Socially Responsible Investing: Aligning values and performance

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Socially Responsible Investing (SRI)

Agenda

- What is SRI?
- TIAA-CREF philosophy
- Defining the investable universe
- Social Choice Equity strategy
- Social Choice Bond strategy
- Concluding remarks
SRI leadership

More than 40 years of Responsible Investment experience

Total AUM across Social Choice product suite: $17.3 billion

<table>
<thead>
<tr>
<th>Social Choice Equity Fund</th>
<th>Social Choice Bond Fund</th>
<th>Social Choice Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.7 billion</td>
<td>$178 million</td>
<td>$14.5 billion</td>
</tr>
</tbody>
</table>

Assets as of 8/31/2014
What is Responsible Investing?

- Various terms – ESG-targeted funds, ethical investing, sustainable investing, etc. – describing a broad range of activity
- How we define Socially Responsible Investing (SRI): Mutual funds explicitly incorporating environmental, social and governance (ESG) criteria

### Responsible Investment Approaches

<table>
<thead>
<tr>
<th>ESG-focused funds</th>
<th>Impact investing</th>
<th>Active ownership</th>
<th>ESG integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRI funds incorporating ESG criteria explicitly in security selection</td>
<td>Investments with direct and measurable social outcomes</td>
<td>Proxy voting, corporate engagement</td>
<td>Considering ESG factors in conventional investments</td>
</tr>
</tbody>
</table>
What are investors looking for in ESG-focused/SRI funds?

- Competitive performance still the primary concern
- Comprehensive approach evaluating companies on range of issues
- Identifying industry leaders in ESG performance – not simply excluding companies or industries considered objectionable
- Direct effect on social and environmental outcomes through Impact Investing
- Core equity and bond allocations, rather than niche products

### SRI Survey Results

<table>
<thead>
<tr>
<th>Interested in SRI</th>
<th>Unaware of available fund options</th>
<th>Believe SRI can deliver competitive returns</th>
<th>Priority concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>61%</td>
<td>81%</td>
<td>Natural resources, human rights</td>
</tr>
</tbody>
</table>

Survey commissioned by TIAA-CREF, conducted by Greenberg, Quinlan Rosner Research, 12/5/2013 – 1/21/2014
SRI philosophy

Objective: Achieve both financial and nonfinancial value creation

<table>
<thead>
<tr>
<th>✔️ Broad-market characteristics</th>
<th>✔️ High ESG quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Diversification matching broad benchmarks for stocks and bonds</td>
<td>▪ Rigorous ESG standards</td>
</tr>
<tr>
<td>▪ Core strategy fitting established asset allocation models</td>
<td>▪ Continuous improvement incentives for issuers</td>
</tr>
<tr>
<td>▪ Potential for competitive risk-adjusted returns to meet fiduciary needs</td>
<td>▪ Comprehensive approach considering multiple ESG risks and opportunities</td>
</tr>
</tbody>
</table>
ESG incorporation to determine eligible investment universe

- Develop strategy and methodology for evaluating public securities on comprehensive and relevant ESG factors
- Work with multiple stakeholders to advance best practices for ESG performance evaluations and comparison standards

Proactive Social Investment framework (PSI)

- PSI represents opportunities for competitive returns across broad range of publicly traded fixed-income securities
- Proprietary strategy addressing demand for investments with direct and measurable social and/or environmental benefits

ESG criteria for public securities have two dimensions
Responsible Investment team develops ESG strategy

- Develops and manages environmental, social and governance (ESG) investment guidelines for Social Choice product suite
- Uses proprietary due diligence process to evaluate established research providers
- Conducts internal research to supplement limited external sources for fixed-income and Proactive Social Investment (PSI)
Defining the eligible investment universe

Proprietary framework for selecting research providers

- Established track record in ESG research and analysis
- Rigorous analytical capabilities to generate transparent views on company ESG performance
- Diverse and comprehensive data sources reflecting input of multiple stakeholders
- Consistent ESG methodologies applied across regions
- Comprehensive factors encompassing broad range of ESG issues, focusing on industry-specific risks and opportunities
- Continuous monitoring of company issues, controversies, and emerging ESG trends

Research provider due diligence
Principles for ESG evaluation

- Include companies that are sector leaders in ESG performance
- Consider positive and negative impacts on key stakeholders – employees, communities, customers, suppliers and the planet
- Use industry-specific ESG factors and consider a company’s adherence to international norms and conventions

ESG evaluation criteria

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Social</th>
<th>Governance</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change</td>
<td>Human capital</td>
<td>Corporate governance</td>
<td>Environment</td>
</tr>
<tr>
<td>Natural resource usage</td>
<td>Product safety</td>
<td>Business ethics</td>
<td>Customers</td>
</tr>
<tr>
<td>Waste management</td>
<td>Housing, health, community development</td>
<td>Public policy</td>
<td>Labor/human rights, community</td>
</tr>
</tbody>
</table>
ESG criteria for fixed-income securities

Fixed-income securities overall
- All holdings subject to ESG evaluation
- Review process is complex due to range of bond issuers
- Internal expertise is paramount, given limited external sources

Proprietary classification – Proactive Social Investment (PSI)*
- Six issuer categories: Corporate, government/agency, mortgage-backed (MBS), asset-backed (ABS), commercial mortgage-backed (CMBS), municipal
- Four themes: Affordable housing, community and economic development, renewable energy and climate change, natural resources
Proprietary quantitative process enables disciplined portfolio construction and consistent monitoring

- Portfolio management
  - Jim Campagna, CFA – Portfolio Manager with 23 years of investment experience
  - Lei Liao, CFA – Portfolio Manager with 10 years of industry experience

- Trading support
  - Equity trading desks in New York and San Francisco provide 24-hour trading capability
Why an index approach is best for this strategy

- Designed to match performance of Russell 3000 Index
- Broadly diversified core strategy fits existing asset allocation models
- Low costs support better performance and benchmark tracking

Index construction process

- **Investment universe:** 2,500 stocks
- **ESG-eligible universe:** 1,200 stocks
- **Optimization process:** Selects 800 to 1,000 stocks to match R-3000 characteristics

ESG evaluation reduces the investable universe of 2,500 stocks by > 50%
Proprietary techniques and industry tools match benchmark performance

- Barra risk model uses 13 fundamental and 55 industry group factors
- Match risk profile of R-3000 with only one-third of benchmark securities
- Overweight stocks with characteristics similar to stocks not in investable universe
- Ex-ante tracking error in range of 100-125 basis points
- Short-term performance variability due to absence of certain large-cap stocks, such as oil companies, money-center banks, and tech companies
- Long-term performance is very comparable to R-3000 over 3-, 5- and 10-year periods
As of June 30, 2014
Data shown are for informational purposes only. Allocations at the time of investment may be different.
Source: FactSet, TIAA-CREF
Financials sector represents average 3% overweight in portfolio

Example: Overweighting insurance to compensate for banks not in investable universe

Sector allocations vs. R-3000 (average for 12/31/2013 - 6/30/2014)

Data shown are for informational purposes only. Allocations at the time of investment may be different.

Source: FactSet, TIAA-CREF

As of June 30, 2014
Average Annual Returns vs. Russell 3000 Index
Performance shown net of fees as of June 30, 2014*

Expense ratio for the Institutional Share Class is 0.18% (gross and net)
* The Fund’s inception date is July 01, 1999. Returns do not reflect the taxes that a shareholder would pay on fund distributions or on redemptions of fund shares. Investment return and principal value will fluctuate so that, when redeemed, shares may be worth more or less than the original cost. The performance presented represents past performance and is not an indicator or guarantee of future results. Performance data for the Fund is presented net of management fees and expenses and includes the reinvestment of dividends through June 30, 2014. The net expense ratio for this portfolio is 0.18%. Current performance may be lower or higher than the performance presented herein. For performance current to the most recent month-end, please visit www.tiaa-cref.org/charts/imf-performance.html. Please see the Appendix for important notes to this presentation.

Morningstar ratings as of 6/30/2014: 3-year three stars (1,338 funds), 5-year four stars (1,192 funds), 10-year four stars (798 funds).
Morningstar ratings include Retail, Retirement, Premier and Institutional fund share classes. Morningstar is an independent service that rates mutual funds and variable annuities. The top 10% of accounts in an investment category receive five stars, the next 22.5% receive four stars, and the next 35% receive three stars. Morningstar proprietary ratings reflect historical risk-adjusted performance and can change every month. They are calculated from the account's three-, five- and ten-year average annual returns in excess of 90-day Treasury bill returns with appropriate fee adjustments, and a risk factor that reflects subaccount performance below 90-day T-bill returns. The overall star ratings are Morningstar’s published ratings, which are weighted averages of its three-, five- and ten-year ratings for periods ended June 30, 2014. Past performance cannot guarantee future results.
Social Choice Bond Fund portfolio management

Core actively managed fixed-income strategy

- Focus primarily on undervalued, investment-grade securities and add value through:
  - Duration positioning
  - Yield-curve positioning
  - Sector allocation
  - Security selection
  - Proactive Social Investments (PSI)

Broad investment-grade benchmark offers two advantages:

- Strategy can serve as core holding within established asset allocation models
- Opportunity set leverages breadth and depth of PM, research and trading teams
Social Choice Bond Fund investment resources

- Experienced portfolio management team averaging 18 years of experience
- Research and trading teams average 14 years of experience

**Sector Portfolio Managers**

- **Stephen M. Liberatore, CFA**
  - 19 years’ investment experience
  - Agency Inv. Grade Municipal
  - Government High Yield

- **Nick Travaglino**
  - 17 years’ investment experience
  - Agency MBS

- **Tim Nabors**
  - 16 years’ investment experience
  - Non-Agency MBS

- **Joseph Higgins, CFA**
  - 19 years’ investment experience
  - ABS CMBS

**Research & Trading**

- **Research**
  - 11 Investment Grade
  - 9 High Yield
  - 8 Emerging Markets
  - 3 Muni
  - 1 Developed Markets

- **Trading**
  - 4 Investment Grade
  - 2 High Yield
  - 2 Emerging Markets

- **Research**
  - 2 Agency MBS

- **Trading**
  - 1 Agency MBS

- **Research**
  - 4 Non-Agency MBS

- **Trading**
  - 1 Non-Agency MBS

- **Research**
  - 4 ABS
  - 6 CMBS

- **Trading**
  - 1 CMBS/ABS
### Proactive Social Investment (PSI) categories and themes

#### Six fixed-income sectors

<table>
<thead>
<tr>
<th>Agency</th>
<th>ABS</th>
<th>CMBS</th>
<th>Corporate</th>
<th>MBS</th>
<th>Municipal</th>
</tr>
</thead>
</table>

#### Four ESG themes

<table>
<thead>
<tr>
<th>Affordable housing</th>
<th>Community and economic development</th>
<th>Renewable energy and climate change</th>
<th>Natural resources</th>
</tr>
</thead>
</table>

#### Examples

| U.S. government agency security funding low- and moderate-income housing | Vaccine bonds funding global immunization programs | Direct investment in large-scale solar energy production facility | CMBS security funding construction of first LEED Platinum Certified office building in U.S. |
PSI holdings in Social Choice Bond Fund

- PSI is a growing portion of Social Choice Bond Fund
- Holdings must have direct and measurable social/environmental impact

**Portfolio size:**
- $137.1 million (market value)
- 254 securities

**Proactive holdings:**
- $33.2 million (market value)
- 78 securities
- 24.2% of portfolio
- 79.8% of proactive holdings are non-index eligible
- Weighted average rating: Aa1/AA

Holdings as of June 30, 2014
Numbers may not total to 100% due to rounding.
Source: TIAA-CREF
Social Choice Bond Fund portfolio characteristics vs. benchmark

Broad fixed-income exposure consistent with core intermediate bond allocation

<table>
<thead>
<tr>
<th></th>
<th>Social Choice Bond Fund</th>
<th>Barclays U.S. Aggregate Bond Index</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option-Adjusted Duration¹,²</td>
<td>5.99</td>
<td>5.52</td>
<td>0.47</td>
</tr>
<tr>
<td>Option-Adjusted Spread Duration³</td>
<td>6.04</td>
<td>5.53</td>
<td>0.51</td>
</tr>
<tr>
<td>Option-Adjusted Convexity⁴</td>
<td>0.28</td>
<td>(0.06)</td>
<td>0.34</td>
</tr>
<tr>
<td>Moody’s Rating</td>
<td>Aa3/A1</td>
<td>Aa1/Aa2</td>
<td>(2 Notches)</td>
</tr>
<tr>
<td>S&amp;P Rating</td>
<td>AA-/A+</td>
<td>AA/AA-</td>
<td>(1 Notch)</td>
</tr>
<tr>
<td>Average Years to Maturity</td>
<td>8.23</td>
<td>7.65</td>
<td>0.58</td>
</tr>
<tr>
<td>Number of Issues</td>
<td>254</td>
<td>8,523</td>
<td>(8,269)</td>
</tr>
</tbody>
</table>

**Key Rate Duration⁵ (KRD) Exposure:**

<table>
<thead>
<tr>
<th></th>
<th>Social Choice Bond Fund</th>
<th>Barclays U.S. Aggregate Bond Index</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months:</td>
<td>0.06</td>
<td>0.10</td>
<td>(0.04)</td>
</tr>
<tr>
<td>2 years:</td>
<td>0.50</td>
<td>0.71</td>
<td>(0.21)</td>
</tr>
<tr>
<td>5 years:</td>
<td>1.37</td>
<td>1.39</td>
<td>(0.02)</td>
</tr>
<tr>
<td>10 years:</td>
<td>1.83</td>
<td>1.32</td>
<td>0.51</td>
</tr>
<tr>
<td>20 years:</td>
<td>0.70</td>
<td>1.07</td>
<td>(0.37)</td>
</tr>
<tr>
<td>30 years:</td>
<td>1.54</td>
<td>0.95</td>
<td>0.59</td>
</tr>
</tbody>
</table>

*The data shown is provided for informational purposes only and may not reflect current positioning of the portfolio.

Data as of June 30
For footnotes 1-5, please see definitions on Slide 28.
Outperformance for YTD, 1-year and since inception (09/2012)*

Average annual returns vs. Barclays U.S. Aggregate Bond Index
Performance data as of 6/30/2014

1-year Morningstar peer-group ranking for total returns among 1,053 funds in Intermediate-Term Bond category (as of 6/30/2014)

Expense ratio for Institutional Share class : Gross 1.29%, Net 0.40%. A contractual arrangement is in place that limits certain fees and/or expenses. Had fees/expenses not been limited ("capped"), currently or in the past, returns would have been lower. Expense Cap Expiration Date: July 31, 2014. Please see the prospectus for details.

* The Fund’s inception date is 09/21/2012. Returns do not reflect the taxes that a shareholder would pay on fund distributions or on redemptions of fund shares. Investment return and principal value will fluctuate so that, when redeemed, shares may be worth more or less than the original cost. The performance presented represents past performance and is not an indicator or guarantee of future results. Performance data for the Fund is presented net of management fees and expenses and includes the reinvestment of dividends through June 30, 2014. The net expense ratio for this portfolio is 0.40%. Current performance may be lower or higher than the performance presented herein. For performance current to the most recent month-end, please visit www.tiaa-cref.org/charts/imf-performance.html. Please see the Appendix for important notes to this presentation.
### High information ratio with reasonable tracking error

<table>
<thead>
<tr>
<th></th>
<th>Out (Under) performance gross</th>
<th>Out (Under) performance net</th>
<th>Realized tracking error</th>
<th>Information ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD</td>
<td>+192 bps</td>
<td>+171 bps</td>
<td>28.7</td>
<td>6.7x</td>
</tr>
<tr>
<td>1 Year</td>
<td>+294 bps</td>
<td>+252 bps</td>
<td>38.9</td>
<td>7.6x</td>
</tr>
<tr>
<td>Since Inception*</td>
<td>+222 bps</td>
<td>+180 bps</td>
<td>48.2</td>
<td>4.6x</td>
</tr>
</tbody>
</table>

Source: TIAA-CREF

Definitions:
Tracking error: The standard deviation of the difference in returns between a portfolio and its benchmark index.
Information Ratio: A measure of the risk-adjusted return of a security or portfolio, defined as expected active return divided by tracking error.

* The Fund’s inception date is 09/21/2012. Returns do not reflect the taxes that a shareholder would pay on fund distributions or on redemptions of fund shares. Investment return and principal value will fluctuate so that, when redeemed, shares may be worth more or less than the original cost. The performance presented represents past performance and is not an indicator or guarantee of future results. Performance data for the Fund is presented net of management fees and expenses and includes the reinvestment of dividends through June 30, 2014. Expense ratio for Institutional Share class: Gross 1.29%, Net 0.40%. A contractual arrangement is in place that limits certain fees and/or expenses. Had fees/expenses not been limited (“capped”), currently or in the past, returns would have been lower. Expense Cap Expiration Date: July 31, 2014. Please see the prospectus for details. Current performance may be lower or higher than the performance presented herein. For performance current to the most recent month-end, please visit [www.tiaa-cref.org/charts/imf-performance.html](http://www.tiaa-cref.org/charts/imf-performance.html). Please see the Appendix for important notes to this presentation.
Social Choice funds use different investment approaches reflecting differences in asset classes and benchmarks.

They are designed to produce competitive returns and higher ESG performance quality relative to their benchmarks.

Using broad-market benchmarks, both are designed to serve as core strategies within existing asset allocation models.
Two options for asking questions:

- Send questions from webinar console
- To ask questions by phone, signal the operator
Definitions:

1. **Duration**: A measure of the sensitivity of the price of a fixed-income investment to a change in interest rates.

2. **Option-adjusted duration**: The flat spread which has to be added to the Treasury yield curve in a pricing model (that accounts for embedded options) to discount a security payment to match its market price.

3. **Option-adjusted spread duration**: A measure of the spread of a fixed-income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option.

4. **Convexity**: A measure of the curvature in the relationship between bond prices and bond yields that demonstrates how the duration of a bond changes as the interest rate changes.

5. **Key rate duration**: Holding all other maturities constant, this measures the sensitivity of a security or the value of a portfolio to a 1% change in yield for a given maturity.

This material is prepared by TIAA-CREF Asset Management and represents the views of Amy O'Brien, Jim Campagna, Stephen Liberatore, and Christine Pishko as of October 2014. These views may change in response to changing economic and market conditions. The material is for informational purposes only and should not be regarded as a recommendation or an offer to buy or sell any product or service to which this information may relate. Certain products and services may not be available to all entities or persons.

Investments in socially responsible funds are subject to Social Criteria Risk, namely the risk that because social criteria excludes securities of certain issuers for nonfinancial reasons, investors may forgo some market opportunities available to those that don’t use these criteria.
Important information

Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not bank deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.

Funds that invest in fixed income securities are not guaranteed and are subject to interest rate, inflation, and credit risks.

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877 518-9161 or log on to tiaa-cref.org for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

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