

INTEGRATING ESG CONSIDERATIONS INTO SECURITIES LENDING: PROVIDING A VIEW OF THE ESG DATA LANDSCAPE AND PROPOSING BEST PRACTICES



BY TRAVIS WHITMORE, SCOTT CARVALHO, AND STACIE WANG

Almost 50 years ago, two anti-war United Methodist ministers wanted to ensure that church dollars were not being invested in companies that were supporting the Vietnam War with production of weapons like Napalm. They eventually founded Pax World, perhaps the world's first fund with an explicit goal of helping investors align capital allocation with their social values. While the mutual fund Pax Sustainable Allocation Fund still exists today, it is now joined by hundreds of other sustainable funds.¹ The proliferation of environmental, social and governance (ESG) investing over the last decade has given rise to a significant amount of ESG data and wide ranging, competing frameworks. As regulations have been slow to adapt, investors must navigate the space without clear guidance. Specifically, in the securities lending space, asset owners and investment managers do not have a clear framework on how best to leverage ESG data to incorporate sustainable objectives into lending programs. This report, commissioned by the RMA Financial Technology and Automation Committee (FTAC) and authored by State Street Associates (SSA), takes an academic approach to provide a holistic understanding of the ESG data landscape, which we build upon to propose frameworks for asset owners and agent lenders to integrate ESG into lending practices.

We start by reviewing existing empirical studies and industry reports to investigate the difficulties that face wider ESG adoption in investment decision and lending programs. We report how a primary driver of differentiated data is the complexity of competing reporting guidelines vying to be adopted as the industry standard, the culmination of which leaves market participants unsure of what data is right for their ESG objectives.

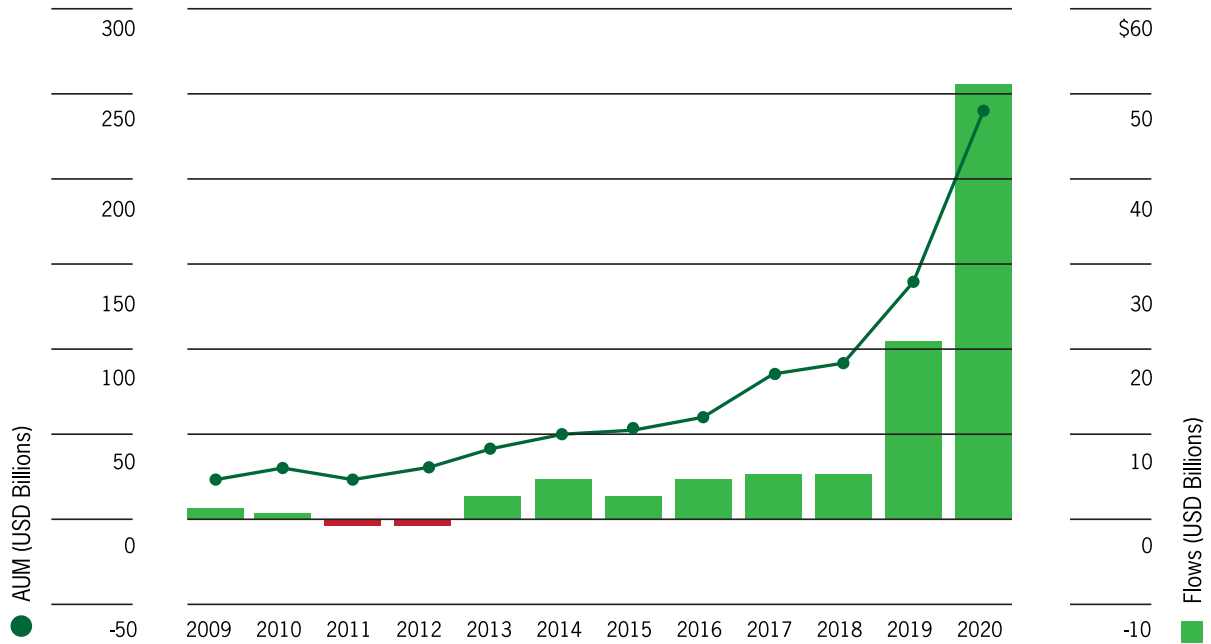
Our review of existing literature provides a view into the numerous data players and differing interpretations of similar information. By aggregating information from existing reports and studies, we clarify the different types of ESG data and their various attributes, including coverage, input data sources, and metric offerings.

This complexity requires asset owners and agent lenders to open a dialogue around how to create an ecosystem that balances both lending decisions and ESG philosophies. In this context, a securities lending program should not be labeled as “ESG compliant,” but it instead should be evaluated based on how well the program allows for asset owners to achieve sustainable investment philosophies. This serves as an opportunity for agent lenders to distinguish their programs from those of their peers, but also serves as a risk for those who do not adapt.

INTRODUCTION

In 2012, there was approximately U.S. \$645 billion invested in sustainable assets like mutual funds, variable annuities, closed-end funds, and exchange-traded funds (ETFs). In 2020, that number reached \$3 trillion (around a 350% increase). When unregistered investment vehicles are included, the total value of investments that consider environmental, social, and governance issues is roughly \$16.6 trillion, as reported by the Forum for Responsible and Sustainable Investing (US SIF).¹ Flows into the United States' sustainable open-end funds and ETFs reached almost \$50 billion in 2020 alone, a tenfold increase compared to 2018, according to Morningstar (**Figure 1**).² Globally, from January 2020 to September 2020, \$203 billion flowed into ESG funds, according to BlackRock's 2020 Sustainability Survey. There are now more than 600 companies voluntarily disclosing ESG information using the Global Reporting Initiative (GRI) standard.³

Figure 1. The Rise of Sustainable Funds



Source: Morningstar. Data as of 12/31/2020.

Includes Sustainable Funds as defined in Sustainable Funds U.S. Landscape Report, Feb. 2020.

Includes funds that have been liquidated; does not include funds of funds.

These are just a few points that illustrate the immense growth of ESG investing over the last decade. While it is clear that the incorporation of ESG considerations by asset managers has impacted how capital is invested, it is less obvious how ESG is impacting other decisions made throughout the investment process. One such area, and the focus of this report, is the important decision made by beneficial owners on how to align their lending programs with their ESG objectives.

As responsible investing rose to prominence in the investment community, asset owners began to have reservations around the compatibility of securities lending and ESG. One of the most prominent reasons behind Japan's Government Pension Investment Fund's highly contested decision to withdraw from lending in 2019 is **the transfer of shareholder rights**.⁴ As discussed in our report, *Beyond Mechanics: The Intersection of Securities Lending and ESG*, an ESG-conscious asset steward is

responsible for exercising voting rights to help achieve sustainability objectives. However, when securities are on loan, asset owners transfer shareholder rights to someone who may not share similar ESG objectives.⁵

While this area has, to a lesser degree, always been something that asset owners considered carefully when examining their participation in a securities lending program, it has recently been brought front and center of the securities lending industry. This is due, in most part, to an increasing emphasis placed on sustainable shareholder activism. For example, a working paper from Harvard Business School found the number of sustainable shareholder proposals doubled from 1999 to 2013. Additionally, there is a growing amount of empirical evidence that suggests sustainable shareholder activism can improve a firm's performance. The same Harvard study found that proposals focused on *material* sustainability issues are associated with subsequent

increases in firm value.⁶

These reasons alone, however, do not mean securities lending is incompatible with ESG. A number of industry working groups have outlined frameworks to ensure asset owners can participate in lending and engage in important proxy votes by recalling securities or restricting inventory. These outlines have been valuable in helping asset owners understand the tools they can use to participate in proxy voting, but since there is no one-size-fits-all solution, outstanding questions remain around best practices. Adding to the complexity is a general lack of clarity around ESG data and how it should be leveraged in an investment process. Given the relative complexity from a data and technology standpoint, the Risk Management Association (RMA) Financial Technology & Automation Committee (FTAC) commissioned this report with the hope it contributes to the conversation around this important initiative.

In this report, we take an academic, data-centric approach to propose methodological frameworks that asset owners and agent lenders can use to navigate the integration of ESG into lending programs. We start by forming a holistic understanding of the ESG data landscape, including the different types of ESG sources and their unique attributes. Building off this, we then discuss ways in which agent lenders and asset owners can leverage ESG data to incorporate individual ESG objectives into lending practices, such as balancing revenue versus proxy vote materiality and creating ESG collateral solutions.

OVERVIEW OF THE ESG DATA LANDSCAPE

In this section, we aim to help asset managers better understand the ESG data landscape to make more informed decisions when it comes to sustainable investing. Before diving into what makes the data so different, we explore the primary drivers that have resulted in differentiated datasets.

Due to the continued rise of ESG investing, demand by investment managers and asset owners for data that accurately measures and captures corporate ESG performance has attracted many data providers into the space. They include industry staples—e.g., Bloomberg, Refinitiv—formerly part of Thomson Reuters, Morgan Stanley Capital International (MSCI), Sustainalytics, Standard and Poor’s (S&P) Trucost—and newcomers (e.g., TrueValue Labs) in a bid to capture the growing market share. According to SustainAbility, an advisory firm that’s been reporting on the rating landscape since 2010, over 600 ESG ratings and rankings existed globally as of 2018. With so many data vendors and organizations taking on the challenge of collecting, aggregating, and producing meaningful data, it is no surprise that investors can feel overwhelmed as they search for ways to incorporate environmental, social,

and governance considerations into their decision processes.

What differentiates ESG data?

Investors have long been focusing on analyzing financial data with a shareholder-centric view. However, increasingly, market values are driven by the intangibles. The market share of tangible assets for S&P 500 companies has dropped dramatically from 83% to only 10% from 1975 to 2020. That means the value on intangibles such as from human, social, and natural capitals has risen from only 17% to 90%.⁷ Also, with the development of stakeholder theory and practices, we have seen ample evidence that sustainability activities and performance could enhance long-term value as a firm’s relationship with its customers, suppliers, employees, and communities could become strategic resources for the firm (Freeman, 1984; Jones, 1995; Walsh, 2005; Campbell, 2007). Moreover, recent research shows that sustainability issues could be financially material and companies with good ESG ratings or positive sentiment on key ESG issues are found to have better market performance (Fridge, Busch, and Bassen 2015; Eccles, Ioannou, and Serafeim 2012, and Cheema-Fox et al. 2020).^{8,9,10} Therefore, there’s been increasing demand for sustainability information as investors view ESG risk and opportunism as playing a greater role in their investment decisions.¹¹

To begin with, we examine some fundamental differences among these vendors citing the recent report “What a Difference an ESG Rating Provider Makes!” by Research Affiliates, which assessed portfolio performance using different ESG vendors. They generalize providers into three primary categories: *fundamental*, *comprehensive*, and *specialist*. We detail this in **Table 1**.

While data providers often share the same overall objective of providing a view into a company’s ESG performance, the data sources and methodologies used to inform those views

can be very different. Research Affiliates found that constructing identical portfolios (United States-based and European-based) using different ESG data providers for each resulted in significant performance differences. Their results suggested this was driven by the underlying data being uncorrelated, as **correlations of varying pairs of ESG ratings were as low as 38%**.

Given that there are many potential sources of information on sustainability, we examine well-known and widely used third-party data providers MSCI, Bloomberg, Sustainalytics, ISS, Dow Jones Sustainability Index, Refinitiv, and FactSet’s TruValue Labs due to their scope, reputation, and repeated mentions in empirical studies in the space.^{12,13} We break down these differences and highlight ESG’s diverse data landscape with a table describing key characteristics and methodologies for each provider (see **Appendix 1**).

Why the lack of consensus on ESG data?

One challenge for investors to incorporate ESG into their investment process is the substantial disagreement documented among ESG data rating agencies and data vendors on the sustainability performance/scores of firms (Chatterji et al. 2016; Berg, Koelbel, Rigobon 2020; Christensen, Serafeim, and Sikochi 2021).^{14,15,17} Their theory suggests that disagreement arises due to **different information sets** and **different interpretations of information** (e.g., Cookson and Niessner 2020).¹⁶ Three factors contribute most to rating divergence, listed below:¹⁷

1. **Scope:** The set of attributes to include.
2. **Measurement:** Indicator to quantify the attribute(s).
3. **Weights:** View on the importance of the attribute(s).

A recent paper from the Harvard Business School (Kotsantonis and Serafeim, 2019), looked at several important aspects of ESG measurements and data to

help learn more about the field. The paper highlights how data providers lack overall consistency and transparency of the data and measures, leading to inconsistency, variety of measures, self-reporting, and overall disagreement on companies' ESG performance.¹⁸

The weight of the evidence from research in this space suggests that the rapid rise of data providers and lack of a standardized framework have largely resulted in the large disagreement in ESG data. Vendors collect data from different sources with different scopes, metrics, and perspectives. Then they measure or score firms' sustainability performance with significantly different methodologies, which are often opaque. This makes it difficult for investors to compare datasets and implement ESG data in their investment process.

Are there any standardization frameworks in place?

While it would be easy to blame providers for their opaque and differing methodologies, they are simply acting within a space with minimal universal standardization and frameworks. As a result of many markets and regulators being slow to introduce standardization around sustainability reporting, there have been several organizations who are competing to establish their frameworks as the standard. This view was formalized in a recent report by the U.S. Securities and Exchange Commission's (SEC) Division of Examinations, which identified the "imprecision of industry ESG definitions and terms" as a risk surrounding ESG investing and factors.¹⁹

We get a sense of what is driving this competition when reviewing well-established organizations' mission statements. The Sustainability Accounting Standards Board (SASB) is a non-profit organization whose primary objective is to set "standards to guide the disclosure of financially material sustainability information by companies to their investors."²⁰ An-

other well-established organization in this space is the Global Reporting Initiative (GRI), which aims to be "the global standard-setter for impact reporting."²¹ Similarly, the Task Force on Climate-related Financial Disclosures (TCFD) was created "to improve and increase reporting of climate-related financial information."²² Given there are several well-established competing frameworks and no clear set of agreed-upon guidelines to abide by, it's understandable why variation in the data will occur.

Fortunately, this is starting to change. In September 2020, five leading framework and standard-setting organizations—the CDP, Climate Disclosure Standards Board (CDSB), GRI, International Integrated Reporting Council (IIRC), and SASB—released a joint paper outlining their intent to create a more comprehensive corporate reporting standard.²³ Additionally, the European Commission released the new Sustainable Finance Disclosure Regulation (SFDR), which sets specific rules for the sustainability-related information that financial market participants operating in the European Union need to disclose in accordance with the SFDR as of March 10, 2021.²⁴ In the U.S., the SEC continues to indicate continued discussion with market participants on the topic of ESG disclosure requirements aiming to turn it from a voluntary practice to mandatory disclosure.²⁵

As standardization of reporting continues to be enacted across the globe, adopting similar standards to ratings and signals should be taken with caution. A group of industry leaders from the ESG data space has echoed academics and investment managers' desire to increase reporting standardization but welcomes different methodologies as it encourages various analyses of the data.²⁶ This variety lends well to different investment goals, strategies, and analyses. Also, the variety of ESG data formats

is similar to the variety of financial reporting formats and should not be viewed as a large hindrance to analysis.

What kind of a data provider should I use?

Where ESG data fits in the investment process depends on one's ESG philosophy and investment goals. Investors need to tailor their ESG data provider choices to their investment strategy. Taking vendor-provided data at face value can be misleading—so it's important to have a comprehensive understanding of the data inputs, methodology, and "quirks." An example of an ESG data comparison is summarized nicely in a report by the Man Institute.²⁷ Different objectives of investors include identifying risks, generating alpha, increasing environmental engagement, and enhancing corporate governance.

For example, for investors looking to generate additional alpha or identify underlying company risks, it has been shown that leveraging industry-level information to select different types of climate metrics can help manage climate risk while increasing risk-adjusted returns.²⁸ Investors mention similar reasoning for the benefit of combining different data sources to formulate their conclusions of a company's ESG performance. Furthermore, demand for more granular information on how investors implement investment strategies that target ESG goals will make it mandatory for those decision-makers to understand the data at a more complete level.

Having formed a view of the ESG data landscape by identifying the primary drivers of differentiated datasets, different scoring methodologies and sustainability reporting, and reviewing recent regulatory frameworks, we now move to examining how this data can be leveraged in a securities lending program. Specifically, we look to review how this data can help beneficial owners and agent lenders work together to align on sustainability goals.

Developing sustainable securities lending programs

Having generated over U.S. \$7.5 billion in revenue in 2020 alone and an average global on-loan balance of approximately \$2.5 trillion, the securities lending industry makes up an important part of global markets.^{29,30} While securities lending can generate \$4.5 million in average annual returns and serves as a useful collateral management solution for asset managers, it is also a critical component of market efficiency, providing liquidity and promoting price discovery.³¹ As a result, it is crucial that securities lending aligns with the evolving sustainable economy and the increased importance placed on ESG factors.

In the next section, we will build upon our understanding of ESG data to propose high-level best practices that can help guide agent lenders on how best to align their programs with asset owners' sustainable investment philosophies.

Defining ESG in the context of securities lending

Given the breadth, complexity, and lack of standardization around ESG, it is helpful to start by framing the direction securities lending programs should move toward in order to align with responsible investing. A recent joint white paper, *Framing Securities Lending for the Sustainability Era*, published by the International Securities Lending Association (ISLA) in conjunction with Allen & Overy, can help guide this discussion.³²

The term "ESG" is applied by investors in many ways and is often used to label something as having incorporated responsible investing considerations. This means ESG can have differing objectives based on the context it is used in and the goals of the individual investors. Additionally, there is no regulatory standardization that defines one product as "ESG compliant" and another as "not ESG compliant."

As such, the goal of agent lenders should not be to make a securities lending program ESG compliant, but instead offer a way for individual investors to express their view of ESG objectives. One investor's ESG goals may be to reduce their carbon footprint, while another's is to increase female representation on corporate boards. An ESG-aware securities lending program will help investors incorporate their individual considerations into their lending decisions. To that end, ESG is a great mechanism to facilitate conversations between agent lenders and asset owners on their sustainability goals but should not be used to label a securities lending program.

Facilitating shareholder activism in a securities lending program

Having discussed how, in the context of securities lending, ESG can represent various objectives for asset owners, we dive deeper into how these various objectives will impact an important decision made by lenders on a regular basis: the act of recalling securities to participate in proxy votes (or the decision to restrict inventory if a security is already on loan).

From the perspective of asset owners, there are two tools at their disposal to help drive ESG objectives. First, they can choose where to invest capital, abstaining from (underweight) companies not aligned with their goals and investing in (overweight) companies that are. This financially incentivizes companies to improve on areas of sustainability. Second, they can flex their rights as large shareholders by actively voting for sustainable changes that align with their objectives. It is in this regard that securities lending may impact an asset owner's ability to be a responsible asset steward since voting rights are transferred when securities are on loan. When 44 institutional investors were asked to name measures that might facilitate the application of ESG principles to their securities

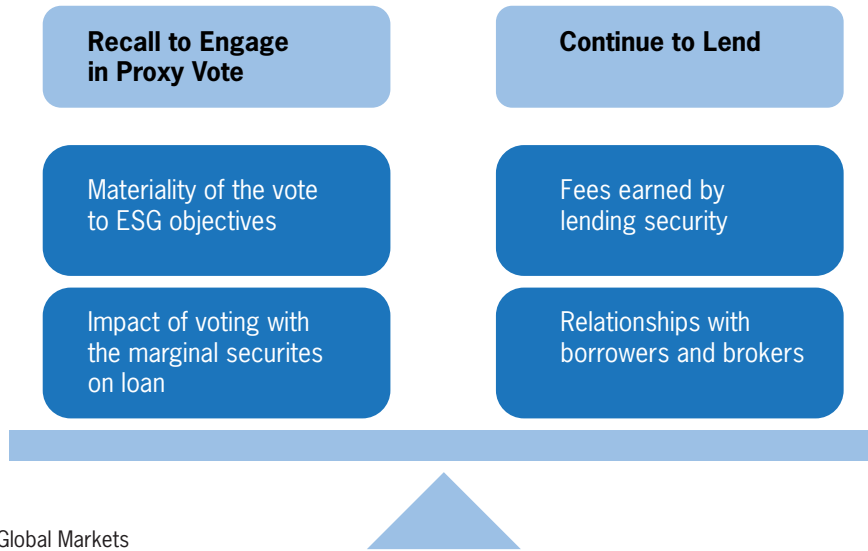
lending program in a recent survey by the Risk Management Association, half of them responded with "transparency into proxy voting."³³

It is clear that in order to enable asset owners to fulfill their ethical responsibility as an asset steward, agent lenders must be able to facilitate security-level recalls. However, it is unclear how much lending revenue an asset owner is willing to forgo to participate in a given proxy vote. For each time an asset owner recalls securities to participate in a vote, they incur an opportunity cost in the form of the revenue that they would have earned if the securities had stayed on loan. Additionally, frequent recalls can strain relationships with borrowers who may not have been expecting to return a given security and must now source it elsewhere.

Figure 1 illustrates how this can put asset owners in a difficult position. They have a fiduciary duty to earn incremental revenue for their clients where possible, while at the same time they look to fulfill their role as a responsible asset steward by driving long-term sustainable value through proxy votes. Making things more difficult is the minimal regulatory guidance around what asset owners should best consider as a proper threshold to balance revenue versus proxy vote materiality. As a result, asset owners may have differing views on when to recall for a proxy vote, as shown in **Figure 2**.

Since sustainability objectives differ across asset owners, the proxy votes that each owner considers *material* will also differ. While this customized approach adds a level of complexity from an operational standpoint, it may actually be beneficial as a whole. Differing views means agent lenders won't have concentrated recalls, allowing them to take a balanced pool approach, re-allocating securities instead of recalling them from borrowers. This will help alleviate concerns around borrower relationships as well.

Figure 1. Balancing Fiduciary Duty with that of a Responsible Asset Steward



Source: State Street Global Markets

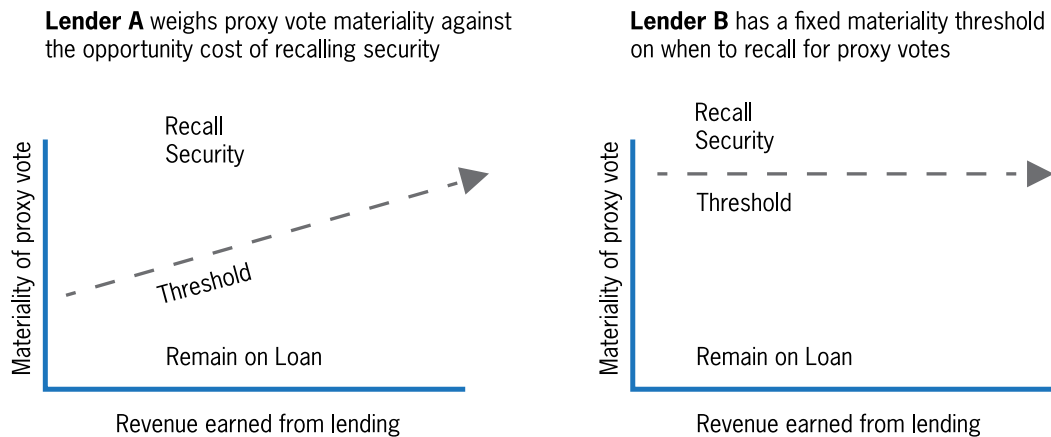
Agent lenders can help asset owners balance trade offs

This complexity provides an opportunity for agent lenders to engage with asset owners on how to manage these tradeoffs, allowing them to become an important part of the sustainable investment ecosystem. It is likely that ESG-conscious asset owners who

want to ensure they are playing an active role in material proxy votes will already have access to data feeds that enable them to participate in votes. However, they are likely to look for guidance on how to approach the materiality revenue matrix and may want to better understand how their peers are approaching these tradeoffs.

As a result, agent lenders should work with asset owners to help frame how to think about material proxy votes and what revenue thresholds they may want to set up. This expands the role the agent lender plays, moving from facilitating market transactions to becoming a partner in the decision-making process.

Figure 2. Revenue Materiality Matrix - Asset Owners Have Differing Revenue vs Proxy Vote Thresholds



Source: State Street Global Markets

Given we are early in the evolutionary cycle, agent lenders and asset owners will need to align on the level of transparency that is required before operationalizing anything. Only through active engagement will agent lenders be able to understand what information is relevant and at what frequencies it would need to be made available. For example, asset owners may want more transparency into the fees that individual securities earn to help form a complete view of the materiality revenue matrix. Additionally, this means being able to facilitate timely security-level recalls. As the industry works through the evolution of ESG and securities lending, the level of required transparency may increase, which may incur initial costs for agent lenders, as it would require building out existing systems to integrate and report relevant metrics. However, it could pay future dividends since ESG-conscious asset owners would likely choose a lending program that offers these capabilities over one that doesn't.

Asset owners, for their part, are likely looking to gain more insights into the materiality of votes. Unlike the ESG performance metrics that we discussed in the previous section, there are limited sources of accurate, ESG relevant proxy vote information. This leaves the door open for data vendors to provide meaningful value in the space. One well-established vendor, Broadridge, has taken advantage of the opportunity in their launch of Proxy Policies and Insights (PPI) Data in January of 2021. Leveraging artificial intelligence (AI) and machine learning, their data-feed offers 5 million proxy voting data points from 85,000 meetings and will make "it easy for investors to be aware of ESG proxy proposals that impact the future of their investments."³⁴ While there are limited case studies of how the dataset can be operationalized, the objective is certainly in the right direction. We are likely to see an influx of additional vendors in this space, as we have seen with ESG data more broadly.

Leveraging data to develop collateral solutions that align with sustainable objectives

Another aspect of securities lending that has been an area of friction is the collateral lenders receive from borrowers, which acts as a form of insurance in case of borrower defaults. This can take the form of non-cash (e.g., equities, treasuries, corporate bonds, etc.) or cash collateral. While both have nuanced sustainability considerations, they share the underpinning concern around the collateral's acceptability with an asset owner's or manager's ESG policies.

When lenders receive cash collateral, it is generally reinvested into highly liquid short-term funds, such as a money market fund, to earn incremental returns. This raises the potential for a misalignment in the underlying securities of the cash reinvestment vehicle and the ESG policies of the beneficial owner. Securities lending programs can work towards alleviating this concern by reinvesting cash into funds that consider ESG when selecting the underlying securities.³⁵ These types of cash reinvestment strategies can help ensure that sustainability philosophies are being incorporated into reinvestment decisions of cash collateral. While these funds may not perfectly align with the sustainability goals of asset owners, it is unrealistic to expect to find a 100% compatible cash reinvestment vehicle, due, in large part, to the differences in ESG data. However, separately managed accounts can leverage this framework to set up their own ESG guidelines to be aligned more closely with a lender's objectives.

The use of non-cash collateral has increased significantly over the last decade, making up almost 60% of global collateral balances, as reported by State Street.³¹ This has given rise to the question over collateral acceptability. Primarily, asset owners are concerned that the collateral received from borrowers does not fit with their

ESG objectives. Similarly, the choice asset owners face regarding exercising proxy votes by applying sustainable considerations to non-cash collateral has similar tradeoffs that should be balanced. This provides another opportunity for agent lenders to differentiate themselves.

Asset owners may want to be able to set rules around what collateral is acceptable based on their sustainability philosophies. However, this has costs associated with it. Currently, asset owners benefit from being pooled in loans with other lenders who have the same collateral parameters. This allows for lenders to earn more on their securities. Creating bespoke collateral profiles to cater to individual ESG objectives can limit how often the securities are put out on loan and could be detrimental to revenue.

For this reason, it is most likely in the best interest for asset owners and agent lenders to create ESG-friendly collateral baskets. This would, however, require lenders to source ESG data to score, filter, and then categorize securities based on their ESG metrics. Like cash reinvestment funds that consider ESG characteristics, these baskets may not align perfectly with asset owners' objectives but having several options could allow baskets to be tilted to specified ESG characteristics, such as environmental or governance concerns. Up-front investments for agent lenders would require time and technology costs, but if done as part of a longer-term strategy, the option to use ESG friendly non-cash baskets would attract asset owners who may harbor concerns in this area.

Currently, there are limited real-world examples here, which serves as both an opportunity and a risk. If we expect sustainable investing to continue to drive investment decision making, lending programs that work toward these best practices can attract clients, while the programs that are late in adopting them may risk harming partnerships.

CONCLUSION

The importance placed on ESG considerations has risen dramatically over the last decade and will likely continue to influence how investment managers and asset owners evaluate all aspects of their investment life cycle. While securities lending is compatible with ESG, there are opportunities to improve the way in which securities lending programs are evaluated against ESG considerations. Since these considerations may vary widely across investment firms, we suggest that securities lending programs should not be viewed as “ESG compliant,” but instead should be gauged based on how well they allow investors to achieve their sustainability objectives. As a result, the goal of agent lenders is to provide ways in which their clients can help meet those objectives. This could mean providing insights into the proxy vote materiality versus revenue trade off, facilitating security-level recalls, and setting up ESG cash and non-cash collateral pools. As the space continues to grow, agent lenders who engage with their clients on ESG and help incorporate their considerations can capture a rare opportunity to differentiate their programs against their peers.®

Notes

1. 2020 Report on US Sustainable and Impact Investing Trends. The Forum for Sustainable and Responsible Investment (US SIF).
2. Hale, J. (January 2021). A Broken Record: Flows for U.S. Sustainable Funds Again Reach New Heights. Morningstar.
3. Temple-West, P. (2019). US Congress rejects European-style ESG reporting standards. Financial Times.
4. Lewis, L. and Nauman, B. (2019). Short sellers under fire from investment boss of world’s largest pension fund. Financial Times.
5. February 2018. Developing an active ownership policy. UNPRI
6. Grewal, J., Serafeim, G., and Yoon A. (2016). Shareholder Activism on Sustainability Issues. Harvard Working Paper.
7. Tomo, O. (2015). Annual Study of Intangible Asset Market Value from Ocean Tomo.
8. Eccles, R., Ioannou, I. and Serafeim, G. (2012). The Impact of a Culture of Sustainability on Corporate Behavior and Performance. Harvard Business School Working Paper.
9. Friede, G., Busch, T., and Bassen, A. (2015). ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies. *Journal of Sustainable Finance & Investment*, Volume 5, Issue 4, p. 210-233.
10. Cheema-Fox, A., LaPerla, B., Serafeim, G. and Wang, H. (2020). Corporate Resilience and Response During COVID-19. *Forthcoming Journal of Applied Corporate Finance*.
11. 2020 Institutional Investor Survey. Harvard Law school.
12. Huber, B. and Comstock, M. (2017). ESG Reports and Ratings: What They Are, Why They Matter. Harvard Law School Forum on Corporate Governance
13. Li, F. and Polychronopoulos, A. (2020). What a Difference an ESG Ratings Provider Makes. *Research Affiliates*
14. Chatterji, A., Durand, R., Levine, D. and Touboul, S. (2016). Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic Management Journal* 37(8): 1597-1614.
15. Dane, C., Serafeim, G. and Sikochi, A. (2021). Why Is Corporate Virtue in the Eye of the Beholder? The Case of ESG Ratings. *Accounting Review* (forthcoming).
16. Cookson, J.A. and Niessner, M. (2020). Why don’t we agree? Evidence from a social network of investors. *Journal of Finance* 75(1): 173-228.
17. Berg, F., Koelbel, J. and Rigobon, R. (2019). Aggregate Confusion: The Divergence of ESG Ratings. MIT Sloan School Working Paper 5822-19.
18. Kotsantonis, S. and Serafeim, G. (2019). Four Things No One Will Tell You About ESG Data. *Journal of Applied Corporate Finance* 31 (2), pages 50-58.
19. 2021. The Division of Examinations’ Review of ESG Investing. US SEC.
20. SASB.org (accessed April 27, 2021)
21. Globalreporting.org (accessed April 27, 2021)
22. fsb-tcfd.org (accessed April 27, 2021)
23. September 2020. Statement of Intent to Work Together Towards Comprehensive Corporate Reporting. Facilitated by the Impact Management Project, World Economic Forum and Deloitte.
24. February 2021. Breaking Down the New EU ESG Disclosure Regulation: One Month to Go. *National Law Review*.
25. 2020. The Rise of Standardized ESG Disclosure Frameworks in the United States. Harvard Law School Forum.
26. 2019. How to Use ESG Data Throughout Your Portfolio. Rimes Thought Leadership.
27. March 2019. How we’re turning off-the-shelf ESG data into useful and informative. Man Institute.
28. Cheema-Fox, A., LaPerla, B., Serafeim, G., Turkington, D. and Wang, H. (2021). Decarbonizing Everything.
29. 2020. DataLend: \$7.66 Billion in Revenue Generated in Lender-to-Broker Securities Lending Market in 2020. PRNewswire.
30. 2020. Securities Lending Market Report. International Securities Lending Association (ISLA).
31. Morrissey, B. and Whitmore, T. (2020). Generating Returns in a Low Interest Rate Regime. State Street Thought Leadership.
32. March 2021. Framing Securities Lending for the Sustainability Era. ISLA and Allen & Overy.
33. Garritt, F. and Horner, G. (2020). Complementary, Not Conflicting: Securities Lending and ESG Investing Coexist. Risk Management Association (RMA).
34. Schwartz, R. (2021). Broadridge bring AI and Machine Learning to Proxy Voting Data. Global Custodian.
35. 2021. State Street to Establish First ESG Securities Lending Commingled Cash Collateral Reinvestment Strategy. Business Wire.

“THIS COULD MEAN PROVIDING INSIGHTS INTO THE PROXY VOTE MATERIALITY VERSUS REVENUE TRADE OFF, FACILITATING SECURITY-LEVEL RECALLS, AND SETTING UP ESG CASH AND NON-CASH COLLATERAL POOLS.”



TRAVIS WHITMORE is the Lead Securities Finance Quantitative Researcher at Street Associates. Travis can be reached at: TWhitmore@StateStreet.com.



SCOTT CARVALHO is a Quantitative Analyst at State Street Associates. Scott can be reached at: SCarvalho4@StateStreet.com.



STACIE WANG is co-head of ESG research, State Street Associates. Stacie can be reached at: HWang5@StateStreet.com.