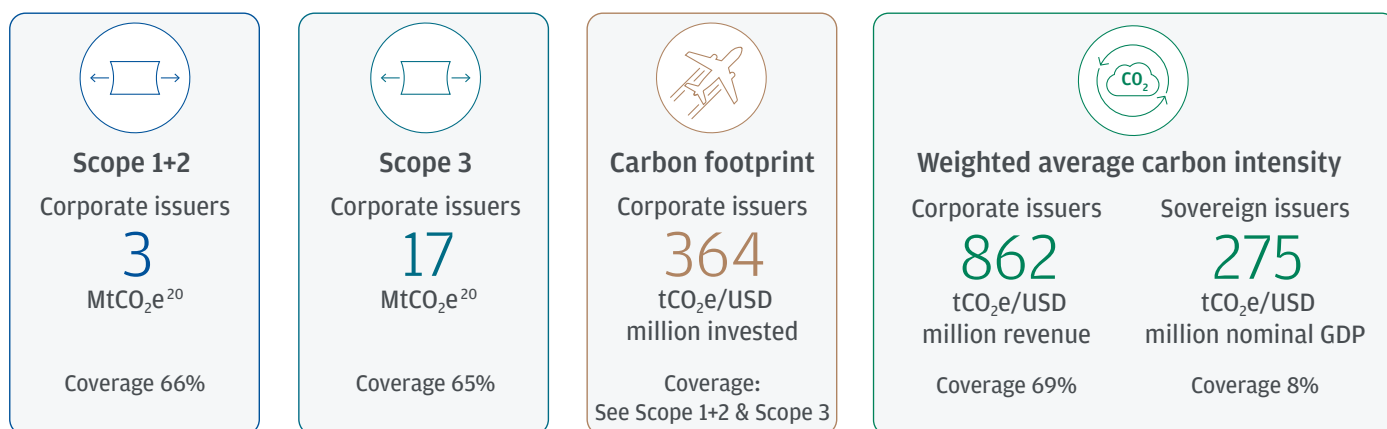
GHG emissions of our assets under management

Below, we report the metrics described in the table in Exhibit VIII. The data is based on our discretionary AUM holdings as of 31st December 2024. MSCI data coverage generally encompasses listed equities, corporate bonds and sovereign debt. Other asset classes are currently not covered due to data limitations and methodology challenges. AUM includes clients' Investment Management accounts across the IPB. Emissions data comes from the MSCI dataset as of 31st December 2024. The data includes absolute Scope 1, 2 and 3 emissions and enterprise value including cash (EVIC) for individual companies, GDP-based emission intensities for individual sovereign debt issuers and fund-level EVIC-based emission intensities and WACIs for corporates and sovereigns.

CARBON EXPOSURE METRICS FOR IPB ASSETS UNDER MANAGEMENT²⁰ IN 2024²¹



CARBON EXPOSURE METRICS FOR IPB ASSETS UNDER MANAGEMENT IN 2023



²⁰Assets under management constitute our Investments services across Discretionary/Investment Management business where we conduct Portfolio Management activity, also known as our Entrust business.

²¹Note that the calculations consider data coverage (reported and estimated) and are rebased to 100%, where coverage is less than 100%, to reflect a full portfolio view. This, in effect, assumes that the value for the metrics for securities or assets for which no data is available, is, on average, the same as that for which data is available, thus the numbers disclosed in this report are representative of the entire IPB portfolio.

²²Mt is reflective of megaton (mass, one million metric tons). A CO₂ equivalent (CO₂e) is a unit of measurement that is used to standardize the warming effect of different greenhouse gases (over 100 years) in comparison to CO₂.

²³Coverage above indicates the percentage of AUM for which MSCI has emissions data (reported and/or estimated including where we have taken proxy for certain funds) available across each reported metric. Please see Appendix for more information on how these carbon exposure metrics have been calculated.

Emissions data coverage and limitations

Our current focus is on disclosing carbon metrics across listed equity, corporate bonds and sovereign debt. These are either held directly as single line stocks or bonds in client accounts as part of Separately Managed Accounts (“SMAs”) or exposure is gained indirectly in client accounts through investments in third-party managed funds. We use MSCI as the main data provider for this purpose.

MSCI provides climate change metrics for over 21,000²⁴ entities. MSCI collects emissions data as reported by companies from a variety of sources, such as Annual Reports, Corporate Social Responsibility Reports, company websites, CDP (formerly Carbon Disclosure Project) and government databases²⁵. However, the majority of companies do not currently report their emissions data²⁶. For such cases, or where emissions reported do not align with the GHG Protocol or do not cover all geographies and operations, MSCI uses proprietary methodologies to estimate Scope 1, Scope 2, upstream Scope 3, and downstream Scope 3 carbon emissions²⁷.

MSCI also provides emissions data for sovereign bond issuers. The data is collected from sources such as the United Nations, World Bank, and the Central Intelligence Agency and is updated annually.

Emissions data beyond listed equities, corporate bonds, and sovereign debt is limited, due to still developing methodologies, the lack of disclosures (e.g. private equity funds, securitized bonds), and challenges associated with data collection (e.g. hedge funds). We expect to continue tracking the developments in methodologies and data coverage and quality and, as this becomes more feasible, may consider extending our reporting to additional asset classes in the future.

Our Sustainability initiatives

Our operational sustainability, including Scope 1 and 2 emissions, is managed at the JPMorganChase level. The Firm’s strategy for energy and carbon footprint management is guided by the concept of the GHG mitigation hierarchy, designed to prioritize actions with the largest potential impact on emissions reduction. JPMorganChase strives to avoid or minimize emissions as close as possible to their source, both to maximize efficiency in its operations and reduce its contributions to atmospheric GHG concentrations. Efforts to further reduce operational GHG emissions include energy efficiency initiatives in its buildings and generating and sourcing renewable electricity for its global electric power needs. For more information on the Firm’s initiatives globally, please refer to the annual Climate Report on the Firm’s [website](#).

Targets

As of 2024, we have not set emissions targets for our overall assets under management. We continue to evaluate appropriate metrics that reflect our efforts across the entirety of our business.

²⁴As reported in MSCI, Greenhouse Gas Emission Data Process, MSCI ESG Research LLC, November 2024.

²⁵MSCI, Carbon Emissions Estimation: Methodology and definitions, MSCI ESG Research LLC, February 2024.

²⁶While the IPB looks to data inputs that it believes to be reliable, the IPB cannot guarantee the accuracy, availability or completeness of its proprietary system or third-party data. Under certain of IPB’s investment processes, data inputs may include information self-reported by companies and third-party providers that may be based on criteria that differ significantly from the criteria used by the IPB, which often include forward-looking statements of intent and are not necessarily fact-based or objectively measurable. In addition, the criteria used by third-party providers can differ significantly, and data can vary across providers and within the same industry for the same provider. Such data gaps could result in the incorrect, incomplete or inconsistent assessment of an ESG practice and/or related risks and opportunities.

²⁷As defined by the Greenhouse Gas Protocol, Scope 1 emissions are direct emissions which occur from sources that are owned or controlled by companies, such as emissions from company-owned facilities. Scope 2 emissions are a company’s indirect emissions, e.g. from purchased or acquired electricity, steam, heat and cooling. Scope 3 emissions refer to indirect emissions from the rest of a company’s value chain, from either upstream or downstream activities. The Protocol distinguishes between 15 Scope 3 categories. Upstream Scope 3 emissions refer to indirect emissions related to purchased or acquired goods and services, downstream Scope 3 emissions refer to indirect carbon emissions related to sold goods and services.

APPENDIX – EQUATIONS FOR CARBON EXPOSURE METRICS

Metric	Description and equation
Total financed emissions (tons CO ₂ e)	Absolute GHG emissions associated with a portfolio $\sum_i (I_i \times Emissions_i \times \frac{Investment_i}{EVIC_i})$
Carbon footprint (tons CO ₂ e/USD million invested)	Total carbon emissions for a portfolio normalized by the market value of the portfolio $\frac{\sum_i (I_i \times Emissions_i \times \frac{Investment_i}{EVIC_i})}{\sum_i (I_i \times Investment_i)}$
Weighted average carbon intensity (WACI) (tons CO ₂ e/USD million revenue)	Portfolio's exposure to carbon-intensive companies $\sum_i (I_i \times \frac{Investment_i}{AUM} \times \frac{Emissions_i}{Revenues_i})$
Weighted average carbon intensity of sovereign debt issuers (tons CO ₂ e/USD million nominal GDP)	Portfolio's exposure to carbon-intensive economies $= \sum_i (I_i \times \frac{Investment_i}{AUM} \times Fossil\ fuel\ sector\ factor_i)$

Where:

- *i* denotes a corporate issuer.
- *g* denotes a sovereign issuer.
- *I* is a scope marker for corporate (*i*) or sovereign (*g*) issuer, equal to 1 for assets and with available (reported or estimated) data (0 otherwise).
- *Emissions* are the greenhouse gas emissions of an issuer corporate (*i*) or sovereign (*g*), measured in tons of CO₂ equivalent.
- A CO₂ equivalent (CO₂e) is a unit of measure that is used to standardize the warming effect of different greenhouse gases (over 100 years) in comparison to CO₂.
- *Investment* is the total value invested in an issuer either corporate (*i*) or sovereign (*g*).
- *AUM* is the total size of the portfolio.
- *EVIC* refers to Enterprise Value including Cash which is the sum of the market capitalization of ordinary shares at fiscal year-end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.
- *Revenues* are the total revenues of a corporate issuer *i*, in million USD.
- *Fossil fuel sector factor* denotes whether a corporate issuer is active in fossil fuel sectors, taking the value of 1 if it is, and 0 otherwise.
- *GDP_g* is the nominal GDP of a sovereign issuer *g* in million USD.

DISCLAIMERS

ESG/Sustainable Investing Risk

Sustainable investing ("SI") and investment approaches that incorporate environmental, social and governance ("ESG") considerations or sustainable investing may include additional risks. ESG or sustainable investing strategies (together, "ESG Strategies"), including separately managed accounts ("SMAs"), mutual funds and exchange traded funds ("ETFs"), can limit the types and number of investment opportunities and, as a result, could underperform other strategies that do not have an ESG or sustainable focus. Certain strategies focusing on a particular theme or sector can be more concentrated in particular industries or sectors that share common characteristics and are often subject to similar business risks and regulatory burdens. Because investing on the basis of ESG / sustainability criteria can involve qualitative and subjective analysis, there can be no assurance that the methodology utilized by, or determinations made by, J.P. Morgan, or an investment manager or investment adviser selected by J.P. Morgan, will align with the beliefs or values of our client. Additionally, other investment managers and investment advisers, including our affiliates, can have a different approach to ESG or sustainable investing and can offer ESG Strategies that differ from the ESG Strategies offered at J.P. Morgan with respect to the same theme or topic. When evaluating investments, an investment manager or investment adviser is dependent upon information and data that might be incomplete, inaccurate, or unavailable, which could cause the manager/adviser to incorrectly assess an investment's ESG or sustainable attributes. In making investment decisions, J.P. Morgan uses data and information, including but not limited to, industry classifications, industry grouping, ratings, scores, and issuer screening provided by third-party data providers or by a J.P. Morgan affiliated service provider. J.P. Morgan does not review, guarantee, or validate any third-party data, ratings, screenings, or processes. Such data and information will not have been validated by J.P. Morgan and can therefore be incomplete or erroneous. ESG and sustainable investing are not uniformly defined concepts and scores or ratings may vary across data providers that use similar or different screens based on their process for evaluating ESG characteristics. Investments identified by J.P. Morgan as demonstrating positive ESG characteristics might not be the same investments identified by other investment managers in the market that use similar ESG screens or methodologies. In addition, investments identified as demonstrating positive ESG characteristics at a particular point in time might not exhibit positive or favorable ESG characteristics across all relevant metrics or methodologies or on an ongoing basis. ESG or sustainable investing practices differ by asset class, country, region, and industry and are constantly evolving. As a result, a company's ESG or sustainability-related practices and J.P. Morgan's assessment of such practices could change over time.

The ESG or sustainable solutions offered by J.P. Morgan meet our internally developed criteria for inclusion in the ESG Strategies available to our clients which, where applicable, take into account ESG or sustainable investing regulations. As part of the due diligence process, J.P. Morgan's Manager Solutions team applies an ESG eligibility framework that establishes minimum criteria for determining the universe of ESG Strategies offered to our clients. The evolving nature of sustainable finance regulations and the development of jurisdiction-specific legislation setting out the regulatory criteria for a "sustainable" investment or "ESG" investment mean that there is likely to be a difference in the regulatory meaning of such terms. This is already the case in the European Union where, for example, under the Sustainable Finance Disclosure Regulation (EU) (2019/2088) ("SFDR") certain criteria must be satisfied in order for an investment to be classified as a "sustainable investment". Unless otherwise specified and where permitted by applicable law, any references to "sustainable investing" or "ESG" in this material are intended as references to our internally developed criteria only and not to any jurisdiction-specific regulatory definition.

MSCI

This disclosure was developed using information from MSCI ESG Research LLC or its affiliates or information providers. Although JPMSE and its affiliates' information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, none of the information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. J.P. Morgan does not review, guarantee or validate any third-party data, ratings, screenings or processes. Such data and information will not have been validated by J.P. Morgan and can therefore be incomplete or erroneous.

KEY RISKS

This material is for information purposes only, and may inform you of certain products and services offered by private banking businesses, part of JPMorgan Chase & Co. ("JPM"). Products and services described, as well as associated fees, charges, and interest rates, are subject to change in accordance with the applicable account agreements and may differ among geographic locations. Not all products and services are offered at all locations. If you are a person with a disability and need additional support accessing this material, please contact your J.P. Morgan team or email us at accessibility.support@jpmorgan.com for assistance. **Please read all Important Information.**

GENERAL RISKS & CONSIDERATIONS

Any views, strategies or products discussed in this material may not be appropriate for all individuals and are subject to risks. **Investors may get back less than they invested, and past performance is not a reliable indicator of future results.**

Asset allocation/diversification does not guarantee a profit or protect against loss. Nothing in this material should be relied upon in isolation for the purpose of making an investment decision. You are urged to consider carefully whether the services, products, asset classes (e.g. equities, fixed income, alternative investments, commodities, etc.) or strategies discussed are suitable to your needs. You must also consider the objectives, risks, charges, and expenses associated with an investment service, product, or strategy prior to making an investment decision. For this and more complete information, including discussion of your goals/situation, contact your J.P. Morgan team.

NON-RELIANCE

Certain information contained in this material is believed to be reliable; however, JPM does not represent or warrant its accuracy, reliability or completeness, or accept any liability for any loss or damage (whether direct or indirect) arising out of the use of all or any part of this material. No representation or warranty should be made with regard to any computations, graphs, tables, diagrams or commentary in this material, which are provided for illustration/ reference purposes only. The views, opinions, estimates and strategies expressed in this material constitute our judgment based on current market conditions and are subject to change without notice. JPM assumes no duty to update any information in this material in the event that such information changes. Views, opinions, estimates and strategies expressed herein may differ from those expressed by other areas of JPM, views expressed for other purposes or in other contexts, and **this material should not be regarded as a research report.** Any projected results and risks are based solely on hypothetical examples cited, and actual results and risks will vary depending on specific circumstances. Forward-looking statements should not be considered as guarantees or predictions of future events.

Nothing in this document shall be construed as giving rise to any duty of care owed to, or advisory relationship with, you or any third-party. Nothing in this document shall be regarded as an offer, solicitation, recommendation or advice (whether financial, accounting, legal, tax or other) given by J.P. Morgan and/or its officers or employees, irrespective of whether or not such communication was given at your request. J.P. Morgan and its affiliates and employees do not provide tax, legal or accounting advice. You should consult your own tax, legal and accounting advisors before engaging in any financial transactions.

Estimates, forecasts, comparisons

For illustrative purposes only. Estimates, forecasts and comparisons are as of the dates stated in the material.

Alternative assets

Investing in alternative assets involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are generally not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Real Estate/Hedge Funds/Other Private Investments

Real estate, hedge funds, and other private investments may not be suitable for all individual investors, may present significant risks, and may be sold or redeemed at more or less than the original amount invested. Private investments are offered only by offering memoranda, which more fully describe the possible risks. There are no assurances that the stated investment objectives of any investment product will be met. Hedge funds (or funds of hedge funds): often engage in leveraging and other speculative investment practices that may increase the risk of investment loss; can be highly illiquid; are not required to provide periodic pricing or valuation information to investors; may involve complex tax structures and delays in distributing important tax information; are not subject to the same regulatory requirements as mutual funds; and often charge high fees. Further, any number of conflicts of interest may exist in the context of the management and/or operation of any hedge fund.

YOUR INVESTMENTS AND POTENTIAL CONFLICTS OF INTEREST

Conflicts of interest will arise whenever JPMorgan Chase Bank, N.A. or any of its affiliates (together, "J.P. Morgan") have an actual or perceived economic or other incentive in its management of our clients' portfolios to act in a way that benefits

J.P. Morgan. Conflicts will result, for example (to the extent the following activities are permitted in your account): (1) when J.P. Morgan invests in an investment product, such as a mutual fund, structured product, separately managed account or hedge fund issued or managed by JPMorgan Chase Bank, N.A. or an affiliate, such as J.P. Morgan Investment Management Inc.; (2) when a J.P. Morgan entity obtains services, including trade execution and trade clearing, from an affiliate; (3) when J.P. Morgan receives payment as a result of purchasing an investment product for a client's account; or (4) when J.P. Morgan receives payment for providing services (including shareholder servicing, recordkeeping or custody) with respect to investment products purchased for a client's portfolio. Other conflicts will result because of relationships that J.P. Morgan has with other clients or when J.P. Morgan acts for its own account.

Investment strategies are selected from both J.P. Morgan and third-party asset managers and are subject to a review process by our manager research teams. From this pool of strategies, our portfolio construction teams select those strategies we believe fit our asset allocation goals and forward-looking views in order to meet the portfolio's investment objective.

As a general matter, we prefer J.P. Morgan managed strategies. We expect the proportion of J.P. Morgan managed strategies will be high (in fact, up to 100 percent) in strategies such as, for example, cash and high-quality fixed income, subject to applicable law and any account-specific considerations.

While our internally managed strategies generally align well with our forward-looking views, and we are familiar with the investment processes as well as the risk and compliance philosophy of the firm, it is important to note that J.P. Morgan receives more overall fees when internally managed strategies are included. We offer the option of choosing to exclude J.P. Morgan managed strategies (other than cash and liquidity products) in certain portfolios.

The Six Circles Funds are U.S.-registered mutual funds managed by J.P. Morgan and sub-advised by third parties. Although considered internally managed strategies, JPMC does not retain a fee for fund management or other fund services.

LEGAL ENTITY, BRAND & REGULATORY INFORMATION

In the **United States**, bank deposit accounts and related services, such as checking, savings and bank lending, are offered by **JPMorgan Chase Bank, N.A.** Member FDIC.

JPMorgan Chase Bank, N.A. and its affiliates (collectively “**JPMCB**”) offer investment products, which may include bank managed investment accounts and custody, as part of its trust and fiduciary services. Other investment products and services, such as brokerage and advisory accounts, are offered through **J.P. Morgan Securities LLC (“JPM”)**, a member of **FINRA** and **SIPC**. Insurance products are made available through Chase Insurance Agency, Inc. (CIA), a licensed insurance agency, doing business as Chase Insurance Agency Services, Inc. in Florida. JPMCB, JPM and CIA are affiliated companies under the common control of JPM. Products not available in all states.

In **Germany**, this material is issued by **J.P. Morgan SE**, with its registered office at Taunustor 1 (TaunusTurm), 60310 Frankfurt am Main, Germany, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). In **Luxembourg**, this material is issued by **J.P. Morgan SE - Luxembourg Branch**, with registered office at European Bank and Business Centre, 6 route de Treves, L-2633, Senningerberg, Luxembourg, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Luxembourg Branch is also supervised by the Commission de Surveillance du Secteur Financier (CSSF); registered under R.C.S Luxembourg B255938. In the **United Kingdom**, this material is issued by **J.P. Morgan SE - London Branch**, registered office at 25 Bank Street, Canary Wharf, London E14 5JP, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - London Branch is also supervised by the Financial Conduct Authority and Prudential Regulation Authority. In **Spain**, this material is distributed by **J.P. Morgan SE, Sucursal en España**, with registered office at Paseo de la Castellana, 31, 28046 Madrid, Spain, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE, Sucursal en España is also supervised by the Spanish Securities Market Commission (CNMV); registered with Bank of Spain as a branch of J.P. Morgan SE under code 1567. In **Italy**, this material is distributed by **J.P. Morgan SE - Milan Branch**, with its registered office at Via Cordusio, n.3, Milan 20123, Italy, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Milan Branch is also supervised by Bank of Italy and the Commissione Nazionale per le Società e la Borsa (CONSOB); registered with Bank of Italy as a branch of J.P. Morgan SE under code 8076; Milan Chamber of Commerce Registered Number: REA MI 2536325. In the **Netherlands**, this material is distributed by **J.P. Morgan SE - Amsterdam Branch**, with registered office at World Trade Centre, Tower B, Strawinskylaan 1135, 1077 XX, Amsterdam, The Netherlands, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Amsterdam Branch is also supervised by De Nederlandsche Bank (DNB) and the Autoriteit Financiële Markten (AFM) in the Netherlands. Registered with the Kamer van Koophandel as a branch of J.P. Morgan SE under registration number 72610220. In **Denmark**, this material is distributed by **J.P. Morgan SE - Copenhagen Branch, filial af J.P. Morgan SE, Tyskland**, with registered office at Kalvebod Brygge 39-41, 1560 København V, Denmark, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Copenhagen Branch, filial af J.P. Morgan SE, Tyskland is also supervised by Finanstilsynet (Danish FSA) and is registered with Finanstilsynet as a branch of J.P. Morgan SE under code 29010. In **Sweden**, this material is distributed by **J.P. Morgan SE - Stockholm Bankfilial**, with registered office at Hamngatan 15, Stockholm, 11147, Sweden, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Stockholm Bankfilial is also supervised by Finansinspektionen (Swedish FSA); registered with Finansinspektionen as a branch of J.P. Morgan SE. In **Belgium**, this material is distributed by **J.P. Morgan SE - Brussels Branch** with registered office at 35 Boulevard du Régent, 1000, Brussels, Belgium, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE Brussels Branch is also supervised by the National Bank of Belgium (NBB) and the Financial Services and Markets Authority (FSMA) in Belgium; registered with the NBB under registration number 0715.622.844. In **Greece**, this material is distributed by **J.P. Morgan SE - Athens Branch**, with its registered office at 3 Haritos Street, Athens, 10675, Greece, authorized by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB); J.P. Morgan SE - Athens Branch is also supervised by Bank of Greece; registered with Bank of Greece as a branch of J.P. Morgan SE under code 124; Athens Chamber of Commerce Registered Number 158683760001; VAT Number 99676577. In **France**, this material is distributed by **J.P. Morgan SE - Paris Branch**, with its registered office at 14, Place Vendôme 75001 Paris, France, authorized by

the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB) under code 842 422 972; J.P. Morgan SE - Paris Branch is also supervised by the French banking authorities the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and the Autorité des Marchés Financiers (AMF). In **Switzerland**, this material may be available at **J.P. Morgan (Suisse) SA**, with registered address at rue du Rhône, 35, 1204, Geneva, Switzerland, which is authorised and supervised by the Swiss Financial Market Supervisory Authority (FINMA) as a bank and a securities dealer in Switzerland.

This communication is an advertisement for the purposes of the Markets in Financial Instruments Directive (MIFID II) and the Swiss Financial Services Act (FINSA). Investors should not subscribe for or purchase any financial instruments referred to in this advertisement except on the basis of information contained in any applicable legal documentation, which is or shall be made available in the relevant jurisdictions (as required).

In **Hong Kong**, this material is distributed by **JPMCB, Hong Kong branch**. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In **Singapore**, this material is distributed by **JPMCB, Singapore branch**. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice. For materials which constitute product advertisement under the Securities and Futures Act and the Financial Advisers Act, this advertisement has not been reviewed by the Monetary Authority of Singapore. JPMorgan Chase Bank, N.A., a national banking association chartered under the laws of the United States, and as a body corporate, its shareholder's liability is limited.

With respect to countries in **Latin America**, the distribution of this material may be restricted in certain jurisdictions. We may offer and/or sell to you securities or other financial instruments which may not be registered under, and are not the subject of a public offering under, the securities or other financial regulatory laws of your home country. Such securities or instruments are offered and/or sold to you on a private basis only. Any communication by us to you regarding such securities or instruments, including without limitation the delivery of a prospectus, term sheet or other offering document, is not intended by us as an offer to sell or a solicitation of an offer to buy any securities or instruments in any jurisdiction in which such an offer or a solicitation is unlawful. Furthermore, such securities or instruments may be subject to certain regulatory and/or contractual restrictions on subsequent transfer by you, and you are solely responsible for ascertaining and complying with such restrictions. To the extent this content makes reference to a fund, the Fund may not be publicly offered in any Latin American country, without previous registration of such fund's securities in compliance with the laws of the corresponding jurisdiction.

JPMorgan Chase Bank, N.A. (JPMCBNA) (ABN 43 074 112 011/AFS Licence No: 238367) is regulated by the Australian Securities and Investment Commission and the Australian Prudential Regulation Authority. Material provided by JPMCBNA in Australia is to “wholesale clients” only. For the purposes of this paragraph the term “wholesale client” has the meaning given in section 761G of the Corporations Act 2001 (Cth). Please inform us if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

JPMS is a registered foreign company (overseas) (ARBN 109293610) incorporated in Delaware, U.S.A. Under Australian financial services licensing requirements, carrying on a financial services business in Australia requires a financial service provider, such as J.P. Morgan Securities LLC (JPMS), to hold an Australian Financial Services Licence (AFSL), unless an exemption applies. JPMS is exempt from the requirement to hold an AFSL under the Corporations Act 2001 (Cth) (Act) in respect of financial services it provides to you, and is regulated by the SEC, FINRA and CFTC under US laws, which differ from Australian laws. Material provided by JPMS in Australia is to “wholesale clients” only. The information provided in this material is not intended to be, and must not be, distributed or passed on, directly or indirectly, to any other class of persons in Australia. For the purposes of this paragraph the term “wholesale client” has the meaning given in section 761G of the Act. Please inform us immediately if you are not a Wholesale Client now or if you cease to be a Wholesale Client at any time in the future.

This material has not been prepared specifically for Australian investors. It:

- may contain references to dollar amounts which are not Australian dollars;
- may contain financial information which is not prepared in accordance with Australian law or practices;
- may not address risks associated with investment in foreign currency denominated investments; and
- does not address Australian tax issues.

References to “J.P. Morgan” are to JPM, its subsidiaries and affiliates worldwide. “J.P. Morgan Private Bank” is the brand name for the private banking business conducted by JPM. This material is intended for your personal use and should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission. If you have any questions or no longer wish to receive these communications, please contact your J.P. Morgan team.

© 2025 JPMorganChase. All rights reserved.

J.P.Morgan PRIVATE BANK