Prepared for
Community Foundation for Muskegon County

Serving the Community Foundations of Muskegon, Mason, and Oceana Counties

January 27, 2020
Agenda

I. Market recap
II. Portfolio performance and asset allocation
III. Economic and market outlook

Appendix
– Segregated accounts reporting
– Fund pages

Presented by:
Matt Ruhl, CFA
Senior Investment Consultant
Vanguard Institutional Advisory Services®
Market recap
All segments of U.S. and Non-U.S. Equities had strong returns in 2019

Global equity market returns as of December 31, 2019 (%)

<table>
<thead>
<tr>
<th>U.S. Equities</th>
<th>Non-U.S. Equities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-Cap</td>
<td>Developed Markets</td>
</tr>
<tr>
<td>Mid-Cap</td>
<td>Emerging Markets</td>
</tr>
<tr>
<td>Small-Cap</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3 months</td>
<td>22.3</td>
</tr>
<tr>
<td>1 year</td>
<td>11.4</td>
</tr>
<tr>
<td>Large-Cap</td>
<td>31.5</td>
</tr>
<tr>
<td>Mid-Cap</td>
<td>20.4</td>
</tr>
<tr>
<td>Small-Cap</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td>Growth</td>
<td></td>
</tr>
<tr>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>35.8</td>
<td></td>
</tr>
</tbody>
</table>

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Sources: FTSE, MSCI, Russell, CRSP and Dow Jones.
Large-cap (CRSP US Mega Cap Index), Mid-cap (CRSP US Mid Cap Index), Small-cap (CRSP US Small Cap Index), Value (Russell 3000 Value Index), Growth (Russell 3000 Growth Index), Developed markets (FTSE Developed All Cap ex-US Index), Emerging markets (FTSE Emerging Markets All Cap China A Inclusion Index).
All sectors have exhibited positive performance over the course of 2019

U.S. equity sector returns as of December 31, 2019 (%)

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Sources: FactSet and Vanguard.
U.S. markets measured by CRSP US Total Market Index.
Yields have fallen across the U.S. Treasury yield curve in 2019

<table>
<thead>
<tr>
<th>Yield (%) and change (bps)</th>
<th>1 month</th>
<th>3 month</th>
<th>6 month</th>
<th>1 year</th>
<th>2 year</th>
<th>3 year</th>
<th>5 year</th>
<th>7 year</th>
<th>10 year</th>
<th>20 year</th>
<th>30 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current yield (%)</td>
<td>1.48</td>
<td>1.55</td>
<td>1.60</td>
<td>1.59</td>
<td>1.58</td>
<td>1.62</td>
<td>1.69</td>
<td>1.83</td>
<td>1.92</td>
<td>2.25</td>
<td>2.39</td>
</tr>
<tr>
<td>3 month change</td>
<td>−43</td>
<td>−33</td>
<td>−23</td>
<td>−16</td>
<td>−5</td>
<td>6</td>
<td>14</td>
<td>21</td>
<td>24</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td>12 month change</td>
<td>−96</td>
<td>−90</td>
<td>−96</td>
<td>−104</td>
<td>−90</td>
<td>−84</td>
<td>−82</td>
<td>−76</td>
<td>−77</td>
<td>−62</td>
<td>−63</td>
</tr>
</tbody>
</table>

Source: U.S. Treasury.
All segments of the fixed income markets had positive returns with low inflation fears in 2019

Global fixed income market returns as of December 31, 2019 (%)

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Sources: Bloomberg Barclays.
Portfolio performance and asset allocation
### Asset allocation summary of CFMC VIAS composite portfolio

**As of December 31, 2019**

<table>
<thead>
<tr>
<th>Category</th>
<th>Market value as of December 31, 2019</th>
<th>Policy target allocation</th>
<th>Actual weight</th>
<th>Variance (%)</th>
<th>Variance ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic equity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Stock Market Index Fund Institutional Shares</td>
<td>$78,602,047</td>
<td>39.0%</td>
<td>40.1%</td>
<td>1.1%</td>
<td>$2,218,840</td>
</tr>
<tr>
<td>Domestic equity subtotal</td>
<td>$78,602,047</td>
<td>39.0%</td>
<td>40.1%</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td>International equity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total International Stock Index Fund Institutional Shares</td>
<td>$61,567,285</td>
<td>31.0%</td>
<td>31.4%</td>
<td>0.4%</td>
<td>$852,428</td>
</tr>
<tr>
<td>International equity subtotal</td>
<td>$61,567,285</td>
<td>31.0%</td>
<td>31.4%</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Fixed income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Bond Market Index Fund Institutional Shares</td>
<td>$42,008,276</td>
<td>22.6%</td>
<td>21.4%</td>
<td>-1.2%</td>
<td>-$2,254,813</td>
</tr>
<tr>
<td>Private loans*</td>
<td>$4,300,000</td>
<td>2.4%</td>
<td>2.2%</td>
<td>-0.2%</td>
<td>–$400,505</td>
</tr>
<tr>
<td>Fixed income subtotal</td>
<td>$46,308,276</td>
<td>25.0%</td>
<td>23.6%</td>
<td>-1.4%</td>
<td></td>
</tr>
<tr>
<td>Other investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Estate Index Fund Institutional Shares</td>
<td>$9,376,769</td>
<td>5.0%</td>
<td>4.8%</td>
<td>-0.2%</td>
<td>-$415,950</td>
</tr>
<tr>
<td>Other investments subtotal</td>
<td>$9,376,769</td>
<td>5.0%</td>
<td>4.8%</td>
<td>-0.2%</td>
<td></td>
</tr>
<tr>
<td>Total portfolio</td>
<td>$195,854,377</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Private loans are not managed by Vanguard.*
Community Foundation for Muskegon County
Combined fee analysis as of December 31, 2019

<table>
<thead>
<tr>
<th>Investment management fee</th>
<th>Assets in tier</th>
<th>Management fee (%)</th>
<th>Management fee ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First $10 million</td>
<td>$10,000,000</td>
<td>0.15%</td>
<td>$15,000</td>
</tr>
<tr>
<td>Next $10 million</td>
<td>$10,000,000</td>
<td>0.12%</td>
<td>$12,000</td>
</tr>
<tr>
<td>Next $30 million</td>
<td>$30,000,000</td>
<td>0.08%</td>
<td>$24,000</td>
</tr>
<tr>
<td>Next $50 million</td>
<td>$50,000,000</td>
<td>0.03%</td>
<td>$15,000</td>
</tr>
<tr>
<td>Over $100 million</td>
<td>$91,833,371</td>
<td>0.02%</td>
<td>$18,637</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$191,833,371</td>
<td>0.04%</td>
<td>$84,367</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fund expenses</th>
<th>Market value</th>
<th>% of portfolio</th>
<th>Fund expense (%)</th>
<th>Fund expense ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Stock Market Index Fund</td>
<td>$78,602,047</td>
<td>40.97%</td>
<td>0.030%</td>
<td>$23,581</td>
</tr>
<tr>
<td>Institutional Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total International Stock</td>
<td>$61,567,285</td>
<td>32.09%</td>
<td>0.080%</td>
<td>$49,254</td>
</tr>
<tr>
<td>Index Fund Institutional Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fixed Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Bond Market Index Fund</td>
<td>$42,147,788</td>
<td>21.97%</td>
<td>0.035%</td>
<td>$14,752</td>
</tr>
<tr>
<td>Institutional Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate-Term Bond</td>
<td>$139,482</td>
<td>0.07%</td>
<td>0.070%</td>
<td>$98</td>
</tr>
<tr>
<td>Index Fund Admiral™ Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Real Estate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REIT Index Fund Institutional</td>
<td>$9,376,769</td>
<td>4.89%</td>
<td>0.100%</td>
<td>$9,377</td>
</tr>
<tr>
<td>Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$191,833,371</td>
<td>100%</td>
<td>0.051%</td>
<td>$97,061</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total fees and expenses</th>
<th>(%)</th>
<th>($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment management fee</td>
<td>0.04%</td>
<td>$84,367</td>
</tr>
<tr>
<td>Fund expenses</td>
<td>0.05%</td>
<td>$97,061</td>
</tr>
<tr>
<td><strong>Estimated annual fees and</strong></td>
<td></td>
<td>$181,427</td>
</tr>
<tr>
<td><strong>expenses</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Total Portfolio Performance & Asset Allocation

Performance Summary ending December 31, 2019

<table>
<thead>
<tr>
<th></th>
<th>Market Value ($)</th>
<th>1 Mo (%)</th>
<th>3 Mo (%)</th>
<th>1 Yr (%)</th>
<th>3 Yrs (%)</th>
<th>5 Yrs (%)</th>
<th>10 Yrs (%)</th>
<th>Inception (%)</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNITY FOUNDATION FOR MUSKEGON COUNTY (Net)</td>
<td>2.48</td>
<td>6.35</td>
<td>21.67</td>
<td>9.76</td>
<td>7.23</td>
<td>--</td>
<td>7.21</td>
<td>Apr-14</td>
<td></td>
</tr>
<tr>
<td>Composite Benchmark</td>
<td>2.51</td>
<td>6.41</td>
<td>22.43</td>
<td>9.76</td>
<td>7.26</td>
<td>--</td>
<td>7.24</td>
<td>Apr-14</td>
<td></td>
</tr>
</tbody>
</table>

- Composite Benchmark = 39% Spliced Total Stock Market Index / 31% Spliced Total International Stock Index / 25% Spliced Bloomberg Barclays US Aggregate Float Adjusted Index / 5% Real Estate Spliced Index

Current Allocation as of December 31, 2019

<table>
<thead>
<tr>
<th></th>
<th>Current $</th>
<th>Current %</th>
<th>Policy</th>
<th>Difference*</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Equity</td>
<td>$78,602,047</td>
<td>40.1%</td>
<td>39.0%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Non-US Equity</td>
<td>$61,567,285</td>
<td>31.4%</td>
<td>31.0%</td>
<td>0.4%</td>
</tr>
<tr>
<td>US Fixed Income</td>
<td>$42,008,276</td>
<td>21.4%</td>
<td>22.6%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>Real Estate</td>
<td>$9,376,769</td>
<td>4.8%</td>
<td>5.0%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Other**</td>
<td>$4,300,000</td>
<td>2.2%</td>
<td>2.4%</td>
<td>-0.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$195,854,377</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

*Difference between Policy and Current Allocation
**“Other” represents the foundation’s private loans, which are not being managed by Vanguard.

Gross of Advisory Fee returns reflect the deduction of fund expense ratios and any purchase or redemption fees.
Net of Fee returns reflect the deduction of fund expense ratios, any purchase or redemption fees, and VIAS advisory fee applied to the client portfolio.
<table>
<thead>
<tr>
<th></th>
<th>Market Value ($)</th>
<th>% of Portfolio</th>
<th>1 Mo (%)</th>
<th>3 Mo (%)</th>
<th>1 Yr (%)</th>
<th>3 Yrs (%)</th>
<th>5 Yrs (%)</th>
<th>10 Yrs (%)</th>
<th>Inception (%)</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMUNITY FOUNDATION FOR MUSKEGON COUNTY</strong></td>
<td>195,854,377</td>
<td>100.00</td>
<td>2.48</td>
<td>6.36</td>
<td>21.72</td>
<td>9.81</td>
<td>7.27</td>
<td>--</td>
<td>7.26</td>
<td>Apr-14</td>
</tr>
<tr>
<td><strong>COMMUNITY FOUNDATION FOR MUSKEGON COUNTY (Net)</strong></td>
<td>195,854,377</td>
<td>100.00</td>
<td>2.48</td>
<td>6.35</td>
<td>21.67</td>
<td>9.76</td>
<td>7.23</td>
<td>--</td>
<td>7.21</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Composite Benchmark</td>
<td>2.51</td>
<td>6.41</td>
<td>22.43</td>
<td>9.76</td>
<td>7.26</td>
<td>--</td>
<td></td>
<td>--</td>
<td>7.24</td>
<td>Apr-14</td>
</tr>
<tr>
<td><strong>MUSKEGON COUNTY SPLICED TOTAL</strong></td>
<td>2.51</td>
<td>6.41</td>
<td>22.43</td>
<td>9.76</td>
<td>7.26</td>
<td>--</td>
<td></td>
<td>--</td>
<td>7.24</td>
<td>Apr-14</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td>140,169,332</td>
<td>71.57</td>
<td>3.48</td>
<td>9.03</td>
<td>26.70</td>
<td>12.49</td>
<td>8.97</td>
<td>--</td>
<td>8.54</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Equity Domestic</td>
<td>78,602,047</td>
<td>40.13</td>
<td>2.87</td>
<td>9.01</td>
<td>30.81</td>
<td>14.56</td>
<td>11.21</td>
<td>--</td>
<td>11.74</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Spliced Total Stock Market Index</td>
<td>2.87</td>
<td>9.00</td>
<td>30.84</td>
<td>14.56</td>
<td>11.21</td>
<td>13.44</td>
<td></td>
<td>11.74</td>
<td>Apr-14</td>
<td></td>
</tr>
<tr>
<td><strong>Equity International</strong></td>
<td>61,567,285</td>
<td>31.44</td>
<td>4.27</td>
<td>9.05</td>
<td>21.56</td>
<td>9.90</td>
<td>5.88</td>
<td>--</td>
<td>4.01</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Spliced Total International Stock Index</td>
<td>4.43</td>
<td>9.26</td>
<td>21.80</td>
<td>9.84</td>
<td>5.84</td>
<td>5.13</td>
<td></td>
<td>4.12</td>
<td>Apr-14</td>
<td></td>
</tr>
<tr>
<td><strong>Total Fixed Income</strong></td>
<td>42,008,276</td>
<td>21.45</td>
<td>-0.14</td>
<td>0.03</td>
<td>8.73</td>
<td>4.03</td>
<td>3.01</td>
<td>--</td>
<td>3.19</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Fixed Income Domestic</td>
<td>42,008,276</td>
<td>21.45</td>
<td>-0.14</td>
<td>0.03</td>
<td>8.73</td>
<td>4.03</td>
<td>3.01</td>
<td>--</td>
<td>3.19</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Spliced Bloomberg Barclays US Aggregate Float Adjusted Index</td>
<td>-0.09</td>
<td>0.14</td>
<td>8.87</td>
<td>4.08</td>
<td>3.07</td>
<td>3.78</td>
<td>3.26</td>
<td>Apr-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Real Estate</strong></td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.83</td>
<td>0.63</td>
<td>29.02</td>
<td>8.39</td>
<td>7.20</td>
<td>--</td>
<td>8.92</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Real Estate Domestic</td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.83</td>
<td>0.63</td>
<td>29.02</td>
<td>8.39</td>
<td>7.20</td>
<td>--</td>
<td>8.92</td>
<td>Apr-14</td>
</tr>
<tr>
<td>Real Estate Spliced Index</td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.82</td>
<td>0.65</td>
<td>29.03</td>
<td>8.46</td>
<td>7.27</td>
<td>12.06</td>
<td>9.00</td>
<td>Apr-14</td>
</tr>
<tr>
<td><strong>Private Loans</strong></td>
<td>4,300,000</td>
<td>2.20</td>
<td>0.27</td>
<td>0.81</td>
<td>3.29</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3.29</td>
<td>Mar-18</td>
</tr>
</tbody>
</table>

Gross of Advisory Fee returns reflect the deduction of fund expense ratios and any purchase or redemption fees.
Net of Fee returns reflect the deduction of fund expense ratios, any purchase or redemption fees, and VIAS advisory fee applied to the client portfolio.
### Performance Summary (Gross of Advisory Fees) ending December 31, 2019

<table>
<thead>
<tr>
<th>Market Value</th>
<th>% of Portfolio</th>
<th>1 Mo (%)</th>
<th>3 Mo (%)</th>
<th>1 Yr (%)</th>
<th>3 Yrs (%)</th>
<th>5 Yrs (%)</th>
<th>10 Yrs (%)</th>
<th>Inception (%)</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNITY FOUNDATION FOR MUSKEGON COUNTY</td>
<td>195,854,377</td>
<td>100.00</td>
<td>2.48</td>
<td>6.36</td>
<td>21.72</td>
<td>9.81</td>
<td>7.27</td>
<td>--</td>
<td>7.26</td>
</tr>
<tr>
<td>Composite Benchmark</td>
<td></td>
<td></td>
<td>2.51</td>
<td>6.41</td>
<td>22.43</td>
<td>9.76</td>
<td>7.26</td>
<td>--</td>
<td>7.24</td>
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<tr>
<td>MUSKEGON COUNTY SPliced TOTAL</td>
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<tr>
<td>Total Equity</td>
<td>140,169,332</td>
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<td>8.54</td>
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<tr>
<td>Equity Domestic</td>
<td>78,602,047</td>
<td>40.13</td>
<td>2.87</td>
<td>9.01</td>
<td>30.81</td>
<td>14.56</td>
<td>11.21</td>
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<td>11.74</td>
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<tr>
<td>Spliced Total Stock Market Index</td>
<td></td>
<td></td>
<td>2.87</td>
<td>9.00</td>
<td>30.84</td>
<td>14.56</td>
<td>11.21</td>
<td>13.44</td>
<td>11.74</td>
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<tr>
<td>Vanguard® Total Stock Market Index Fund Institutional Shares</td>
<td>78,602,047</td>
<td>40.13</td>
<td>2.87</td>
<td>9.01</td>
<td>30.81</td>
<td>14.55</td>
<td>11.21</td>
<td>13.43</td>
<td>11.73</td>
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<td>2.87</td>
<td>9.00</td>
<td>30.84</td>
<td>14.56</td>
<td>11.21</td>
<td>13.44</td>
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<tr>
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<td>2.55</td>
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<td>27.71</td>
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<td>8.56</td>
<td>10.93</td>
<td>8.98</td>
</tr>
<tr>
<td>Equity International</td>
<td>61,567,285</td>
<td>31.44</td>
<td>4.27</td>
<td>9.05</td>
<td>21.56</td>
<td>9.90</td>
<td>5.88</td>
<td>--</td>
<td>4.01</td>
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<tr>
<td>Spliced Total International Stock Index</td>
<td></td>
<td></td>
<td>4.43</td>
<td>9.26</td>
<td>21.80</td>
<td>9.84</td>
<td>5.84</td>
<td>5.13</td>
<td>4.12</td>
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<tr>
<td>Vanguard® Total International Stock Index Fund Inst Shares</td>
<td>61,567,285</td>
<td>31.44</td>
<td>4.27</td>
<td>9.05</td>
<td>21.56</td>
<td>9.90</td>
<td>5.88</td>
<td>5.13</td>
<td>4.00</td>
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<td>Spliced Total International Stock Index</td>
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<td></td>
<td>4.43</td>
<td>9.26</td>
<td>21.80</td>
<td>9.84</td>
<td>5.84</td>
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<td>23.01</td>
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<tr>
<td>Total Fixed Income</td>
<td>42,008,276</td>
<td>21.45</td>
<td>-0.14</td>
<td>0.03</td>
<td>8.73</td>
<td>4.03</td>
<td>3.01</td>
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<td>3.19</td>
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<tr>
<td>Fixed Income Domestic</td>
<td>42,008,276</td>
<td>21.45</td>
<td>-0.14</td>
<td>0.03</td>
<td>8.73</td>
<td>4.03</td>
<td>3.01</td>
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<td>3.19</td>
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<tr>
<td>Spliced Bloomberg Barclays US Aggregate Float Adjusted Index</td>
<td></td>
<td></td>
<td>-0.09</td>
<td>0.14</td>
<td>8.87</td>
<td>4.08</td>
<td>3.07</td>
<td>3.78</td>
<td>3.26</td>
</tr>
<tr>
<td>Vanguard® Total Bond Market Index Fund Institutional Shares</td>
<td>42,008,276</td>
<td>21.45</td>
<td>-0.14</td>
<td>0.03</td>
<td>8.73</td>
<td>4.03</td>
<td>3.01</td>
<td>3.70</td>
<td>3.21</td>
</tr>
<tr>
<td>Spliced Bloomberg Barclays US Aggregate Float Adjusted Index</td>
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<td></td>
<td>-0.09</td>
<td>0.14</td>
<td>8.87</td>
<td>4.08</td>
<td>3.07</td>
<td>3.78</td>
<td>3.26</td>
</tr>
<tr>
<td>Spliced Intermediate-Term Investment-Grade Debt Funds Average</td>
<td></td>
<td></td>
<td>-0.05</td>
<td>0.21</td>
<td>8.69</td>
<td>3.78</td>
<td>2.84</td>
<td>3.80</td>
<td>2.93</td>
</tr>
<tr>
<td>Total Real Estate</td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.83</td>
<td>0.63</td>
<td>29.02</td>
<td>8.39</td>
<td>7.20</td>
<td>--</td>
<td>8.92</td>
</tr>
<tr>
<td>Real Estate Domestic</td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.83</td>
<td>0.63</td>
<td>29.02</td>
<td>8.39</td>
<td>7.20</td>
<td>--</td>
<td>8.92</td>
</tr>
<tr>
<td>Real Estate Spliced Index</td>
<td></td>
<td></td>
<td>0.82</td>
<td>0.65</td>
<td>29.03</td>
<td>8.46</td>
<td>7.27</td>
<td>12.06</td>
<td>9.00</td>
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<tr>
<td>Vanguard® Real Estate Index Fund Institutional Shares</td>
<td>9,376,769</td>
<td>4.79</td>
<td>0.83</td>
<td>0.63</td>
<td>29.02</td>
<td>8.39</td>
<td>7.20</td>
<td>12.01</td>
<td>8.92</td>
</tr>
<tr>
<td>Real Estate Spliced Index</td>
<td></td>
<td></td>
<td>0.82</td>
<td>0.65</td>
<td>29.03</td>
<td>8.46</td>
<td>7.27</td>
<td>12.06</td>
<td>9.00</td>
</tr>
<tr>
<td>Real Estate Funds Average</td>
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<td></td>
<td>-0.22</td>
<td>0.43</td>
<td>26.64</td>
<td>7.90</td>
<td>6.52</td>
<td>11.12</td>
<td>8.17</td>
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</tbody>
</table>
## Performance Summary (Gross of Advisory Fees) ending December 31, 2019

<table>
<thead>
<tr>
<th>Private Loans</th>
<th>Market Value ($)</th>
<th>% of Portfolio</th>
<th>1 Mo (%)</th>
<th>3 Mo (%)</th>
<th>1 Yr (%)</th>
<th>3 Yrs (%)</th>
<th>5 Yrs (%)</th>
<th>10 Yrs (%)</th>
<th>Inception (%)</th>
<th>Inception Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Loans</td>
<td>4,300,000</td>
<td>2.20</td>
<td>0.27</td>
<td>0.81</td>
<td>3.29</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3.29</td>
<td>Mar-18</td>
</tr>
<tr>
<td>Private Loan 1</td>
<td>2,300,000</td>
<td>1.17</td>
<td>0.27</td>
<td>0.81</td>
<td>3.29</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3.29</td>
<td>Mar-18</td>
</tr>
<tr>
<td>Private Loan 2</td>
<td>2,000,000</td>
<td>1.02</td>
<td>0.27</td>
<td>0.81</td>
<td>3.29</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>3.29</td>
<td>Mar-18</td>
</tr>
</tbody>
</table>
Total Portfolio Performance

Gross of Fees (Calendar Year)

- Rate of Return %
- 21.7 22.4
- 16.6 16.0
- 7.7 7.5
- Inception
- 7.3 7.2

Gross of Advisory Fee returns reflect the deduction of fund expense ratios and any purchase or redemption fees.

Net of Fees (Calendar Year)

- Rate of Return %
- 21.7 22.4
- 16.5 16.0
- 7.7 7.6
- Inception
- 7.2 7.2

Net of Fee returns reflect the deduction of fund expense ratios, any purchase or redemption fees, and VIAS advisory fee applied to the client portfolio.
## Cash Flow Summary

<table>
<thead>
<tr>
<th></th>
<th>Last Month</th>
<th>Last Three Months</th>
<th>Year-To-Date</th>
<th>One Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Market Value</strong></td>
<td>$191,805,832</td>
<td>$186,963,410</td>
<td>$164,471,143</td>
<td>$164,471,143</td>
</tr>
<tr>
<td><strong>Net Cash Flow</strong></td>
<td>-$691,285</td>
<td>-$2,853,128</td>
<td>-$4,103,418</td>
<td>-$4,103,418</td>
</tr>
<tr>
<td><strong>Capital Appreciation</strong></td>
<td>$3,427,727</td>
<td>$10,223,307</td>
<td>$30,607,677</td>
<td>$30,607,677</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>$1,312,103</td>
<td>$1,520,788</td>
<td>$4,878,975</td>
<td>$4,878,975</td>
</tr>
</tbody>
</table>

## Month Ending December 31, 2019

<table>
<thead>
<tr>
<th></th>
<th>Beginning Market Value</th>
<th>Net Cash Flow</th>
<th>Capital Appreciation</th>
<th>Income</th>
<th>Ending Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Loan 1</td>
<td>$2,300,000</td>
<td>-$6,229</td>
<td>$0</td>
<td>$6,229</td>
<td>$2,300,000</td>
</tr>
<tr>
<td>Private Loan 2</td>
<td>$2,000,000</td>
<td>-$5,417</td>
<td>$0</td>
<td>$5,417</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Vanguard® Real Estate Index Fund Institutional Shares</td>
<td>$9,299,516</td>
<td>$0</td>
<td>-$18,793</td>
<td>$96,046</td>
<td>$9,376,769</td>
</tr>
<tr>
<td>Vanguard® Total Bond Market Index Fund Institutional Shares</td>
<td>$42,065,688</td>
<td>$0</td>
<td>-$151,725</td>
<td>$94,313</td>
<td>$42,008,276</td>
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<td>Vanguard® Total International Stock Index Fund Inst Shares</td>
<td>$59,046,494</td>
<td>$0</td>
<td>$1,833,563</td>
<td>$687,228</td>
<td>$61,567,285</td>
</tr>
<tr>
<td>Vanguard® Total Stock Market Index Fund Institutional Shares</td>
<td>$77,094,135</td>
<td>-$679,639</td>
<td>$1,764,683</td>
<td>$422,870</td>
<td>$78,602,047</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$191,805,832</td>
<td>-$691,285</td>
<td>$3,427,727</td>
<td>$1,312,103</td>
<td>$195,854,377</td>
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</tbody>
</table>
### Investment Expense Analysis as of December 31, 2019

<table>
<thead>
<tr>
<th>Name</th>
<th>Market Value</th>
<th>% of Portfolio</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Equity</strong></td>
<td>$140,169,332</td>
<td>71.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Equity Domestic</strong></td>
<td>$78,602,047</td>
<td>40.1%</td>
<td>0.030%</td>
</tr>
<tr>
<td>Vanguard® Total Stock Market Index Fund Institutional Shares</td>
<td>$78,602,047</td>
<td>40.1%</td>
<td>0.030%</td>
</tr>
<tr>
<td><strong>Equity International</strong></td>
<td>$61,567,285</td>
<td>31.4%</td>
<td>0.080%</td>
</tr>
<tr>
<td>Vanguard® Total International Stock Index Fund Inst Shares</td>
<td>$61,567,285</td>
<td>31.4%</td>
<td>0.080%</td>
</tr>
<tr>
<td><strong>Total Fixed Income</strong></td>
<td>$42,008,276</td>
<td>21.4%</td>
<td></td>
</tr>
<tr>
<td><strong>Fixed Income Domestic</strong></td>
<td>$42,008,276</td>
<td>21.4%</td>
<td>0.035%</td>
</tr>
<tr>
<td>Vanguard® Total Bond Market Index Fund Institutional Shares</td>
<td>$42,008,276</td>
<td>21.4%</td>
<td>0.035%</td>
</tr>
<tr>
<td><strong>Total Real Estate</strong></td>
<td>$9,376,769</td>
<td>4.8%</td>
<td>0.100%</td>
</tr>
<tr>
<td><strong>Real Estate Domestic</strong></td>
<td>$9,376,769</td>
<td>4.8%</td>
<td>0.100%</td>
</tr>
<tr>
<td>Vanguard® Real Estate Index Fund Institutional Shares</td>
<td>$9,376,769</td>
<td>4.8%</td>
<td>0.100%</td>
</tr>
<tr>
<td><strong>Private Loans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Loan 1</td>
<td>$2,300,000</td>
<td>1.2%</td>
<td></td>
</tr>
<tr>
<td>Private Loan 2</td>
<td>$2,000,000</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$195,854,377</td>
<td>100.0%</td>
<td>0.049%</td>
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</tbody>
</table>
## Market Performance as of December 31, 2019

<table>
<thead>
<tr>
<th>Name</th>
<th>Dec-19</th>
<th>Last 3 Months</th>
<th>1 Yr</th>
<th>3 Yrs</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US Equity</strong></td>
<td></td>
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<td></td>
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<tr>
<td>CRSP US Total Market TR USD</td>
<td>2.9</td>
<td>9.0</td>
<td>30.8</td>
<td>14.6</td>
<td>11.2</td>
<td>13.4</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>3.0</td>
<td>9.1</td>
<td>31.5</td>
<td>15.3</td>
<td>11.7</td>
<td>13.6</td>
</tr>
<tr>
<td>S&amp;P 400 MidCap</td>
<td>2.8</td>
<td>7.1</td>
<td>26.2</td>
<td>9.3</td>
<td>9.0</td>
<td>12.7</td>
</tr>
<tr>
<td>S&amp;P 600 SmallCap</td>
<td>3.0</td>
<td>8.2</td>
<td>22.8</td>
<td>8.4</td>
<td>9.6</td>
<td>13.4</td>
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<tr>
<td><strong>International Equity</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSCI Emerging Markets</td>
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<td>11.8</td>
<td>18.4</td>
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<td>3.7</td>
</tr>
<tr>
<td>MSCI Emerging Markets NR LCL</td>
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<td>9.5</td>
<td>18.1</td>
<td>11.5</td>
<td>7.5</td>
<td>6.1</td>
</tr>
<tr>
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<td>3.2</td>
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<td>5.7</td>
<td>5.5</td>
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<tr>
<td>MSCI EAFE NR LCL</td>
<td>1.3</td>
<td>5.2</td>
<td>21.7</td>
<td>7.7</td>
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<td>7.2</td>
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<tr>
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<td>21.5</td>
<td>9.9</td>
<td>5.5</td>
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<tr>
<td><strong>Fixed Income Domestic</strong></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>BBgBarc US Aggregate TR</td>
<td>-0.1</td>
<td>0.2</td>
<td>8.7</td>
<td>4.0</td>
<td>3.0</td>
<td>3.7</td>
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<tr>
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<td>0.4</td>
<td>1.0</td>
<td>7.0</td>
<td>3.5</td>
<td>2.9</td>
<td>3.3</td>
</tr>
<tr>
<td>BBgBarc US Credit/Corp 5-10 Yr TR</td>
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<td>1.3</td>
<td>14.3</td>
<td>5.9</td>
<td>4.8</td>
<td>5.9</td>
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<tr>
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<td>23.9</td>
<td>8.8</td>
<td>6.4</td>
<td>8.0</td>
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<tr>
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<td>-1.1</td>
<td>-1.1</td>
<td>19.6</td>
<td>8.1</td>
<td>5.4</td>
<td>7.6</td>
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<tr>
<td>BBgBarc US Treasury Strips 20-30 Yr Equal Parity TR</td>
<td>-4.0</td>
<td>-5.9</td>
<td>20.1</td>
<td>9.3</td>
<td>4.9</td>
<td>10.1</td>
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<td>2.0</td>
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<td>14.3</td>
<td>6.4</td>
<td>6.1</td>
<td>7.6</td>
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<tr>
<td>BBgBarc US Govt TR</td>
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<td>-0.8</td>
<td>6.8</td>
<td>3.3</td>
<td>2.4</td>
<td>3.0</td>
</tr>
<tr>
<td>BBgBarc US Credit TR</td>
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<td>1.1</td>
<td>13.8</td>
<td>5.8</td>
<td>4.4</td>
<td>5.3</td>
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<tr>
<td>BBgBarc US Treasury 1-5 Yr TR</td>
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<td>0.3</td>
<td>4.2</td>
<td>2.1</td>
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<td>1.7</td>
</tr>
<tr>
<td>BBgBarc US Treasury 5-10 Yr TR</td>
<td>-0.4</td>
<td>-0.8</td>
<td>7.5</td>
<td>3.6</td>
<td>2.7</td>
<td>4.0</td>
</tr>
<tr>
<td>BBgBarc US Treasury Long TR</td>
<td>-2.8</td>
<td>-4.1</td>
<td>14.8</td>
<td>6.9</td>
<td>4.1</td>
<td>7.0</td>
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<td>1.1</td>
<td>4.9</td>
<td>2.1</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>BBgBarc US TIPS TR</td>
<td>0.4</td>
<td>0.8</td>
<td>8.4</td>
<td>3.3</td>
<td>2.6</td>
<td>3.4</td>
</tr>
<tr>
<td><strong>Fixed Income International</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BBgBarc Global Aggregate ex US Tres Hedged TR</td>
<td>-0.3</td>
<td>-1.1</td>
<td>7.6</td>
<td>4.4</td>
<td>3.9</td>
<td>4.3</td>
</tr>
<tr>
<td>BBgBarc Emerging Markets TR</td>
<td>1.5</td>
<td>2.1</td>
<td>13.1</td>
<td>6.1</td>
<td>5.8</td>
<td>6.6</td>
</tr>
<tr>
<td><strong>REIT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSCI US REIT Gross</td>
<td>-0.6</td>
<td>-0.8</td>
<td>25.8</td>
<td>8.1</td>
<td>7.0</td>
<td>11.9</td>
</tr>
</tbody>
</table>
## Benchmark History as of December 31, 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>End Date</th>
<th>Spliced Total Stock Market Index</th>
<th>Spliced Total International Stock Index</th>
<th>Spliced Bloomberg Barclays US Aggregate Float Adjusted Index</th>
<th>Real Estate Spliced Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/1/2018</td>
<td>Present</td>
<td>39%</td>
<td>31%</td>
<td>25%</td>
<td>5%</td>
</tr>
<tr>
<td>7/1/2018</td>
<td>7/31/2018</td>
<td>39%</td>
<td>30%</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>6/1/2018</td>
<td>6/30/2018</td>
<td>39%</td>
<td>29%</td>
<td>25%</td>
<td>7%</td>
</tr>
<tr>
<td>4/1/2018</td>
<td>5/31/2018</td>
<td>39%</td>
<td>28%</td>
<td>25%</td>
<td>8%</td>
</tr>
<tr>
<td>3/1/2018</td>
<td>3/31/2018</td>
<td>39%</td>
<td>27%</td>
<td>25%</td>
<td>9%</td>
</tr>
<tr>
<td>9/1/2017</td>
<td>2/28/2018</td>
<td>39%</td>
<td>26%</td>
<td>25%</td>
<td>10%</td>
</tr>
<tr>
<td>8/1/2017</td>
<td>8/31/2017</td>
<td>38%</td>
<td>25.33%</td>
<td>26.67%</td>
<td>10%</td>
</tr>
<tr>
<td>7/1/2017</td>
<td>7/31/2017</td>
<td>37.5%</td>
<td>25%</td>
<td>27.5%</td>
<td>10%</td>
</tr>
<tr>
<td>5/1/2014</td>
<td>6/30/2017</td>
<td>10%</td>
<td>30%</td>
<td>24%</td>
<td>36%</td>
</tr>
</tbody>
</table>

### Total Equity

- **N/A**

### Equity Domestic

- **4/30/2014** Present 100% CRSP US Total Market TR USD

### Vanguard® Total Stock Market Index Fund Institutional Shares

- **4/30/2014** Present 100% CRSP US Total Market TR USD

### Equity International

- **4/30/2014** Present 100% FTSE Global All-Cap ex-US Index

### Vanguard® Total International Stock Index Fund Inst Shares

- **4/30/2014** Present 100% FTSE Global All-Cap ex-US Index
### Benchmark History as of December 31, 2019

<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategory</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fixed Income</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Fixed Income Domestic</td>
<td></td>
<td>4/30/2014</td>
<td>Present 100% BBgBarc US Aggregate Float Adjusted TR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vanguard® Total Bond Market Index Fund Institutional Shares</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/30/2014</td>
<td>Present 100% BBgBarc US Aggregate Float Adjusted TR</td>
</tr>
<tr>
<td>Total Real Estate</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Real Estate Domestic</td>
<td></td>
<td>7/25/2018</td>
<td>Present 100% MSCI US IM Real Estate 25/50 Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/26/2018</td>
<td>7/24/2018 100% MSCI US IM Real Estate 25/50 Tran Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/30/2014</td>
<td>1/25/2018 100% MSCI US REIT Gross</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vanguard® Real Estate Index Fund Institutional Shares</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7/25/2018</td>
<td>Present 100% MSCI US IM Real Estate 25/50 Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/26/2018</td>
<td>7/24/2018 100% MSCI US IM Real Estate 25/50 Tran Index</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/30/2014</td>
<td>1/25/2018 100% MSCI US REIT Gross</td>
</tr>
<tr>
<td>Private Loans</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Private Loan 1</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Private Loan 2</td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
Quarterly summary of combined historical performance
As of December 31, 2019

<table>
<thead>
<tr>
<th>QTR</th>
<th>CFMC Composite Portfolio</th>
<th>CFMC Composite Benchmark*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annualized return</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 year</td>
<td>3 year</td>
</tr>
<tr>
<td></td>
<td>6.35</td>
<td>21.67</td>
</tr>
<tr>
<td>2018</td>
<td>-6.71</td>
<td>16.50</td>
</tr>
</tbody>
</table>

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Notes:
Composite performance data consists of previous providers' portfolio and benchmark returns through April 2014; VIAS returns thereafter. Data prior to May 2014 is based upon information taken from the previous providers' quarterly performance reports and is provided as an estimate only. Composite does not include segregated accounts or pledge holdings.
Return calculations are derived from Morningstar Direct.
* Composite Benchmark allocations over time:
50% S&P 500 / 10% Russell 2000 / 10% MSCI EAFE / 30% LB AGG from March 2004 to March 2006;
45% S&P 500 / 12.5% Russell 2000 / 12.5% MSCI EAFE / 30% LB AGG from March 2005 to December 2007;
55% Russell 3000 / 15% MSCI AC World Index ex-US / 30% LB AGG from December 2007 to December 2008;
55% Russell 3000 / 15% MSCI AC World Index ex-US / 30% Barclays AGG from December 2008 to April 2014;
36% Spliced Total Stock Market Index (CRSP US Total Market Index) / 30% Spliced Barclays US Agg Float-Adj Ix (Barclays U.S. Aggregate Float Adjusted Index)/24% Spliced Total Int'l Stock Index (FTSE Global All Cap ex US Index) / 10% REIT Spliced Index (MSCI US REIT Index) from May 2014 to June 2017;
39% Spliced Total Stock Market Index (CRSP US Total Market Index) / 25% Spliced Barclays US Agg Float-Adj Ix (Barclays U.S. Aggregate Float Adjusted Index)/26% Spliced Total Int'l Stock Index (FTSE Global All Cap ex US Index) / 10% REIT Spliced Index (MSCI US REIT Index) from July 2017 to February 2018;
39% Spliced Total Stock Market Index (CRSP US Total Market Index) / 25% Spliced Barclays US Agg Float-Adj Ix (Barclays U.S. Aggregate Float Adjusted Index)/31% Spliced Total Int'l Stock Index (FTSE Global All Cap ex US Index) / 5% REIT Spliced Index (MSCI US REIT Index) from March 2018 to the present.
For more information about Vanguard funds or non-Vanguard funds offered through Vanguard Brokerage Services, visit vanguard.com or call your Investment Consultant or Relationship Manager to obtain a prospectus or, if available, a summary prospectus. Investment objectives, risks, charges, expenses, and other important information are contained in the prospectus; read and consider it carefully before investing. Total Portfolio Net of Fees returns reflect the deduction of fund expense ratios, purchase or redemption fees, and any advisory service fee applied to the client portfolio.

Total Portfolio returns represent client-specific time-weighted returns (TWR) are presented gross of any applicable service fees with the exception of mutual fund expense ratios and other security-level expenses.

Internal rates of return (IRR) are net of any applicable service fees, include account-specific cash flows, and are not directly comparable to a benchmark, since benchmarks do not include cash flows.

Client performance inception date is generally the first month-end after initial funding. Mutual funds and all investments are subject to risk, including the possible loss of the money you invest. Diversification does not ensure a profit or protect against a loss.

Performance figures assume the reinvestment of dividends and capital gains distributions. The fund performance percentages are based on fund total return data, adjusted for expenses, obtained from Lipper, a Thomson Reuters Company. The total return data was not adjusted for fees and loads.

Benchmark comparative indexes represent unmanaged or average returns on various financial assets, which can be compared with funds' total returns for the purpose of measuring relative performance.

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Economic and market outlook
Vanguard 2020 market and economic outlook at a glance

Key take aways:

- Increasingly unpredictable policy environment is undermining economic activity.
- Global growth to slow further but we’re a long way from a serious global contraction.
- The chance of a large drawdown in stocks and other high-beta assets remains elevated.

Investment outlook

The 10-year annualized nominal return projections, based on market conditions as of September 30, 2019, are as follows:

<table>
<thead>
<tr>
<th>Equities</th>
<th>3.5%–5.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. equities</td>
<td></td>
</tr>
<tr>
<td>U.S. growth</td>
<td>2.5%–4.5%</td>
</tr>
<tr>
<td>U.S. value</td>
<td>6.0%–8.0%</td>
</tr>
<tr>
<td>U.S. large-cap</td>
<td>3.5%–5.5%</td>
</tr>
<tr>
<td>U.S. small-cap</td>
<td>4.5%–6.5%</td>
</tr>
<tr>
<td>U.S. real estate investment trusts</td>
<td>2.5%–4.5%</td>
</tr>
<tr>
<td>Global equities ex-U.S (unhedged)</td>
<td>6.5%–8.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fixed income</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. bonds</td>
<td>2.0%–3.0%</td>
</tr>
<tr>
<td>U.S. Treasury bonds</td>
<td>1.5%–2.5%</td>
</tr>
<tr>
<td>U.S. credit bonds</td>
<td>2.5%–3.5%</td>
</tr>
<tr>
<td>U.S. high-yield corporate bonds</td>
<td>3.0%–4.0%</td>
</tr>
<tr>
<td>U.S. Treasury inflation-protected securities</td>
<td>1.0%–2.0%</td>
</tr>
<tr>
<td>U.S. cash</td>
<td>1.5%–2.5%</td>
</tr>
<tr>
<td>Global bonds ex-U.S (hedged)</td>
<td>1.5%–2.5%</td>
</tr>
</tbody>
</table>

These probabilistic return assumptions depend on current market conditions and, as such, may change over time.

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model® regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of September 30, 2019. Results from the model may vary with each use and over time. For more information, see page 4.

Source: Vanguard Investment Strategy Group.
Trade tensions and unpredictable policymaking take their toll

An increasingly unpredictable policy environment is undermining economic activity globally through postponed investments and declines in production. But we don’t seem on the verge of a serious global contraction.

We do not foresee a significant reversal of trade tensions or expect that policymaking will become more predictable in the year ahead. For example, Vanguard estimates there’s only a 10% chance of an upside scenario where China and the U.S. sign a series of trade deals, roll back tariffs, and continue negotiations on structural issues.

Our research also shows that periods of high uncertainty are associated with lower growth, tighter financial conditions, and lower asset returns.

Notes: The bars represent the average year-over-year change in each of the indicators in high- versus low-uncertainty periods. Periods of low versus high uncertainty are obtained through a Markov-switching model for global growth. Global financial conditions are an aggregate measure of risk sentiment and include variables such as equity returns, credit spreads, and lending behavior. Lower values denote easier financial conditions and risk-on attitudes. Z-scores measure how far a value differs from the historical average, accounting for the measure's typical fluctuations.

Sources: Vanguard calculations, based on data from Moody’s Analytics Data Buffet and Thomson Reuters Datastream.
Vanguard 2020 market and economic outlook at a glance

**Growth: Prospects around the globe are deteriorating**

**United States: Downshifting for an uncertain road ahead**
Vanguard expects elevated levels of uncertainty to persist through at least 2020 and continue to weigh on business sentiment, along with waning support from the consumer. We see U.S. growth falling below trend to around 1% in 2020, with the risk of recession still elevated.

**China: No hard landing, uncertainty impedes stimulus**
Slowing global economic growth and expectations for U.S.-China tensions place China’s economy in an environment of perpetual high policy uncertainty. These factors constitute a sizable headwind for both immediate and medium-term growth prospects. China will likely slow to a below-trend pace of 5.8% in 2020.

**Euro area: No strong rebound in sight given limited fiscal stimulus**
The euro-area economy has continued to slow because of the importance of industrial trade to its economy and some drag from Brexit-related uncertainty. Growth in the euro area is likely to stay weak at around 1%.

**Emerging markets: Global trade slowdown**
Economic growth for emerging markets in the aggregate is expected to be 4.6% in 2020. However, we expect there to be vast heterogeneity both within and among regions. Some of the recent slowdown across emerging markets reflects the spillover effects of a slowing China, policy tightening by the U.S. Federal Reserve in 2018, and a decline in global trade.

Sources: International Monetary Fund and Vanguard forecasts.
Monetary policy: The pivot to looser policy continues

Despite increased doubts about the effectiveness of monetary policy, we expect central banks to continue to adopt unconventional measures, while significant fiscal stimulus remains unlikely unless there is a more severe downturn. Our outlook is for subdued inflation trends across major economies, consistent with the inflation expectations held by consumers and financial markets.

United States. Vanguard expects that the U.S. economy, and in turn the U.S. Federal Reserve, will shift into a lower gear in 2020 as policy-makers, businesses, and consumers navigate a more uncertain road ahead. That translates into the Fed reducing the federal funds rate by 25 to 50 basis points before the end of 2020. We expect inflation to barely reach 2% in the U.S., with the Federal Reserve’s core inflation gauge staying below its 2% policy target.

Euro area. In 2020 we expect the European Central Bank to leave policy broadly unchanged, with risks skewed toward further easing.

China. Policy efforts to stabilize growth will continue, but concerns about medium-term financial stability risks will keep these measures in moderation relative to prior easing cycles, reducing the tailwinds for global growth prospects.

Notes: Vanguard’s base case expectations for 2020 (0.5%–1.5% GDP growth, 1.8% core PCE, and 100,000 new non-farm payroll jobs per month for the duration of 2020). Vanguard estimate includes model-based expectations and those of Vanguard’s Investment Strategy Group.
Sources: Vanguard calculations, based on data from the U.S. Bureau of Economic Analysis, the Federal Open Market Committee, Bloomberg, and Moody’s Analytics Data Buffet.
Investment outlook: Subdued returns ahead

In the face of elevated uncertainty and a synchronized global slowdown, equity markets have remained surprisingly robust. However, investors should caution themselves against extrapolating present gains into the future.

As global growth slows further in 2020 and policy uncertainties continue, investors should expect periodic bouts of volatility and a fragile backdrop for markets in 2020 and beyond.

Near-term. Our near-term outlook for global equity markets remains guarded, and the chance of a large drawdown for equities and other high-beta assets remains elevated and significantly higher than it would be in a normal market environment. High-quality fixed income assets, whose expected returns are positive only in nominal terms, remain a key diversifier in a portfolio.

Long-term. Returns over the next decade are anticipated to be modest at best. Our expectation for fixed income returns has fallen because of declining policy rates, lower yields across maturities, and compressed corporate spreads.

Notes: Fair-value volatility range is calculated with an OLS regression using Vanguard’s leading economic indicator index (VLEI), financial conditions index (VFCl), and policy uncertainty index as independent variables. Volatility is measured as the standard deviation of daily returns of the S&P 500 index on a 30-day rolling time period, annualized. The forecasted range of volatility for 2020 is based on Vanguard’s economic projections.

Sources: Vanguard calculations, based on data from Thomson Reuters Datastream and policyuncertainty.com.
Appendix
– Segregated accounts reporting
Quarterly investment performance summary of segregated accounts
For the period ending December 31, 2019

Performance net of investment manager fees

<table>
<thead>
<tr>
<th>Account name</th>
<th>Investment manager</th>
<th>Q4 2019 return</th>
<th>2019</th>
<th>Market value as of 12/31/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freedom - Willard Bosma</td>
<td>RJ</td>
<td>+5.88%</td>
<td>+19.02%</td>
<td>$493,435</td>
</tr>
<tr>
<td>J Hanna/M Murphy</td>
<td>UBS</td>
<td>+5.93%</td>
<td>+20.56%</td>
<td>$1,347,665</td>
</tr>
<tr>
<td>Ernest E Settle</td>
<td>UBS</td>
<td>+5.77%</td>
<td>+20.06%</td>
<td>$1,227,077</td>
</tr>
<tr>
<td>Cutler</td>
<td>Schwab</td>
<td>+5.92%</td>
<td>+14.86%</td>
<td>$206,677</td>
</tr>
<tr>
<td>The 2012 Fund</td>
<td>Schwab</td>
<td>+0.02%</td>
<td>+0.24%</td>
<td>$582,180</td>
</tr>
<tr>
<td>MI Heritage Trails (MICHHT)</td>
<td>UBS</td>
<td>+5.68%</td>
<td>+19.38%</td>
<td>$1,380,619</td>
</tr>
<tr>
<td>Donahue</td>
<td>NW</td>
<td>+0.87%</td>
<td>+8.32%</td>
<td>$231,995</td>
</tr>
<tr>
<td>G &amp; B Hilt Fund</td>
<td>UBS</td>
<td>+5.67%</td>
<td>+19.33%</td>
<td>$7,315,488</td>
</tr>
<tr>
<td>Collins</td>
<td>RJ</td>
<td>+5.62%</td>
<td>+22.79%</td>
<td>$779,028</td>
</tr>
<tr>
<td>Campbell Scholarship</td>
<td>ML</td>
<td>+4.65%</td>
<td>+15.00%</td>
<td>$36,769</td>
</tr>
<tr>
<td>Shelby Rotary</td>
<td>LPL</td>
<td>+4.91%</td>
<td>+18.02%</td>
<td>$373,423</td>
</tr>
</tbody>
</table>

Note: Vanguard cannot independently validate the accuracy of the returns shown above. All returns are calculated using data as reported by CFMC staff. Return calculation reflects beginning period and ending period market values adjusted for investment provider or CFMC cash flows, and investment provider fees.
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

RJ – Freedom – Willard Bosma ($493,435)

- Equity: 77.8%
- Fixed Income: 4.0%
- Cash / Cash Alternatives: 18.2%

UBS – J Hanna/M Murphy ($1,347,665)

- Equity: 77.4%
- Fixed Income: 3.8%
- Cash / Cash Alternatives: 18.6%
- Non-classified: 0.2%
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

UBS – Ernest E Settle ($1,227,380)

- Equity: 76.0%
- Fixed Income: 4.0%
- Cash / Cash Alternatives: 19.8%
- Non-classified: 0.2%

Schwab – Cutler ($195,813)

- Equity: 64.1%
- Fixed Income: 3.2%
- Cash / Cash Alternatives: 32.8%
- Non-classified: 3.2%
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

Schwab – The 2012 Fund ($582,180)

- Cash / Cash Alternatives: 100.0%

UBS - MI Heritage Trails (MICHHT) ($1,380,619)

- Fixed Income: 76.5%
- Equity: 21.6%
- Alternative Investments: 1.7%
- Cash / Cash Alternatives: 0.2%
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

ML – Campbell Scholarship ($36,769)

NW – Donahue ($231,995)

- **Equity**: 59.4%
- **Fixed Income**: 34.5%
- **Cash / Cash Alternatives**: 6.1%

- **Fixed Income**: 99.8%
- **Cash / Cash Alternatives**: 0.2%
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

UBS – G & B Hilt Fund (hilt05) ($7,315,488)

- Equity: 72.3%
- Fixed Income: 27.6%
- Cash / Cash Alternatives: 0.1%

RJ – Collins ($779,028)

- Equity: 87.5%
- Fixed Income: 8.2%
- Cash / Cash Alternatives: 4.4%
Quarterly asset allocation summary of segregated accounts
As of December 31, 2019

LPL – Shelby Rotary ($373,423)

Combined segregated accounts ($13,974,659)
Spliced benchmark information

**Spliced Total Stock Market Index**: Dow Jones Wilshire 5000 Index through April 22, 2005; MSCI US Broad Market Index through June 2, 2013; CRSP US Total Market Index thereafter.

**Spliced Total International Stock Index**: Total International Composite Index through August 31, 2006; MSCI EAFE + Emerging Markets Index through December 15, 2010; MSCI ACWI ex USA IMI Index through June 2, 2013, FTSE Global All Cap ex US Index thereafter.

**REIT Spliced Index**: MSCI US REIT Index adjusted to include a 2% cash position (Lipper Money Market Average) through April 30, 2009; 100% MSCI US REIT Index thereafter.

**Spliced Bloomberg Barclays U.S. Aggregate Float Adjusted Index**: Bloomberg U.S. Aggregate Bond Index through December 31, 2009; Bloomberg U.S. Aggregate Float Adjusted Index thereafter.
Appendix
– Fund pages
Vanguard Total Stock Market Index Fund (VITSX)

**Equity characteristics**

<table>
<thead>
<tr>
<th></th>
<th>VITSX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of stocks</td>
<td>3,579</td>
<td>3,513</td>
</tr>
<tr>
<td>Median market cap</td>
<td>$83.0B</td>
<td>$83.0B</td>
</tr>
<tr>
<td>P/E ratio (trailing earnings)</td>
<td>22.6x</td>
<td>22.5x</td>
</tr>
<tr>
<td>P/B ratio</td>
<td>3.2x</td>
<td>3.2x</td>
</tr>
<tr>
<td>Return on equity (5-year average)</td>
<td>15.7%</td>
<td>15.7%</td>
</tr>
<tr>
<td>Earnings growth rate (5-year)</td>
<td>10.8%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Equity yield (dividend)</td>
<td>1.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Foreign holdings</td>
<td>0.4%</td>
<td>—</td>
</tr>
<tr>
<td>Turnover (fiscal year end)</td>
<td>3.5%</td>
<td>—</td>
</tr>
<tr>
<td>Short-term reserves</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Market-cap breakdown**

<table>
<thead>
<tr>
<th>Market capitalization</th>
<th>VITSX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than $31</td>
<td>69.7%</td>
<td>69.6%</td>
</tr>
<tr>
<td>$25 to $31</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
<tr>
<td>$9 to $25</td>
<td>13.4%</td>
<td>13.4%</td>
</tr>
<tr>
<td>$5 to $9</td>
<td>5.6%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Below $5</td>
<td>7.3%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

**Risk and volatility**

<table>
<thead>
<tr>
<th></th>
<th>R-squared</th>
<th>Beta</th>
<th>Alpha</th>
<th>Standard deviation</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>VITSX</td>
<td>N/A</td>
<td>N/A</td>
<td>-0.00</td>
<td>12.38</td>
<td>1.04</td>
</tr>
<tr>
<td>Primary benchmark</td>
<td>1.00</td>
<td>1.00</td>
<td>N/A</td>
<td>12.38</td>
<td>1.04</td>
</tr>
<tr>
<td>Broad-based</td>
<td>1.00</td>
<td>1.00</td>
<td>N/A</td>
<td>12.39</td>
<td>1.04</td>
</tr>
</tbody>
</table>

**Sector diversification as a % of common stock**

- **Technology**: 21.8%
- **Financials**: 19.4%
- **Consumer Services**: 13.3%
- **Industrials**: 13.2%
- **Health Care**: 13.0%
- **Consumer Goods**: 7.9%
- **Oil & Gas**: 4.1%
- **Utilities**: 3.2%
- **Basic Materials**: 2.2%
- **Telecommunications**: 1.9%

All data as of December 31, 2019, unless otherwise noted.

FOR FINANCIAL ADVISORS AND INSTITUTIONS ONLY. NOT FOR PUBLIC DISTRIBUTION.
Vanguard Total International Stock Index Fund (VTSNX)

**Equity characteristics**

<table>
<thead>
<tr>
<th></th>
<th>VTSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of stocks</td>
<td>7,423</td>
<td>7,069</td>
</tr>
<tr>
<td>Median market cap</td>
<td>$28.6B</td>
<td>$28.5B</td>
</tr>
<tr>
<td>P/E ratio (trailing earnings)</td>
<td>15.4x</td>
<td>15.5x</td>
</tr>
<tr>
<td>P/B ratio</td>
<td>1.6x</td>
<td>1.7x</td>
</tr>
<tr>
<td>Return on equity (5-year average)</td>
<td>12.4%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Earnings growth rate (5-year)</td>
<td>9.7%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Equity yield (dividend)</td>
<td>3.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Turnover (fiscal year end)</td>
<td>3.5%</td>
<td>—</td>
</tr>
<tr>
<td>Short-term reserves</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Market-cap breakdown**

<table>
<thead>
<tr>
<th>Market capitalization</th>
<th>VTSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than $12</td>
<td>69.4%</td>
<td>69.2%</td>
</tr>
<tr>
<td>$10 to $12</td>
<td>3.6%</td>
<td>3.6%</td>
</tr>
<tr>
<td>$4 to $10</td>
<td>13.8%</td>
<td>13.8%</td>
</tr>
<tr>
<td>$2 to $4</td>
<td>5.9%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Below $2</td>
<td>7.4%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

**Risk and volatility**

<table>
<thead>
<tr>
<th></th>
<th>R-squared</th>
<th>Beta</th>
<th>Alpha</th>
<th>Standard deviation</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTSNX</td>
<td>N/A</td>
<td>N/A</td>
<td>0.00</td>
<td>11.58</td>
<td>0.71</td>
</tr>
<tr>
<td>Primary benchmark</td>
<td>0.99</td>
<td>1.01</td>
<td>N/A</td>
<td>11.42</td>
<td>0.72</td>
</tr>
<tr>
<td>Broad-based benchmark</td>
<td>0.99</td>
<td>1.01</td>
<td>N/A</td>
<td>11.42</td>
<td>0.72</td>
</tr>
</tbody>
</table>

R-squared and beta are calculated from trailing 36-month fund returns relative to the associated benchmark. Broad-based benchmark: FTSE Global All Cap ex US Index.

**Sector diversification as a % of common stock**

<table>
<thead>
<tr>
<th>Sector</th>
<th>VTSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financials</td>
<td>24.4%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Industrials</td>
<td>14.7%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>13.9%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>9.4%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Technology</td>
<td>9.2%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Health Care</td>
<td>8.7%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Basic Materials</td>
<td>6.8%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>6.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Utilities</td>
<td>3.3%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Sector categories are based on the Industry Classification Benchmark ("ICB"), except for the “Other” category (if applicable), which includes securities that have not been provided an ICB classification as of the effective reporting period.

**Market allocation**

<table>
<thead>
<tr>
<th>% of common stock</th>
<th>VTSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>16.7%</td>
<td>16.8%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>11.1%</td>
<td>11.3%</td>
</tr>
<tr>
<td>China</td>
<td>8.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Canada</td>
<td>6.6%</td>
<td>6.7%</td>
</tr>
<tr>
<td>France</td>
<td>6.6%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5.7%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Germany</td>
<td>5.5%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Australia</td>
<td>4.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>3.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Korea</td>
<td>3.2%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Other</td>
<td>28.1%</td>
<td>27.4%</td>
</tr>
</tbody>
</table>

**Ten largest holdings**

<table>
<thead>
<tr>
<th>% of total net assets</th>
<th>Alibaba Group Holding Ltd.</th>
<th>Nestle SA</th>
<th>Tencent Holdings Ltd.</th>
<th>Taiwan Semiconductor Manufacturing Co. Ltd.</th>
<th>Samsung Electronics Co. Ltd.</th>
<th>Royal Dutch Shell plc</th>
<th>Roche Holding AG</th>
<th>Novartis AG</th>
<th>Toyota Motor Corp.</th>
<th>HSBC Holdings plc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.4%</td>
<td>1.2%</td>
<td>1.1%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Top ten as a % of total net assets</td>
<td>9.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The holdings listed exclude any temporary cash investments and equity index products.
Vanguard Total Bond Market Index Fund (VBTIX)

Fixed income characteristics

<table>
<thead>
<tr>
<th></th>
<th>VBTIX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bonds</td>
<td>9,033</td>
<td>10,982</td>
</tr>
<tr>
<td>Average duration</td>
<td>6.2 years</td>
<td>6.0 years</td>
</tr>
<tr>
<td>Average effective maturity</td>
<td>8.3 years</td>
<td>8.2 years</td>
</tr>
<tr>
<td>Turnover (fiscal year end)</td>
<td>43.9%</td>
<td>—</td>
</tr>
<tr>
<td>Short-term reserves</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Distribution by issuer type

<table>
<thead>
<tr>
<th>Issuer type</th>
<th>% of total net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury/Agency</td>
<td>43.3%</td>
</tr>
<tr>
<td>Government Mortgage-Backed</td>
<td>22.3%</td>
</tr>
<tr>
<td>Industrial</td>
<td>16.5%</td>
</tr>
<tr>
<td>Finance</td>
<td>8.5%</td>
</tr>
<tr>
<td>Foreign</td>
<td>4.8%</td>
</tr>
<tr>
<td>Commercial Mortgage-Backed</td>
<td>2.2%</td>
</tr>
<tr>
<td>Utilities</td>
<td>2.0%</td>
</tr>
<tr>
<td>Asset-Backed</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

Hedged non-U.S. dollar-denominated bonds are included in the sector of issuer, not as part of the foreign category.

Risk and volatility

<table>
<thead>
<tr>
<th>Fund</th>
<th>R-squared</th>
<th>Beta</th>
<th>Alpha</th>
<th>Standard deviation</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>VBTIX</td>
<td>N/A</td>
<td>N/A</td>
<td>-0.00</td>
<td>2.94</td>
<td>0.81</td>
</tr>
<tr>
<td>Primary benchmark</td>
<td>0.99</td>
<td>0.99</td>
<td>N/A</td>
<td>2.94</td>
<td>0.82</td>
</tr>
<tr>
<td>Broad-based benchmark</td>
<td>0.99</td>
<td>0.99</td>
<td>N/A</td>
<td>2.97</td>
<td>0.82</td>
</tr>
</tbody>
</table>

R-squared and beta are calculated from trailing 36-month fund returns relative to the associated benchmark. Broad-based benchmark: Spliced Bloomberg Barclays U.S. Aggregate Float Adjusted Index.

Distribution by effective maturity as a % of funds

- Under 1 Year: 0.7%
- 1 - 3 Years: 23.5%
- 3 - 5 Years: 25.2%
- 5 - 10 Years: 31.7%
- 10 - 20 Years: 4.3%
- 20 - 30 Years: 14.1%
- Over 30 Years: 0.5%

Distribution by credit quality as a % of funds

- U.S. Government: 63.7%
- Aaa: 3.8%
- Aa: 3.4%
- A: 11.4%
- Baa: 17.7%
- Less Than Baa: 0.0%

Credit-quality ratings are measured on a scale that generally ranges from AAA (highest) to D (lowest). "NR" is used to classify securities for which a rating is not available. NR securities may include a fund’s investment in Vanguard Market Liquidity Fund or Vanguard Municipal Cash Management Fund, each of which invests in high-quality money market instruments and may serve as a cash management vehicle for the Vanguard funds, trusts, and accounts. U.S. Treasury, U.S. Agency, and U.S. Agency mortgage-backed securities appear under "U.S. Government." Credit-quality ratings for each issue are obtained from Barclays using ratings derived from Moody’s Investors Service (Moody’s), Fitch Ratings (Fitch), and Standard & Poor’s (S&P). When ratings from all three agencies are available, the median rating is used. When ratings are available from two of the agencies, the lower rating is used. When one rating is available, that rating is used.
Vanguard Intermediate-Term Bond Index Fund (VBILX)

**Fixed income characteristics**

<table>
<thead>
<tr>
<th></th>
<th>VBILX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bonds</td>
<td>1,875</td>
<td>2,018</td>
</tr>
<tr>
<td>Average duration</td>
<td>6.3 years</td>
<td>6.3 years</td>
</tr>
<tr>
<td>Average effective maturity</td>
<td>7.2 years</td>
<td>7.1 years</td>
</tr>
<tr>
<td>Turnover (fiscal year end)</td>
<td>53.0%</td>
<td>—</td>
</tr>
<tr>
<td>Short-term reserves</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Distribution by issuer type**

<table>
<thead>
<tr>
<th>Issuer Type</th>
<th>% of total net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury/Agency</td>
<td>54.4%</td>
</tr>
<tr>
<td>Industrial</td>
<td>24.0%</td>
</tr>
<tr>
<td>Finance</td>
<td>14.6%</td>
</tr>
<tr>
<td>Foreign</td>
<td>4.7%</td>
</tr>
<tr>
<td>Utilities</td>
<td>2.2%</td>
</tr>
<tr>
<td>Other</td>
<td>0.1%</td>
</tr>
<tr>
<td>Asset-Backed</td>
<td>0.0%</td>
</tr>
<tr>
<td>Commercial Mortgage-Backed</td>
<td>0.0%</td>
</tr>
<tr>
<td>Government Mortgage-Backed</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

**Risk and volatility**

<table>
<thead>
<tr>
<th></th>
<th>R-squared</th>
<th>Beta</th>
<th>Alpha</th>
<th>Standard deviation</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>VBILX</td>
<td>N/A</td>
<td>N/A</td>
<td>-0.00</td>
<td>3.41</td>
<td>0.84</td>
</tr>
<tr>
<td>Primary benchmark</td>
<td>0.99</td>
<td>0.99</td>
<td>N/A</td>
<td>3.45</td>
<td>0.86</td>
</tr>
<tr>
<td>Broad-based benchmark</td>
<td>0.97</td>
<td>1.13</td>
<td>N/A</td>
<td>2.97</td>
<td>0.82</td>
</tr>
</tbody>
</table>

*R-squared and beta are calculated from trailing 36-month fund returns relative to the associated benchmark.
Broad-based benchmark: Spliced Bloomberg Barclays U.S. Aggregate Float Adjusted Index.*

**Distribution by effective maturity as a % of funds**

- Under 1 Year: 0.1%
- 1 - 3 Years: 0.3%
- 3 - 5 Years: 3.3%
- 5 - 10 Years: 96.2%
- 10 - 20 Years: 0.1%
- 20 - 30 Years: 0.0%
- Over 30 Years: 0.0%

**Distribution by credit quality as a % of funds**

- U.S. Government: 53.9%
- Aaa: 2.1%
- Aa: 3.0%
- A: 16.3%
- Baa: 24.7%
- Less Than Baa: 0.0%

Credit-quality ratings are measured on a scale that generally ranges from AAA (highest) to D (lowest). "NR" is used to classify securities for which a rating is not available. NR securities may include a fund’s investment in Vanguard Market Liquidity Fund or Vanguard Municipal Cash Management Fund, each of which invests in high-quality money market instruments and may serve as a cash management vehicle for the Vanguard funds, trusts, and accounts. U.S. Treasury, U.S. Agency, and U.S. Agency mortgage-backed securities appear under “U.S. Government.” Credit-quality ratings for each issue are obtained from Barclays using ratings derived from Moody’s Investors Service (Moody’s), Fitch Ratings (Fitch), and Standard & Poor’s (S&P). When ratings from all three agencies are available, the median rating is used. When ratings are available from two of the agencies, the lower rating is used. When one rating is available, that rating is used.
### Vanguard Real Estate Index Fund (VGSNX)

#### Equity characteristics

<table>
<thead>
<tr>
<th></th>
<th>VGSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of stocks</td>
<td>185</td>
<td>181</td>
</tr>
<tr>
<td>Median market cap</td>
<td>$18.3B</td>
<td>$17.1B</td>
</tr>
<tr>
<td>P/E ratio (trailing earnings)</td>
<td>34.7x</td>
<td>34.7x</td>
</tr>
<tr>
<td>P/B ratio</td>
<td>2.7x</td>
<td>2.7x</td>
</tr>
<tr>
<td>Return on equity (5-year average)</td>
<td>7.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Earnings growth rate (5-year)</td>
<td>16.8%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Equity yield (dividend)</td>
<td>3.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Foreign holdings</td>
<td>0.0%</td>
<td>—</td>
</tr>
<tr>
<td>Turnover (fiscal year end)</td>
<td>24.0%</td>
<td>—</td>
</tr>
<tr>
<td>Short-term reserves</td>
<td>0.0%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Subindustry diversification as a % of common stock

<table>
<thead>
<tr>
<th>Sector</th>
<th>VGSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized REITs</td>
<td>33.1%</td>
<td>33.2%</td>
</tr>
<tr>
<td>Residential REITs</td>
<td>14.6%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Retail REITs</td>
<td>12.0%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Health Care REITs</td>
<td>9.6%</td>
<td>9.6%</td>
</tr>
<tr>
<td>Office REITs</td>
<td>9.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Industrial REITs</td>
<td>8.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Diversified REITs</td>
<td>4.8%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Hotel &amp; Resort REITs</td>
<td>4.2%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Real Estate Services</td>
<td>2.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Real Estate Development</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Real Estate Operating Companies</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

#### Market-cap breakdown

<table>
<thead>
<tr>
<th>Market capitalization</th>
<th>VGSNX</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than $31</td>
<td>29.8%</td>
<td>29.7%</td>
</tr>
<tr>
<td>$25 to $31</td>
<td>8.8%</td>
<td>8.7%</td>
</tr>
<tr>
<td>$9 to $25</td>
<td>31.7%</td>
<td>31.9%</td>
</tr>
<tr>
<td>$5 to $9</td>
<td>13.7%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Below $5</td>
<td>16.0%</td>
<td>16.0%</td>
</tr>
</tbody>
</table>

#### Risk and volatility

<table>
<thead>
<tr>
<th></th>
<th>R-squared</th>
<th>Beta</th>
<th>Alpha</th>
<th>Standard deviation</th>
<th>Sharpe ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>VGSNX</td>
<td>N/A</td>
<td>N/A</td>
<td>-0.01</td>
<td>12.07</td>
<td>0.56</td>
</tr>
<tr>
<td>Primary benchmark</td>
<td>1.00</td>
<td>1.00</td>
<td>N/A</td>
<td>12.07</td>
<td>0.56</td>
</tr>
<tr>
<td>Broad-based benchmark</td>
<td>0.29</td>
<td>0.53</td>
<td>N/A</td>
<td>12.39</td>
<td>1.04</td>
</tr>
</tbody>
</table>

#### Ten largest holdings

<table>
<thead>
<tr>
<th>Holdings</th>
<th>% of total net assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard Real Estate II Index Fund</td>
<td>11.1%</td>
</tr>
<tr>
<td>American Tower Corp.</td>
<td>7.1%</td>
</tr>
<tr>
<td>Crown Castle International Corp.</td>
<td>4.1%</td>
</tr>
<tr>
<td>Prologis Inc.</td>
<td>3.9%</td>
</tr>
<tr>
<td>Equinix Inc.</td>
<td>3.5%</td>
</tr>
<tr>
<td>Simon Property Group Inc.</td>
<td>3.2%</td>
</tr>
<tr>
<td>Public Storage</td>
<td>2.3%</td>
</tr>
<tr>
<td>Welltower Inc.</td>
<td>2.3%</td>
</tr>
<tr>
<td>Equity Residential</td>
<td>2.1%</td>
</tr>
<tr>
<td>AvalonBay Communities Inc.</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

The holdings listed exclude any temporary cash investments and equity index products.

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All data as of December 31, 2019, unless otherwise noted.

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The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More importantly, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard’s primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

The Vanguard Lifecycle Model (VLCM) is designed to identify the product design that represents the best investment solution for a theoretical, representative investor who uses the target-date funds to accumulate wealth for retirement. The VLCM generates an optimal custom glide path for a participant population by assessing the trade-offs between the expected (median) wealth accumulation and the uncertainty about that wealth outcome, for thousands of potential glide paths. The VLCM does this by combining two set of inputs: the asset class return projections from the VCMM and the average characteristics of the participant population. Along with the optimal custom glide path, the VLCM generates a wide range of portfolio metrics such as a distribution of potential wealth accumulation outcomes, risk and return distributions for the asset allocation, and probability of ruin, such as the odds of participants depleting their wealth by age 95.

The VLCM inherits the distributional forecasting framework of the VCMM and applies to it the calculation of wealth outcomes from any given portfolio.

The most impactful drivers of glide path changes within the VLCM tend to be risk aversion, the presence of a defined benefit plan, retirement age, savings rate and starting compensation. The VLCM chooses among glide paths by scoring them according to the utility function described and choosing the one with the highest score. The VLCM does not optimize the levels of spending and contribution rates. Rather, the VLCM optimizes the glide path for a given customizable level of spending, growth rate of contributions and other plan sponsor characteristics.

A full dynamic stochastic life-cycle model, including optimization of a savings strategy and dynamic spending in retirement is beyond the scope of this framework.
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