

Global Research Unlocked

ESG is evolving, but not going away; new EU rules to have broad impact

Key takeaways

- BofA Global Research analysts join the podcast to discuss emerging risks, opportunities, and growth themes in global markets
- US ESG funds had a challenging 2023. Monitoring regulatory landscape is important for material risks and sector opportunities
- Lawyer Michael Littenberg walks us through some of latest ESG regulatory initiatives and implications for ESG investors

06 March 2024

ESG

United States

Thomas (T.J.) Thornton

Head of Research Marketing

BofAS

+1 646 855 2449

thomas.thornton2@bofa.com

Dimple Gosai, CFA

Rsch Analyst & ESG Strategist

BofAS



ESG topics still impacting stocks and there's more to come

US ESG funds faced a challenging 2023, seeing net outflows of around \$7.1 billion, but strong markets meant that assets under management grew strongly. In the US, ESG regulations have historically been market driven, unlike the specific directives in the EU, but more recently the regulatory landscape in the US has seen a flurry of initiatives. For investors, there is state legislation that seeks to penalize managers who boycott fossil fuels and firearms manufacturers and legislation in other states that seeks to keep pensions from investing in fossil fuels and firearms. There have been legal challenges to California's legislation but changes coming from the EU will still be relevant for global companies regardless of the California outcomes. The SEC will vote on the long-awaited climate disclosure rule later today. Dimple Gosai hosts Michael Littenberg of law firm Ropes & Gray to discuss the evolving ESG regulatory landscape and which regulations may impact ESG investors. *Global Research Unlocked can now be found on public podcast platforms, including Spotify, Apple Podcasts, Google Podcasts, and Amazon Music. These podcasts are first released to clients and then to the platforms.*

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 7 to 8.

12667015

Timestamp: 06 March 2024 05:00AM EST

Full Podcast Transcript

T.J. Thornton, Head of Product Marketing: Hello, and welcome to Global Research Unlocked, where we discuss what's rising from growth industries to rising risks and opportunities in global markets. I'm T.J. Thornton, Head of Product Marketing at BofA Global Research, and we're recording this episode on Friday, February 16, 2024.

US ESG funds actually faced a very challenging year where they saw net outflows of around \$7.1 billion in 2023, which was the worst flow performance in the fund's history after five consecutive years of inflows, but that being said, it's not all dismal. Total US ESG AUMs (assets under management) still grew by 24% in 2023, and fun fact is we actually saw the number of US ESG funds grow by 9% last year, so I do think specific themes are still gaining traction.

Dimple Gosai, CFA

Investor interest and views on ESG have evolved quite a bit over the last couple of years. Today we're privileged to be joined by Michael Littenberg, Partner at Ropes & Gray and Dimple Gosai, Head of US ESG and Cleantech Analyst at BofA Global Research. They'll shed some light on these ESG topics and some more. A true expert on this topic, Dimple will host, and I'll be here to take notes. Thanks Michael and Dimple for joining us today.

Dimple Gosai, Head of US ESG Strategy and Cleantech Analyst: Thank you, T.J. Thank you, Michael.

Michael Littenberg, Partner at Ropes & Gray: Thank you for having me here today. It's a pleasure to be with you.

Dimple Gosai: Michael, I'm really glad you could have joined us today. I guess in the US, ESG regulations have historically been market driven, unlike EU specific directives, but more recently the regulatory landscape in the US has seen a flurry of initiatives. Michael, this is really your domain. What are the main ESG regulations investors really should be focusing on?

Michael Littenberg: There's really two categories of regulation in the United States that investors need to be aware of as they relate specifically to ESG. There's a category of regulation that's specific to investors, and then there's the category of regulation that's specific to investee companies. Starting with regulation that's applicable specifically to investors, I think you could break that down largely into state level regulation, what's often referred to as legislation that's pro ESG or anti ESG, and so it's legislation that seeks to define investment practices, typically, when investing in state pension funds on the pro ESG side of it, its legislation that, for example, seeks to limit investment in fossil fuels and firearm assets. And on the anti ESG side, it's legislation that, for example, seeks to penalize managers who boycott fossil fuels and firearms are perceived to be doing that, as well as to penalize managers that are taking ESG into account when it's not viewed as being financially relevant, and there's literally hundreds of different pieces of legislation, both at the adopted and proposing stage in the states. And although not specific to managers, I'll just also mention that there is a big body of anti-fraud legislation. Since there've been several ESG related enforcement actions involving managers, and that's an area that the SEC is still focused on. On the investee side, managers are focused in particular on climate related disclosure legislation. And there's three pieces of legislation that were recently adopted in California that provide for disclosure on greenhouse gas emissions, on climate risk, and then also on net zero and similar sorts of claims. There's also a proposal from the SEC for climate disclosure that would apply to public companies. But then at the state level, there's also proposals that recently have come out of Illinois and New York that are somewhat similar to California legislation. Those are the big areas, but one other I'll just mention, the investee company side that I think is getting more attention is the Uyghur Force Labor Prevention Act and that deals with products that are imported into the United States that have inputs from the Xinjiang region of China. And that's an area where we've been

seeing a lot more enforcement as recently as the other day. I think that's something that's also on a lot of investors' radar screens with respect to the companies that they're investing in. There's of course many other legislative proposals beyond these at the Federal and the State level. But I think it was probably premature generally to spend time on those, either because passage of the legislation is unlikely, or the legislation will probably change significantly before it ultimately gets adopted. And the last point I'll just make is the items that I've highlighted, those are on the US side, but there's also a lot of developments on the international side as well.

Dimple Gosai: You made a really interesting point. We have seen a wave of anti ESG bills in Republican led states that basically prohibit investment managers from considering climate and ESG related risks, like you rightly pointed out. But I do think that the impact largely varies, and I would say that certain regions are seeing more traction than others, which is reflected in AUM. I'm curious, what do you make of this as we go further out in the year, if this landscape shifts and whether there's a contagion effect beyond borders?

Michael Littenberg: It's a good question. I think as we continue to move out, during the course of the year, I think we are going to see more state level legislation around ESG, both legislation that's pro ESG and legislation that anti ESG or seeks to limit integration of ESG factors by asset managers. Certainly, some states have had more traction on anti ESG legislation than others. I think Texas and Florida come to mind there for a lot of people, but also Kentucky, West Virginia, Louisiana, Indiana, among others. Based on our tracking, there's currently 20 states that restrict or propose restricting consideration of ESG factors in investment decisions. There's 11 states that target entities that boycott particular industries, and there's some overlap between those 20 states and those 11 states, so they're not all unique. And there's other bills that of course have been proposed that have not gained traction. For example, New Hampshire recently had a bill that was proposed that would've criminalized consideration of ESG factors, and that bill did not make it very far in the state legislature and that bill is no longer an active bill. Your question though about contagion or spillover effect, I do think that is something that we will continue to see. We've seen it in the past, including last year, the year before. There is a lot of coordination among states around ESG, both states that are pro ESG and anti ESG. And I think that's something that's going to continue. And some of the legislative proposals that have come out around ESG, in particular, some of the anti ESG proposals have come out of think tanks, so you do see similar bills being, and as in many cases, identical bills being proposed in different states. Maybe I can ask you a question 'cause I know you're so active within this area. In terms of investment flows, what are you seeing in terms of some of the ESG flows and also just the sentiment in the US?

Dimple Gosai: Yeah, this is a good question, very different in the US compared to Europe. US ESG funds actually faced a very challenging year where they saw net outflows of around \$7.1 billion in 2023, which was the worst flow performance in the funds' history after five consecutive years of inflows, but that being said, it's not all dismal. Total US ESG AUMs still grew by 24% in 2023, and a fun fact is we actually saw the number of US ESG funds grow by 9% last year, so I do think specific themes are still gaining traction. The clean energy transition, for example, or things like food security, certain areas where ESG investors are very much focused by and large. But related to this, I do think that the potential change in administration is a risk or could add another layer of complexity, which also brings me to the second question I want to ask you around SEC and climate risk disclosure rules. Because that's faced many delays, and I think it's a key question of what happens next? Will these actually manifest in light of this year's challenges?

Michael Littenberg: I think everybody who's tried to predict a date for the rules has been wrong and has been wrong multiple times since they keep getting pushed back. With that said, I do think that we're going to see a final rule get adopted, and I think

we're going to see that final rule sooner rather than later, just based on where we are in the cycle, if it doesn't occur relatively soon, that just increases the risk that it could get rescinded under the Congressional Review Act if there's a change in administration, depending upon how elections break in November. I think though it's important to remember is that even if we do see a final SEC climate rule, it is a virtual certainty that rule is going to face litigation. If we do have a change in administration, I think there's a good chance that if we do have a final rule this year, putting aside the litigation around it, the application of the rule could be watered down by a Republican led SEC, it's no secret that the Republican commissioners on the SEC feel that the existing regulatory framework is sufficient and that the rule that's been proposed by the SEC is overly prescriptive. It is somewhat of an open question as to what the final rule will look like when we see it. What will the phase ins look like? Whether scope three emissions will be in the rule or out of the rule, and that's been a controversial topic and it's not just been along party lines. There's also been significant democratic constituencies that have urged the SEC to leave scope three out of the rule. There's an open question as to whether the financial statement requirements will be in the rule, and if so, what those will look like. And then also, what the audit requirements will look like among many other open questions relating to the rules.

Dimple Gosai: I tend to agree. But I guess my one question around this is we also saw major business groups sue California over the California disclosure laws, which I think adds a layer of complexity to the implementation of these laws and maybe also influence the direction of SEC proposals. What do you think? Do you agree or do the California laws even get implemented if SEC does?

Michael Littenberg: I think that the litigation in California, the two rules you're referring to are SB 253 and SB 261, and those relate to greenhouse gas emissions and disclosure of climate risk. I think the challenge to those rules, it certainly does complicate their implementation. I don't think it's fatal necessarily to the implementation, unless obviously a court agrees with the plaintiffs and the rules get struck down, and they're being challenged on two primary grounds. First, that they violate the first Amendment to the Constitution, which deals with free speech, so they're violating that by compelling particular speech, and then the second argument is that they're preempted by the Federal Clean Air Act. I think many people feel that those same arguments will be made with respect to whatever rule the SEC ultimately adopts. And there was a view that that was going to be the case even before we saw the lawsuit in California, so I don't think there's a whole lot of surprise to these particular challenges that were being brought. I think specific to the California rules, besides the litigation, putting that aside, there are other implementation challenges. I think there's a good chance that implementation of the rules will get pushed back. When he signed the bills in October, California Governor Gavin Newsom, in his signing statement did express that he had reservations around the timing of implementation, that both the California Air Resources Board needed more time, but also companies needed more time to prepare for the rules. Even though he signed the particular bills, he said he was going to work with the legislature during 2024 to amend those bills to push back the timing. I do think that the time period for the implementation of the California rules is likely to get pushed back. In terms of how they may affect the SEC's decision-making process, I think that they'll mostly factor in to the economic analysis that the SEC has to do in connection with its rulemaking. And the upshot there is having rules and other jurisdictions that require many of the same disclosures that the SEC rules would require, will bring down the unique costs specific to the SEC rules, so that will take some pressure off of the economic analysis. Chair Gensler of the SEC had previously indicated effectively that would be the case. And it's possible that when the SEC comes out with its adopting release for its final rules, that in the framing of some of its decisions around the rules and some of the economic analysis, it may piggyback on some of the arguments that have been made in California in the litigation to try to refute those upfront or at least provide a roadmap for refuting those in a challenge to the SEC rule.

Dimple Gosai: Going back a step though, do these delays even matter when we think about it? Because with the EU's Corporate Sustainability Reporting Directive, which I believe is launching early this year, don't companies that operate within the EU have to comply with some of these mandatory disclosure rules anyway? It becomes a bit of a competitive dynamic at that point, and I feel like US companies then will have to report regardless, or am I wrong?

Michael Littenberg: In some cases, the SEC rules or the California rules won't matter because of the EU Corporate Sustainability Reporting Directive or CSRD. And that's a point that I and many others have made in other places. And since CSRD presumes that climate is material, we are going to see, I think most subject companies reporting on climate. But it's important to remember that reporting may be limited to EU subsidiaries of entities that are subject to CSRD, and also that not all of the institutions that will have to report under CSRD also will have to report under SEC rules or California rules. Although there is a lot of overlap, there certainly isn't perfect overlap with California or SEC, but with that said, CSRD certainly is a game changer. Approximately 3000 non-EU companies are going to need to report under CSRD and also approximately 50,000 EU entities, including the EU subsidiaries of many US parents, will have to report under CSRD as well. It's going to result in a lot of additional climate disclosure out in the marketplace and that disclosure will also be much more structured than current climate disclosure since it's going to have to be data tagged.

Dimple Gosai: That's a good point. On that note, let's talk about ESG disclosure regulations in light of the increased greenwashing that we've been seeing. In the US, the SEC has required all public companies to disclose information that's obviously material to investors, which includes information on ESG related risks. And they've also issued guidance and rules that basically set forth its disclosure expectations, so what I really am curious to know is that are there any examples of enforcement actions that's related to some of these ESG issues that you can point to?

Michael Littenberg: Sure. And so first, just to start with the point you made at the beginning of your remark, the SEC has published guidance regarding ESG related disclosures, and they've done that in particular with respect to climate. They put out guidance on climate as far back as 2010, more specifically on enforcement. The anti-fraud rules that the SEC has, which are not specific to ESG and are not new, those apply to both corporate issuers, as well as investment funds. There have been three public ESG related enforcement actions involving asset managers. And then on the corporate side, the SEC's ESG Enforcement Task Force has announced a settlement against a large corporate Brazilian mining company based on what they were alleged to have known, with respect to a particular mine before collapsed, and there was a loss of life in connection with the collapse of that mine. The SEC has recently indicated that its ESG Enforcement Task Force continues to pursue other alleged corporate wrongdoings. I think we may very well see additional enforcement actions coming out of that task force. Looking forward, I think that the principle ESG related enforcement risk is probably around climate disclosures and those may take the form of securities fraud suits, so alleged, inaccurate or inadequate disclosures of climate risks and climate impacts, and those risks may increase over time, as companies restate prior climate disclosures due to better information or changing methodologies. There's also, I think, a risk of consumer protection claims relating to product disclosures, for example, carbon neutral claims. There's a recent new California law, the Voluntary Carbon Markets Disclosure Act, which requires specified information in connection with net zero and greenhouse gas emission reduction claims. I think over time that may increase enforcement risk relating to product claims, although the VC MDA won't be the only driver of those sorts of claims. Maybe Dimple a question I can ask for you, since we are on this topic of ESG risk. I know that's an area that you're following closely. Maybe you could tell me a little bit about just what you've written in that area or the work that you've done on specific sectors where ESG related risks or materializing?

Dimple Gosai: Yeah, of course. I think there's a few examples I can give you. I'll allude to three different sectors. With PFAS (Per- and Polyfluorinated Substances) specifically, PFAS the chemical, we've actually found that stocks have collectively lost around \$145 billion, that's almost 60% in market cap since January 31st of 2018, due to the rise of PFAS litigation. PFAS is that chemical that's found in everyone's frying pans and in rain jackets and in drinking water, and I feel like this is something that's getting bigger and more problematic as time goes. That's the one, the other one is the insurance sector. Evidence from the Federal Insurance Office and Federal Reserve suggests that climate risks are obviously still not being adequately priced in. And this is as historical data sets that are used in modeling are maybe unable to fully capture climate changes non-linear physical risks, so this continues to be a risk factor going forward for the sector itself, and then the third example I'd point to is on the labor side. More recently we saw these strikes and threats of strikes that have resulted in the highest wage increases since 1990 across multiple industries, including autos, logistics, and healthcare, which has obviously also played a role in rising inflation and supply chain disruptions. And some of these risks have also shown up in the last 2023 proxy voting season, when it comes to human capital, for example, or climate risk issues, or chemicals, nanoplastics and so forth, where we've seen over 700 shareholder proposals centered around ESG issues. Aside from what we see on this side, are you seeing any ESG issues that continue to attract shareholder activism and are there any specific topics that you're speaking to your clients about?

Michael Littenberg: I think we're certainly going to see a large number of shareholder proposals again this year relating to ESG, although I think it will probably be down slightly from last year. In terms of the types of proposals that we're seeing, I would say that so far, they largely track the sorts of proposals that we've seen last year and prior years. A lot of proposals around climate, human capital, political spending, human rights, and certainly there's niche proposals within each of those different areas. I think also in terms of a support that proposals receive, I think this year is going to look very much like last year in that mainstream support for ESG proposals is going to be lukewarm. I think there is a place for ESG related activism, but it looks like it's for the time being going to be probably limited to niche investors with very specific agendas rather than being pursued by mainstream investors, at least in most cases. Overall, I expect that large institutional investors, their support for ENS proposals will probably be relatively weak this year. But with that said, I don't think that means that institutional investors aren't expressing concerns and expectations around ESG. Mainstream stewardship concerns mostly I think are being addressed one-on-one rather than through activist campaigns or through proxy voting, and I think that approach generally makes the most sense based on where we are today. Companies are managing ESG issues in a very different way than they were three or four years ago. Most companies are now proactively managing financially material ESG risks and opportunities. Therefore, I think engagement relating to ESG risks and opportunities is more nuanced and it requires a different type of engagement than the blunt approach of the shareholder proposal.

Dimple Gosai: I think it's certainly going to make for an interesting year. With that, this has been an amazing discussion. Thank you for all your insights, Michael.

Michael Littenberg: Thank you, and thanks for having me here today.

Disclosures

Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.



This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright 2024 Bank of America Corporation. All rights reserved. iQDatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.