Article
Cash

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ESG in Money Markets

Bringing Sustainability to Cash Management

- **Environmental, social and governance (ESG) factors significantly influence the sustainability of returns in all asset classes, and cash management plays a critical role in a fully developed investment portfolio.**

- **Data limitations, regulatory constraints and logistical challenges related to portfolio construction and collateral analysis make it difficult to apply ESG scoring to money market funds.**

- **State Street Global Advisors' proprietary, multi-source R-Factor scoring framework provides the foundation for innovative, scalable ESG-focused investment cash solutions.**

Why ESG Matters in Cash Management

At State Street, our core mission is to invest responsibly on behalf of our clients and enable economic prosperity and social progress. We believe that environmentally efficient, socially aware and well-governed firms are best positioned to withstand emerging risks and capitalize on new opportunities, especially over the long term. Our heritage of ESG investing has spanned more than 30 years, and we currently manage nearly $179 billion in ESG assets[1] in mandates spanning index and active equity, fixed income, multi-asset, quantitative equity and cash strategies.

We believe that ESG factors are applicable to all investment strategies across asset classes. We also believe that cash management is central to a fully developed investment portfolio. That's why we are developing cash management strategies that meet our ESG standards as well as our investors' needs.

Relative to other asset classes, integrating ESG considerations into publicly traded cash strategies presents unique challenges. This is driven by a combination of factors, including investor expectations, regulatory requirements and the nature of the underlying assets in MMFs. We are committed to solving these challenges, and we have dedicated a significant amount of research and resources to creating a cash management solution built on a unique and dynamic ESG scoring, screening and tilting process.

In this paper, we examine the challenges of ESG integration in money markets, introduce our proprietary R-Factor platform for ESG data and provide solutions to incorporate ESG scoring for cash management strategies.

R-Factor
State Street Global Advisors' Proprietary, Multi-Source Approach to ESG Scoring

Consistent, high-quality data can be the foundation for investing. Unfortunately, there are significant limitations to the data that has been available about companies' and issuers' ESG practices. Governments don't require companies to formally report on ESG and climate-related data. As a result, companies are on their own to determine what is material to business performance; companies also are inconsistent in their disclosure of ESG and climate data. There are numerous third parties that provide ESG data and ratings, but these data providers have different methodologies with varying degrees of transparency.

State Street aims to set a new standard for ESG data quality and scoring through our proprietary R-Factor platform. R-Factor is designed to address the current limitations of ESG data by providing a consistent, transparent methodology that creates standards for disclosure and financial materiality.

We designed R-Factor based on the following objectives:

- Create a multi-source ESG data architecture platform
- Utilize the Sustainability Accounting Standards Board's (SASB's) transparent framework to help clients and companies understand materiality[2]
- Integrate our proprietary Asset Stewardship insights into our scoring methodology

For environmental and social scoring, R-Factor uses SASB as the key framework for materiality. Developed based on consultation with stakeholders throughout the investment industry, SASB's transparent materiality framework establishes a market infrastructure for identifying the environmental and social metrics and themes that impact a company's long-term performance, across various sectors. For governance scoring, we integrate our proprietary Asset Stewardship insights within the context of region- or country-specific norms.

The R-Factor scoring model is powered by multiple best-in-class ESG data providers — Sustainalytics, Vigeo EIRIS, Institutional Shareholder Services (ISS) Governance and ISS Oekom — as well as SASB meta-data for categorizing and weighting.

State Street's R-Factor Platform

R-Factor systematically solves the ESG data needs of institutional investors:

- Identifies and incorporates best-in-class data from multiple providers
- Incorporates recurring checks on data quality
- Integrates SASB's financial materiality map
- Provides a systems-level reporting framework
- Aligns with regional corporate governance codes
- Creates one "responsible" investing score (R-Factor) for 5,500+ global companies

R-Factor Applications

We are using the platform to develop a range of ESG investment solutions for clients:

Investment Capabilities — integrate ESG analysis into equity, fixed income and cash management portfolios

Reporting — generate detailed, customized client reports for ESG funds and strategies; extend these reporting capabilities across State Street offerings

Risk and Analytics — power interactive portfolio management tools and investment infrastructure

Our Stewardship Objectives

Our stewardship role extends beyond proxy voting and engagement with issuer companies. It includes promoting investor protection for minority shareholders through partnerships with local investors and regulators, and working with investee companies to encourage adoption and disclosure of ESG practices.

Figure 1
State Street's Asset Stewardship Guiding Principles

Transparency and Accountability to Clients	Honest evaluation, continuous enhancement and increased transparency of our stewardship practices
Enhance and Evolve ESG Practices in Markets	Apply higher voting standards where governance practices do not meet global investor expectations
	Identify clear engagement priorities that focus on sector, thematic and/or market specific issues
	Collaborate with other investors when collective action is needed
Develop Long-Term Partnership with Companies	Engage constructively with management/boards to effect change in investee companies
	Publish thought leadership papers to inform directors on changing ESG practices
	Communicate clearly our expectations and vote rationale during engagement
	Guide companies through the evolution in ESG practices

Source: State Street Global Advisors Asset Stewardship Team.

ESG Challenges in Money Market Funds

Given the data limitations and lack of market infrastructure described above, ESG integration is challenging in any asset class. But there are additional constraints that make ESG investing particularly challenging for MMFs.

Cash and short-duration strategies operate under regulatory and investor-driven requirements to maintain high levels of liquidity and security. As a result, they seek conservative, liquid short-term assets that offer market yield. Prime MMFs primarily hold sovereign debt and securities issued by global banks. This is by design because it allows these funds to meet their requirements for size, frequency and consistency of issuance as well as objectives for liquidity and preservation of principal.

This concentration on global banks, however, creates challenges in both scoring bank debt as well as constructing an ESG-centric portfolio. Drawing on our deep expertise in ESG research and building portfolios using ESG factors, we examine some of the ESG-specific challenges related to portfolio construction and monitoring collateral of securities issued by global banks and other financial institutions.

Portfolio Construction

There are roughly 30 AA- and A-rated global banks that access the market daily. Excluding or limiting exposure to even a handful of those institutions to meet ESG filter requirements would create issuer diversification challenges. Given these concentration constraints, screening out only a small number of global banks could have negative impacts from a capacity perspective and also in terms of yield.

Adding non-financial issuers is a way to potentially offset bank concentrations, but this, too, poses challenges because of the inconsistency and smaller size of non-financial issuances relative to the overall market; the notional size and frequency of non-financial corporate issuance is materially less consistent than bank issuance. Moreover, the investment-grade market is currently weighted toward BBB-rated issuers, and rated MMFs are typically limited in their ability to hold anything rated below A-.

From a yield standpoint, non-financial corporate issuance is typically more expensive and is usually issued with maturities longer than the 13-month limit that MMFs face. Money market funds could purchase investment-grade issuances once they get within 13 months of their maturity date; this approach, however, could be expensive in terms of yield and constraining for the fund's weighted-average life (WAL) requirement.

Collateral Monitoring and Management

In addition to issuances by financial institutions and sovereign entities, prime MMFs may also hold asset-backed commercial paper (ABCP), repurchase agreements secured by non-government collateral (alternative repo) and municipal securities. Evaluating and monitoring the ESG characteristics of the underlying collateral for these types of securities creates a broad set of operational challenges. These challenges are exacerbated by infrequent data reporting as well as inconsistent information provided by the various parties involved.

Asset-backed commercial paper. ABCP can be an attractive diversifier for MMFs because it is collateralized and provides a yield premium relative to unsecured bank paper. Attempting to capture data to determine ESG compliance, however, is difficult for this asset class. While many investors view the liquidity provider (usually the financial institution) as the primary source of repayment, ABCP typically is also collateralized by assets such as receivables, loans and leases originated by various underlying obligors.

Relying on the information provided by monthly servicer reports to make ESG judgments on this collateral may be problematic for several reasons:

- Lack of consistency: Each ABCP program creates its own template for monthly servicer reports.
- Lack of information about specific obligors: The reports usually disclose the obligor's sector but don't identify the specific obligor. The ABCP sponsor is unlikely to disclose significant detail given the obligor's client relationship with the parent bank and anonymity requirements that are standard in this type of funding structure.
- Outdated information: The reports tend to be released with a one-month lag in data.

Alternative repo. Repurchase agreements secured by alternative collateral (anything but government securities) is also a challenge when it comes to capturing comprehensive ESG information. The primary source of repayment for this asset class is the repo counterparty. But the financial crisis highlighted the need to look beyond the counterparty to review the underlying collateral.

Each day we receive upwards of 55,000 line items of collateral from the custodian bank for our alternative repo trades. This makes it operationally complex to perform an ESG collateral review on an ongoing basis. In addition to the sheer volume, the data is received after the trade, T+1; as a result, any change in collateral can only be made the following day. Moreover, the sole reliance to enact these changes is on the third-party custodian.

Municipal securities. The municipal sector is vast and diverse, both in terms of issuers and types of issuances. Unless a fund manager has a separate municipal desk, participating in this asset class requires significant resources and effort.

To fully understand municipals, investors need to analyze the underlying collateral structure and assess the primary source of repayment (town/county taxes, fees, income, etc.). To gain an understanding of ESG compliance, investors must review the underlying collateral data, which is typically insufficient and inconsistent. If the issuance is structured as variable rate demand note, the investor must analyze the letter of credit provider. The letter of credit provider typically is a financial institution, so the fund would also need to account for the 5% issuer concentration limits.

Figure 2
Typical allocations in prime money market funds

Investment-grade corporates — financial	55%–60%
Sovereign debt	10%–12%
Traditional repo	12%–14%
Asset-backed commercial paper	8%–10%
Alternative repo	6%–8%
Investment-grade corporates — non-financial	1%–2%
Municipal securities	<1%

Source: Crane Data as of January 2019.

Potential ESG Solutions for the Money Market Industry

The challenges of ESG-focused investing for MMFs are indeed significant. But that doesn't mean investors can afford to ignore sustainability factors in their cash management strategies just because it's difficult.

R-Factor

Regional, Sector and Asset Class Insights.

Analyzing the R-Factor scores of various sectors and regions in the ESG money market fund universe provides valuable insights about these issuers and their sustainability practices.

Global Banks. Issuances by global banks comprise more than half of the prime MMF universe, so it's informative to examine what trends R-Factor reveals about these assets. While there are many idiosyncratic factors that can affect a bank's R-Factor score, there are some geographic generalities that can be observed when reviewing the current R-Factor scores for the most active global bank issuers of short-duration securities:

Region	R-Factor Insight on Bank Issuers
Europe, Canada and Australia	Most banks from these regions — with some notable exceptions — have well above-average R-Factor scores.
United States	A bifurcated track-record: a few large New York-headquartered universal banks score quite well; whereas others, including a prominent West Coast bank and most large regional banks, garner below-average R-Factor scores.
Asia	Japanese mega-banks and Chinese banks are consistently getting some of the lowest R-Factor scores in the global banking universe.
Middle East and South America	The few banks from these regions that issue for U.S. money markets have lower R-Factor scores than most global peers.

Non-financial issuers. There is a range of R-Factor scores for the most frequent non-financial short-end issuers. Most industries that are relevant in U.S. money markets — including automotive original equipment manufacturers (OEMs), equipment OEMs, consumer and media — have companies that score quite well in the R-Factor platform and others that don't. As was the case with global banks, non-financial issuers that are European-based tend to have higher R-Factor scores; this is not surprising given that Europe has more stringent regulations related to ESG factors than other regions.

Asset-backed commercial paper. ESG assessment of ABCP needs to be bifurcated between the liquidity provider/program sponsor and the underlying collateral. There often is a lack of detailed ESG information for the underlying pool of assets, but the sector/industry breakdown is typically available for each program. Utilizing the average R-Factor for each sector/industry noted in a specific ABCP program and the R-Factor for the liquidity provider generates a weighted R-Factor for the program. Notably, from Crane Data, dispersion of industry-average R-Factor scores for the top 22 industries represents 90% of assets in the top ABCP programs that we used in our analysis.

R-Factor Implementation

Strategies could use multiples levels of screening and tilting to achieve the best possible principal-weighted R-Factor score given constraints:

Screening out controversial issues. We start by excluding issuers involved with the most severe controversial issues that may negatively affect stakeholders, the environment or the company's operations, based on Sustainalytics' Controversy research.[3] Sustainalytics also links these controversial areas to UN Global Compact Principles. When applied in January 2019, for example, this screening resulted in a handful of companies representing around 4% of the total principal, based on Crane Data, being excluded.

ESG optimization for unsecured and traditional repo issuances. Once companies involved with the most controversial issues are removed, the ESG tilting process is applied to the remaining unsecured universe. ESG tilting involves maximizing the principal-weighted R-Factor ESG score with respect to a set of constraints. Defining characteristics of the tilting process include:

- Optimized index is fully invested (no leverage)
- Positive weights for all individual issues (long only)
- Adherence to regulatory requirements specific to the investment vehicle
- Issuers' WAL contribution is limited to avoid over-concentration in a specific maturity bucket
- Principal-weighted coupon of the optimized index is designed to be no lower than the principal-weighted coupon of the starting screened index
- Only issuers with mapped ESG scores are included to maximize coverage for ESG scores

Additional collateral analysis for asset-back commercial paper. For ABCP, we create an R-Factor score that is a 50/50 weighting of the liquidity provider's R-Factor score and the estimated composite R-Factor score of the underlying collateral. The collateral score is based on the weighted average of the R-Factor scores for the various sectors used by each ABCP program. This process will be dynamic because the composition of the underlying collateral may change monthly. In addition, this process will be applied to the most commonly used programs in our internal approve list. Applying a risk budget for the asset class and accounting for market environment, an R-Factor score can be measured overall.

Our research has shown that using this screening and tilting process can result in optimizing an R-Factor score without affecting yield. This is possible because the composition of issuance type and maturities is adjusted to fulfill the overall investment objective and constraints. For instance, if coupon rates are generally higher for traditional repurchase agreements than longer-maturity unsecured commercial paper, then more weight will be given to traditional repurchase agreements than unsecured commercial paper within the same issuer with a higher R-Factor score.

With any ESG-focused investment approach, it's important to think about how potential conflicts between ESG optimization objectives and other constraints will be reconciled in the event of adverse market conditions.

Bringing Sustainability to Cash Management

We started this analysis by recognizing the essential role that ESG factors play in generating long-term, sustainable returns across all asset classes, as well as the importance of cash management in a fully developed investment portfolio. We also outlined some of the regulatory and logistical constraints that make ESG-focused investing especially challenging.

As ESG-centric money market products continue to be introduced in the marketplace, we believe that State Street is uniquely positioned to solve these challenges. Building on our proprietary, multi-source R-Factor platform and our Asset Stewardship insights, we are proud to offer one of the asset management industry's most comprehensive and innovative solutions for ESG-focused cash management.

Our ESG cash management strategy provides competitive levels of income (yield) and liquidity — along with 100% coverage of our stated ESG criteria. By excluding a small subset of instruments and issuers involved in controversial practices and applying a sophisticated tilting process that assesses the R-Factor scores of the issuing counterparty — and, for ABCP, the underlying collateral — we can provide our clients with a scalable ESG cash management strategy that achieves investors' objectives.

Endnotes

01 As of December 31, 2018, $179.0 billion in ESG assets under management.

02 The Sustainability Accounting Standards Board (SASB) is an independent, private-sector standards setting organization dedicated to enhancing the efficiency of the capital markets by fostering high-quality disclosure of material sustainability information that meets investor needs. More information available at materiality.sasb.org

03 Controversies or incidents related to Business Ethics, Governance, Public Policy, Employee, Social Contractors & Supply Chain, Customer, Society & Community, Operations, Environmental Contractors & Supply Chain, and Products and Services are assessed.

About State Street Global Advisors

Our clients are the world's governments, institutions and financial advisors. To help them achieve their financial goals we live our guiding principles each and every day:

- Start with rigor
- Build from breadth
- Invest as stewards
- Invent the future

For four decades, these principles have helped us be the quiet power in a tumultuous investing world. Helping millions of people secure their financial futures. This takes each of our employees in 27 offices around the world, and a firm-wide conviction that we can always do it better. As a result, we are the world's third largest asset manager with US $2.5 trillion* under our care.

* AUM reflects approximately $32.4 billion (as of December 31, 2018), with respect to which State Street Global Advisors Funds Distributors, LLC (SSGA FD) serves as marketing agent; SSGA FD and State Street Global Advisors are affiliated.

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