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TIAA Investments: Innovation and impact in public fixed income

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A PROPRIETARY FRAMEWORK FOR INVESTING WITH IMPACT IN PUBLIC FIXED INCOME MARKETS*

Not too long ago, responsible investing opportunities for individuals were focused almost exclusively within the equity securities of publicly listed companies with strong environmental, social and governance (ESG) performance records. Such companies might be exemplary stewards of the environment, committed to fair labor standards and practices, dedicated to producing safe, high-quality products, and/or generally free of controversial business involvement.

As the concept of responsible investing has evolved, so too, have opportunities for investors. TIAA Investments, a leader in responsible investing since the 1970s, has been on the forefront of this evolution. Today TIAA

Investments offers a suite of ESG-focused investment strategies (including mutual funds, exchange traded funds (ETFs), retail separately managed accounts, and institutional separate accounts) that give investors the opportunity to build complete, responsible and ESG-focused portfolios.

One innovation in this area is TIAA Investments' proprietary framework for identifying and selecting investments which support direct and measurable social and environmental impact with an emphasis on competitive, risk-adjusted return potential. Examples include a clean water project, a U.S. agency security to fund low-income development projects or a corporate bond that finances the development of a solar farm.

TIAA Investments' actively managed responsible fixed income strategies include a dedicated targeted allocation to impact investments. In the following sections, a closer look is focused on the evolution of the framework we developed. We also outline how TIAA Investments' leadership in this specialized area of fixed income investing offers opportunities that can benefit investors, issuers and society alike.

AN EVOLUTION IN PURPOSE AND APPROACH

In the late 2000s, opportunities emerged in private equity and fixed income markets, embodied in a concept now best known as “impact investing.” Impact investments focus on capital solutions to address core societal needs — such as access to education, availability of financial services to underserved populations, housing, healthcare and climate change. As this concept was gaining traction, Stephen M. Liberatore, CFA, portfolio manager for TIAA Investments’ responsible fixed income mandates, began to see synergies between public fixed income securities and the world of impact investing.

Unlike an investment in equities, which invests capital for general corporate purposes, a fixed income security has multiple dimensions. Such an investment may involve basic funding needs for a corporation or other issuer, but it may also be more solutions-oriented, providing capital to fund specific projects that deliver a clearly defined societal benefit. A growing number of issuances of this type, particularly in the municipal bond and agency sectors, prompted Steve to consider the possibility of a separate category of fixed income investments that generate direct and measurable social or environmental impact along with a financial return.

At the same time, Amy O’Brien, head of TIAA Investments’ (now Nuveen’s) responsible investing team, began to see new developments related to impact investing — specifically, increasing client demand for investments that are solution- and outcome-oriented, rather than those that simply use exclusionary approaches (i.e., screening securities out of a universe based on ESG criteria alone). The Nuveen responsible investing team is responsible for the development, enhancement and oversight of the process through which investments become eligible for inclusion in TIAA Investments’ responsible investing products. The team employs rigorous and transparent independent research to maintain ESG best-practice standards. Amy began to monitor and evaluate

the increased availability of ESG information that could support the requirements of this new category of investments.

Historically, research in the area of ESG metrics has focused primarily on methodologies to evaluate public-company ESG performance, which are not necessarily adaptable to all dimensions of public fixed income securities. Developing an eligible investment universe for the new category of securities presented new research needs and considerations. Depending on the security, the ESG evaluation could involve not only public companies, but also private companies, countries, municipalities, agencies, securitizations and, of course, individual projects. Amy and her team ultimately determined that the optimal solution was to develop a proprietary framework for identifying and classifying investment opportunities by combining emerging ESG research available in the marketplace with in-house expertise.

THE IMPACT FRAMEWORK

Amy and Steve combined their efforts in 2007 and further refined their work in 2012, implementing a formal mechanism by which TIAA Investments’ responsible fixed income strategies could include impact investments. Both agreed that such a framework was needed for clients to clearly understand the range of social and environmental impacts the strategy planned to target.

The framework also provides a useful tool for communicating expectations with issuers, when considering investments. As Steve identifies investment opportunities in the marketplace, he may measure them against the framework, which sets parameters for classification based on the issuer’s mission, ESG performance quality, and/or the project to be funded. As a portfolio manager focused on excess returns and risk-adjusted results vs. industry standard benchmarks, Steve invests on the premise that both positive societal impact *and* positive relative value are preconditions for an attractive investment.

FOUR THEMATIC AREAS OF INVESTMENT

Based on extensive engagement with investors and an in-depth survey of participants in TIAA Investments' Social Choice products, four thematic areas were identified and targeted in the impact framework:

AFFORDABLE HOUSING

- Low- and moderate-income housing loans
- Transit-oriented development
- Walkable communities
- Mixed-use development projects

COMMUNITY AND ECONOMIC DEVELOPMENT

- Benefits underserved and/or economically disadvantaged communities
- Services: financial, hospital/medical, and educational
- Urban revitalization: community centers, reconstruction activities
- Humanitarian activities: disaster and international aid

RENEWABLE ENERGY AND CLIMATE CHANGE

- New, expanding, or existing renewable energy projects (including hydroelectric, solar and wind)
- Smart grid and other projects designed to make power generation and transmission systems more efficient
- Energy efficiency projects resulting in the reduction of greenhouse gas emissions

NATURAL RESOURCES

- Sustainability projects: forestry and agriculture; waste management; certified green buildings
- Remediation and redevelopment of polluted or contaminated sites
- Improvement of clean drinking water supplies and/or sewer systems infrastructure

Within these four areas, investments are made across a diversified array of publicly traded fixed income securities. Security types include agency debt, asset-backed securities, commercial mortgage-backed securities, corporate bonds, mortgage-backed securities and municipal bonds.

ALIGNMENT TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (UN SDGS)

Created in 2015, the United Nations Sustainable Development Goals (SDGs) represent guidelines and targets necessary to achieve sustainable development at a global level by 2030. We have mapped our impact themes to the SDGs to demonstrate how the Fund may contribute to the achievement of those goals. For more information about UN SDGs, please visit www.un.org/sustainabledevelopment

THEME: AFFORDABLE HOUSING

- Low- and moderate-income housing loans
- Transit-oriented development
- Walkable communities
- Mixed-use development projects



Alignment with UN SDGs:

Example 1: HUD

Security type	Government related — agency
Issuer	U.S. Department of Housing and Urban Development (HUD)
Mission/projects	<p>HUD finances community development and addresses the structural gap between household incomes and housing prices. Proceeds from HUD issues support the overall mission of the agency.</p> <ul style="list-style-type: none"> • Their primary objective is to provide rental assistance through vouchers and grants for homeless assistance for very low- to extremely low-income families and individuals. • Ensuring a stable supply of affordable housing in safe and quality communities enables low-income groups to live healthy and productive lives. • Sustainable and inclusive communities enforce fair housing, reduce homelessness, bolster energy efficiency and economic development, and strengthen the mortgage market. • HUD supports 5.5 million residents with subsidized housing, including 2.21 million households assisted with Housing Choice Vouchers.¹

¹ <https://www.hud.gov/>

Example 2: The City and County of San Francisco

Security type	Taxable municipal bond
Issuer	The City and County of San Francisco
Mission/projects	<p>Proceeds finance housing revitalization in the Bayview-Hunters Point neighborhood of San Francisco.</p> <ul style="list-style-type: none"> • Hunters View is part of the broader "HOPE SF" initiative through which the city plans to replace four publicly owned housing sites. • Revitalization of the Hunters View housing development is a three-phase project to replace a severely deteriorated public housing site and create a sustainable, mixed-income community with retail, parks and playgrounds, and other community facilities. • The project will result in 750 new units, including 267 public housing replacement units, as well as market-rate and affordable rental and ownership housing.²

² <http://sfmohcd.org>

THEME:
COMMUNITY AND ECONOMIC DEVELOPMENT

Benefits underserved and/or economically disadvantaged communities

- Services: financial, hospital/medical, and educational
- Urban revitalization: community centers, reconstruction activities
- Humanitarian activities: disaster and international aid

Alignment with UN SDGs:



Example 1:
The Reinvestment Fund

Security type	Corporate bond
Issuer	The Reinvestment Fund, Inc.
Mission/projects	<p>The Reinvestment Fund is a private, mission-driven non-profit organization. Certified by the U.S. Treasury as a Community Development Financial Institution (CDFI), this strong financial intermediary offers significant social impact.</p> <p>This issue represents the first public debt issue of a CDFI. The proceeds will be used to finance loans to organizations and businesses in keeping with the Reinvestment Fund's mission to expand economic opportunity in low-wealth areas.</p> <p>Since its inception in 1985, the Reinvestment Fund has put \$1.9 billion in cumulative lending and investments to work in communities across the country, supporting:</p> <ul style="list-style-type: none"> • 21,795 housing units³ • 75,510 jobs³ • 17.6 million square feet of commercial space, including access to supermarkets and fresh food retail³ • 69,260 school and childcare seats³ <p>632,000 annual patient visits to community health centers 7.6 million megawatt hours of energy — enough to power over 807,563 homes for a year, annually displacing 5.7mm tons of CO2 equivalents, the same impact as taking 1.1 million cars off the road.⁴</p>

³ <https://www.reinvestment.com/news/2017/08/09/reinvestment-news-summer-2017/>

⁴ US EPA Carbon Equivalency Calculator

Example 2:
Starbucks Corporation

Security type	Corporate bond
Issuer	Starbucks Corporation
Mission/projects	<p>Starbucks is among the largest global retail coffee chains, operating in 70 countries and sourcing approximately 3% of the world's coffee. The company aims to use its resources and influence to finance initiatives that will make a positive social and environmental impact in the coffee supply chain.</p> <p>This particular security is the first \$U.S. sustainability bond focused on sustainable sourcing. Proceeds from the issue will finance projects that meet the following criteria:</p> <ul style="list-style-type: none"> • Compliance with Starbucks' proprietary Coffee and Farmer Equity (C.A.F.E.) Practices. These practices include environmentally responsible growing methods and resource management, fair minimum wages and working conditions, and economic transparency. • Expenditures related to the development and operation of Farmer Support Centers. To help suppliers and farmers implement C.A.F.E. Practices and bring farmers into its supply chain, Starbucks operates eight such centers in Costa Rica, Rwanda, Tanzania, Ethiopia, Colombia, Guatemala, China, and Indonesia. • Loans made to coffee farmers through Starbucks' \$50 million Global Farmer Fund. This Fund provides financing to coffee farmers in collaboration with various lending organizations. • Compliance with the Green Bond Principles will be demonstrated through annual reporting accompanied by management and auditor attestations. • Starbucks also intends to show the environmental and/or social impacts of the projects to which bond proceeds have been allocated.

THEME:
RENEWABLE ENERGY AND CLIMATE CHANGE

- New, expanding, or existing renewable energy projects (including hydroelectric, solar and wind)
- Smart grid and other projects designed to make power generation and transmission systems more efficient
- Energy efficiency projects resulting in the reduction of greenhouse gas emissions

Alignment with UN SDGs:



Example 1:
Nacional Financiera SNC

Security type	Government related — agency
Issuer	Nacional Financiera SNC (NAFIN)
Mission/projects	<p>NAFIN is a wholly-owned development bank of the Mexican government, providing affordable financing to micro-, small-, and medium-sized enterprises (MSMEs) operating throughout the country. NAFIN focuses on generating jobs and regional growth by strengthening and modernizing Mexico's private sector.</p> <p>This security — the bank's inaugural labeled green bond — will fund a range of existing and proposed renewable energy projects, including, though not limited to, wind energy generation and dedicated infrastructures for wind projects.</p> <ul style="list-style-type: none"> • Verification that the transaction meets the requirements of the Climate Bonds Initiative was provided by Sustainalytics. • Total existing renewable energy projects financed by this bond are expected to generate 6.8 million megawatts (MWh) annually — enough electricity to power 644,972 U.S. homes and displace 3.1 million tons of CO2 equivalents per year, the same impact as taking 987,147 cars off the road.⁴ • The project's four proposed wind farms are expected to produce 1.5 million MWh of energy, enough electricity to power 142,000 U.S. homes and displace 680,998 tons of CO2 equivalents per year an amount equal to the impact of taking 216,890 cars off the road.^{4,5}

5 Sustainalytics

Example 2:
South Davis County, Utah Sewer District

Security type	Taxable municipal bond
Issuer	South Davis County, Utah Sewer District
Mission/projects	<p>This sewer district serves the southern half of Davis County, UT, operating 370 miles of sewer lines and two plants that treat up to 16 million gallons of wastewater per day. Proceeds from this taxable municipal issue will support the Wasatch Resource Recovery Project, jointly owned by the South Davis Sewer District and ALPRO Energy & Water, LLC.⁶</p> <ul style="list-style-type: none"> • The project is designed to convert liquid and solid food waste, along with other organic wastes, into biogas that will be conditioned to produce renewable natural gas. • Processing capacity could reach up to 720 wet tons of waste per day, procured via agreements with waste producers in the Salt Lake City region served by the project. • When completed, this energy-from-waste project is expected to generate enough electricity to power 25,526 average homes, while displacing approximately 190,551 tons annually of CO2 equivalents—effectively the same impact as taking 36,515 cars off the road.^{4,6}

6 <http://wasatchresourcerecovery.com/about/>

THEME:
NATURAL RESOURCES

- Sustainability projects: forestry and agriculture; waste management; certified green buildings
- Remediation and redevelopment of polluted or contaminated sites
- Improvement of clean drinking water supplies and/or sewer systems infrastructure

Alignment with UN SDGs:



Example 1:
CSAIL 2017

Security type	Commercial mortgage-backed security (CMBS)
Issuer	Natixis Real Estate Capital, LLC
Mission/projects	<p>This securitized loan issue represents the first CMBS issue to be labeled “green.” The proceeds will be used to refinance a portion of the existing \$358.6 million fixed-rate first mortgage loan on 85 Broad Street, a 1.1 million square foot, 30-story office building in lower Manhattan.</p> <ul style="list-style-type: none"> • Originally built in 1983, the 85 Broad Street property received a Leadership in Energy and Environmental Design (LEED) Platinum Certificate — the highest LEED rating — in January 2017 for its purposeful investment in HVAC, electrical, and chilled water systems. <p>This issue was subject to a second party opinion by oekom⁷ research; the issuing entity has committed to impact reporting to report on energy consumption and avoidance of CO₂ emissions relative to a local benchmark.</p>

⁷ oekom research earned the SRI/Green Bond Awards 2016 as “most impressive Second Opinion Provider” from the international trade magazine *Global Capital*.

Example 2:
International Finance Corporation (IFC)

Security type	Government related — credit
Issuer	International Finance Corporation (IFC)
Mission/projects	<p>For years, with few economic alternatives, the community surrounding the Kasigau Corridor in East Kenya was forced to meet its survival needs through the depletion of the forest. Proceeds from this inaugural IFC Forest Bond channel funds to the Kasigau Corridor REDD (Reducing Emissions from Deforestation and Forest Degradation) project, which supports economic incentives to reduce deforestation and invest in low-carbon growth. The project:</p> <ul style="list-style-type: none"> • Provides income to the community and local landowners through job creation in monitoring wildlife and sustainable agriculture. • Was awarded Gold status by the Climate, Community and Biodiversity Alliance. • Protects 200,000 hectares and is expected to offset 1.4 million tons of CO₂ emissions annually for the next 30 years. This CO₂ mitigation equals the electricity needed to power 187,546 average U.S. homes and is equivalent to taking 268,279 cars off the road.⁴

The impact framework is TIAA Investments’ proprietary classification of fixed income securities. The security descriptions included here are for informational, illustrative purposes only and should not be viewed as an endorsement or a guarantee of performance. Nothing in this document should be construed or relied upon as legal or financial advice. They may not reflect actual investments. None of this information should be relied upon without independent verification.

**TIAA INVESTMENTS:
A LEADER IN SOCIALLY RESPONSIBLE
FIXED INCOME INVESTING**

Since introducing our impact framework in 2007, TIAA Investments has seen growing interest among individual and institutional investors seeking solutions for social and environmental needs. The diversity of interested investors has also grown, as these opportunities increasingly appeal to socially responsible investors in addition to “mainstream” investors.

To meet this growing demand, an increasing number of fixed income issuers across sectors have responded, which TIAA Investments believes is a positive trend. By participating in these opportunities, TIAA Investments is helping to directly lower the cost of capital for issuers, thereby increasing their long-term viability and potential societal impact.

As a leading fixed income manager and a recognized leader in socially responsible fixed income investing, TIAA Investments is the asset manager many of these entities turn to for guidance. Team members meet frequently with

prospective issuers to discuss how to structure bonds, what characteristics are needed to satisfy investor demand, and the appropriate level and quality of subsequent disclosure around the use of proceeds.

A commitment to responsible investing, in general and impact investments in particular, is consistent with TIAA Investments’ experience, track record and demonstrated leadership in this rapidly growing area of the market.

**OPPORTUNITIES FOR
INVESTORS**

TIAA Investments is one of the largest responsible investing organizations in the United States, managing more than \$20 billion in ESG-focused products. Of these assets, more than \$3 billion are allocated to impact fixed income: publicly traded securities that offer competitive risk-adjusted return potential along with measurable social and environmental benefits. Impact holdings represent approximately 40% of actively managed fixed income assets held in TIAA’s ESG-focused strategies.

Learn more at nuveen.com or call 800-752-8700.

* We introduced our impact framework in 2007 using the terminology Proactive Social Investments (PSI). We have since revised references to the framework to “impact” to provide clarity and transparency around the process.

Risks and other important considerations

Please find enclosed examples of how TIAA Investments evaluates ESG securities. All information shown is historical and represents the views of TIAA Investments. It is provided for informational purposes only and should not be deemed as a recommendation to buy or sell any security or asset.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE

Because ESG criteria excludes some securities, investments in ESG-focused products may not be able to take advantage of the same opportunities or market trends as products that do not use such criteria. Investment products in general may be subject to market and other risk factors. For more information, please visit [Nuveen.com](https://nuveen.com) for more details.

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