

# CITY OF RICHMOND 457B DEFERRED

## Screens Summary (Data as of 12-31-2022)

⊖ Fund Removed from Approved List    ⚠ Fund on Watch List

Name	Ticker	Asset Class	Trailing Performance and Risk				Management			Style		Expense		ESG Metrics				
			1 Yr	3 Yr	5 Yr	10 Yr	Pass/ Fail	Std Dev 3 Yr %	Beta 3 Yr %	Tenure	Pass/ Fail	Style Box	Pass/ Fail	Exp Ratio	Sustain. Rating	Commit. Level	Carbon Risk	
																Updated	Updated	Updated
<b>US Stock</b>																		
DFA US Core Equity 1 I	DFEOX	Large Blend	-15.01	8.06	8.66	12.09	✓	22.28	1.04	10.85	✓	☐	✓	0.14	✓	2	-	Medium Risk
<i>percentile rank</i>			30	23	51	33												
<i># of funds in category</i>			1,379	1,247	1,137	837												
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Vanguard FTSE Social Index Admiral	VFTAX	Large Blend Index	-24.22	5.88	-	-	✓	22.21	1.04	7.03	✓	☐	✖	0.14	✓	4	2-Basic	Low Risk
<i>percentile rank</i>			97	79	-	-												
<i># of funds in category</i>			1,379	1,247	1,137	837												
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American Funds Growth Fund of Amer R6	RGAGX	Large Growth	-30.49	4.78	7.57	11.93	✓	22.77	0.94	29.18	✓	☐	✓	0.30	✓	1	1-Low	Low Risk
<i>percentile rank</i>			54	59	66	49												
<i># of funds in category</i>			1,237	1,133	1,056	807												
<hr/>																		
State St Russell Lg Cp Val® Indx NL CI C		Large Value	-7.64	5.98	6.68	10.30	✓	21.53	1.00	23.86	✓	☐	✓	0.04	✓	3	-	Medium Risk
<i>percentile rank</i>			68	69	63	51												
<i># of funds in category</i>			1,233	1,161	1,105	825												
<hr/>																		
ClearBridge Mid Cap Growth IS	LCMIX	Mid-Cap Growth	-33.24	5.97	8.00	-	✓	25.44	1.01	12.34	✓	☐	✓	0.75	✓	4	-	Low Risk
<i>percentile rank</i>			78	25	36	-												
<i># of funds in category</i>			592	540	505	395												
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Vanguard Mid-Cap Value Index Admiral	VMVAX	Mid-Cap Value	-7.90	6.74	6.39	10.98	✓	24.01	0.96	16.38	✓	☐	✓	0.07	✓	4	1-Low	Medium Risk
<i>percentile rank</i>			47	50	40	13												
<i># of funds in category</i>			407	395	374	274												
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State St Russell Sm Cap® Gr Indx NL CI C		Small Growth	-26.49	0.43	3.34	9.07	✓	26.57	1.00	13.33	✓	☐	✓	0.05	✓	2	-	Medium Risk
<i>percentile rank</i>			45	84	88	78												
<i># of funds in category</i>			604	576	534	405												
<hr/>																		
State St Russell Sm Cp® Val Indx NL CI C		Small Value	-14.57	4.77	4.15	8.46	✓	27.47	0.99	13.33	✓	☐	✓	0.05	✓	2	-	Medium Risk
<i>percentile rank</i>			85	75	62	55												
<i># of funds in category</i>			483	455	428	324												
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<b>Non-US Stock</b>																		
American Funds New World R6	RNWXG	Diversified Emerging Mkts	-21.75	1.01	3.04	4.98	✓	20.37	0.90	23.56	✓	☐	✓	0.57	✓	3	1-Low	Medium Risk
<i>percentile rank</i>			58	17	3	2												
<i># of funds in category</i>			820	736	652	397												
<hr/>																		
American Funds Intl Gr and Inc R6	RIGGX	Foreign Large Blend	-15.16	0.36	2.06	4.28	✓	21.51	1.08	14.26	✓	☐	✓	0.54	✓	2	1-Low	Low Risk
<i>percentile rank</i>			44	56	22	48												
<i># of funds in category</i>			763	723	630	440												
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Vanguard International Growth Adm	VWILX	Foreign Large Growth	-30.79	3.14	4.75	7.84	✓	24.95	1.05	13.02	✓	☐	✓	0.34	✓	3	-	Low Risk
<i>percentile rank</i>			82	9	13	4												
<i># of funds in category</i>			443	399	346	230												
<hr/>																		
DFA International Value I	DFIVX	Foreign Large Value	-3.48	3.88	1.36	4.61	✓	24.88	1.15	12.85	✓	☐	✓	0.29	✓	1	-	Medium Risk
<i>percentile rank</i>			10	8	26	15												
<i># of funds in category</i>			356	326	303	180												
<hr/>																		
American Funds New Perspective R6	RNPGX	Global Stock	-25.61	5.54	7.69	10.29	✓	22.44	1.09	22.10	✓	—	✓	0.41	✓	2	2-Basic	Low Risk
<i>percentile rank</i>			46	17	17	11												
<i># of funds in category</i>			366	309	272	179												

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🔴 Fund Removed from Approved List    🟡 Fund on Watch List

Name	Ticker	Asset Class	Trailing Performance and Risk				Management			Style		Expense		ESG Metrics				
			1 Yr	3 Yr	5 Yr	10 Yr	Pass/ Fail	Std Dev 3 Yr %	Beta 3 Yr %	Tenure	Pass/ Fail	Style Box	Pass/ Fail	Exp Ratio	Sustain. Rating	Commit. Level	Carbon Risk	
																Updated	Updated	Updated
<b>Alternative</b>																		
PIMCO Commodity Real Ret Strat Instl	PCRIX	Commodities Broad Basket	8.85	13.57	7.23	-1.44	✔	22.31	1.17	4.17	✔	—	—	0.76	✔	3	—	—
<i>percentile rank</i>			91	49	36	71												
<i># of funds in category</i>			114	109	91	65									12-31-2022	—	—	
Vanguard Real Estate Index Admiral	VGSLX	Real Estate	-26.20	-0.41	3.68	6.42	✔	22.84	0.96	26.65	✔	—	✔	0.12	✔	3	1-Low	Low Risk
<i>percentile rank</i>			61	57	50	34												
<i># of funds in category</i>			257	238	214	155									12-31-2022	02-15-2022	12-31-2022	
<b>Fixed Income</b>																		
PIMCO International Bond (USD-Hdg) Instl	PFORX	Global Bond	-9.84	-2.00	0.72	2.61	✔	4.88	0.64	8.27	✔	—	—	0.51	✔	3	—	—
<i>percentile rank</i>			14	13	5	1												
<i># of funds in category</i>			130	112	98	59									12-31-2022	—	—	
PIMCO High Yield Instl	PHIYX	High Yield Bond	-10.78	-0.75	1.85	3.55	✔	10.44	0.92	12.98	✔	—	—	0.56	✔	—	—	—
<i>percentile rank</i>			51	64	47	31												
<i># of funds in category</i>			687	630	584	417												
BlackRock Inflation Protected Bond K	BPLBX	Inflation-Protected Bond	-11.47	1.56	2.18	1.05	✔	7.27	1.03	5.88	✔	—	—	0.30	✔	3	—	—
<i>percentile rank</i>			47	36	31	34												
<i># of funds in category</i>			217	204	195	138									09-30-2022	—	—	
Baird Aggregate Bond Inst	BAGIX	Intermediate-Term Bond	-13.35	-2.48	0.25	1.49	✔	6.23	1.05	22.27	✔	📊	—	0.30	✔	3	1-Low	—
<i>percentile rank</i>			49	31	22	9												
<i># of funds in category</i>			471	423	389	289									12-31-2022	02-15-2022	—	
PIMCO Income Instl	PIMIX	Multisector Bond	-7.81	0.03	1.69	4.00	✔	7.35	0.92	15.77	✔	—	—	0.51	✔	—	—	—
<i>percentile rank</i>			23	25	20	1												
<i># of funds in category</i>			344	295	258	152												
Federated Hermes Govt Ultrashort R6	FGULX	Ultrashort Bond	0.45	0.63	1.19	—	✔	0.59	0.06	25.49	✔	—	—	0.24	✔	—	—	—
<i>percentile rank</i>			38	44	60	—												
<i># of funds in category</i>			237	218	180	107												
<b>Target Date</b>																		
Vanguard Target Retirement 2020 Fund	VTWNX	Target Date	-14.15	1.33	3.22	5.83	✔	11.48	0.91	9.86	✔	—	✔	0.08	✔	3	1-Low	—
<i>percentile rank</i>			39	55	44	29												
<i># of funds in category</i>			153	143	122	56									12-31-2022	02-15-2022	—	
Vanguard Target Retirement 2025 Fund	VTVX	Target Date	-15.55	1.66	3.58	6.43	✔	13.38	0.96	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			52	46	39	18												
<i># of funds in category</i>			239	214	185	117									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2030 Fund	VTHRX	Target Date	-16.27	2.09	3.94	6.99	✔	14.76	0.96	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			44	51	45	25												
<i># of funds in category</i>			241	214	185	110									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2035 Fund	VTTX	Target Date	-16.62	2.64	4.34	7.57	✔	16.04	0.95	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			37	55	49	29												
<i># of funds in category</i>			232	207	182	114									12-31-2022	02-15-2022	12-31-2022	

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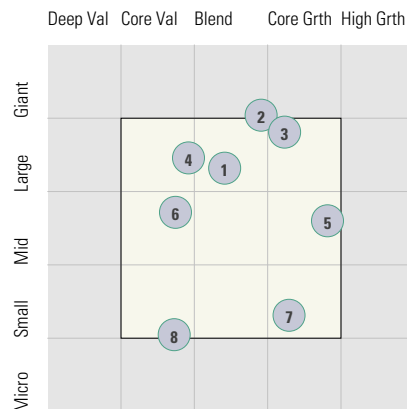
Name	Ticker	Asset Class	Trailing Performance and Risk				Management			Style		Expense		ESG Metrics				
			1 Yr	3 Yr	5 Yr	10 Yr	Pass/ Fail	Std Dev 3 Yr %	Beta 3 Yr %	Tenure	Pass/ Fail	Style Box	Pass/ Fail	Exp Ratio	Pass/ Fail	Sustain. Rating	Commit. Level	Carbon Risk
															Updated	Updated	Updated	
Vanguard Target Retirement 2040 Fund	VFORX	Target Date	-16.98	3.17	4.74	8.06	✔	17.33	0.94	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>36</i>	<i>50</i>	<i>45</i>	<i>26</i>												
<i># of funds in category</i>			<i>236</i>	<i>208</i>	<i>185</i>	<i>110</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2045 Fund	VTIVX	Target Date	-17.36	3.74	5.14	8.34	✔	18.64	0.97	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>31</i>	<i>37</i>	<i>34</i>	<i>21</i>												
<i># of funds in category</i>			<i>232</i>	<i>207</i>	<i>182</i>	<i>113</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2050 Fund	VFIX	Target Date	-17.46	3.80	5.18	8.36	✔	18.82	0.96	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>29</i>	<i>36</i>	<i>37</i>	<i>22</i>												
<i># of funds in category</i>			<i>233</i>	<i>208</i>	<i>185</i>	<i>109</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2055 Fund	VFFVX	Target Date	-17.46	3.79	5.18	8.34	✔	18.83	0.95	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>24</i>	<i>38</i>	<i>39</i>	<i>25</i>												
<i># of funds in category</i>			<i>230</i>	<i>205</i>	<i>182</i>	<i>95</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2060 Fund	VTTX	Target Date	-17.46	3.79	5.18	8.34	✔	18.81	1.35	9.86	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>25</i>	<i>43</i>	<i>46</i>	<i>1</i>												
<i># of funds in category</i>			<i>228</i>	<i>198</i>	<i>171</i>	<i>1</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2065 Fund	VLXVX	Target Date	-17.39	3.78	5.15	—	✖	18.82	1.35	5.47	✔	—	✔	0.08	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>16</i>	<i>47</i>	<i>49</i>	<i>—</i>												
<i># of funds in category</i>			<i>176</i>	<i>64</i>	<i>15</i>	<i>—</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard Target Retirement 2070 Fund	VSVNX	Target Date	—	—	—	—	—	—	—	0.51	✖	—	✔	0.08	✔	3	—	Low Risk
<i>percentile rank</i>			<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>												
<i># of funds in category</i>			<i>176</i>	<i>64</i>	<i>15</i>	<i>—</i>									12-31-2022	—	12-31-2022	
Vanguard Target Retirement Income Fund	VTINX	Target Date	-12.74	0.34	2.30	3.62	✔	8.59	0.88	9.86	✔	—	✔	0.08	✔	3	1-Low	—
<i>percentile rank</i>			<i>54</i>	<i>38</i>	<i>36</i>	<i>40</i>												
<i># of funds in category</i>			<i>178</i>	<i>161</i>	<i>142</i>	<i>96</i>									12-31-2022	02-15-2022	—	
<b>Balanced</b>																		
Vanguard LifeStrategy Cnsvr Gr Inv	VSCGX	Target Risk	-14.99	0.18	2.45	4.44	✔	10.44	1.02	0.85	✖	—	✔	0.12	✔	3	1-Low	—
<i>percentile rank</i>			<i>78</i>	<i>68</i>	<i>45</i>	<i>31</i>												
<i># of funds in category</i>			<i>467</i>	<i>433</i>	<i>406</i>	<i>300</i>									12-31-2022	02-15-2022	—	
Vanguard LifeStrategy Growth Inv	VASGX	Target Risk	-17.09	3.06	4.64	7.60	✔	17.09	1.02	0.85	✖	—	✔	0.14	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>63</i>	<i>60</i>	<i>43</i>	<i>34</i>												
<i># of funds in category</i>			<i>322</i>	<i>296</i>	<i>279</i>	<i>224</i>									12-31-2022	02-15-2022	12-31-2022	
Vanguard LifeStrategy Income Inv	VASIX	Target Risk	-13.93	-1.45	1.20	2.77	✔	7.50	0.99	0.85	✖	—	✔	0.11	✔	4	1-Low	—
<i>percentile rank</i>			<i>85</i>	<i>84</i>	<i>64</i>	<i>42</i>												
<i># of funds in category</i>			<i>142</i>	<i>128</i>	<i>125</i>	<i>90</i>									12-31-2022	02-15-2022	—	
Vanguard LifeStrategy Moderate Gr Inv	VSMGX	Target Risk	-16.00	1.65	3.58	6.05	✔	13.71	0.99	0.85	✖	—	✔	0.13	✔	3	1-Low	Low Risk
<i>percentile rank</i>			<i>66</i>	<i>79</i>	<i>64</i>	<i>55</i>												
<i># of funds in category</i>			<i>758</i>	<i>698</i>	<i>658</i>	<i>495</i>									12-31-2022	02-15-2022	12-31-2022	

# CITY OF RICHMOND 457B DEFERRED

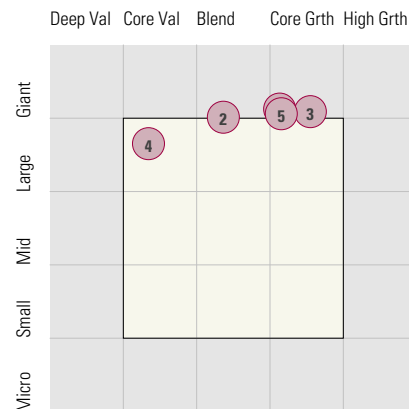
## Style Analysis (Data as of 12-31-2022)

### Style Analysis

Morningstar Style Box US Stock



Morningstar Style Box Non-US Stock



#### US Stock Funds

	Category	Super Sectors %			Asset Allocation %			Avg Mkt Cap M\$	
		Cyclical	Defensive	Sensitive	Cash	US Stock	Foreign		
1	DFA US Core Equity 1 I	Large Blend	31.11	23.44	45.45	0.93	97.84	1.22	57.32
2	Vanguard FTSE Social Index Admiral	Large Blend Index	31.62	25.59	42.79	0.16	98.07	1.77	161.77
3	American Funds Growth Fund of Amer R6	Large Growth	29.80	22.23	47.96	8.62	79.13	11.64	99.09
4	State St Russell Lg Cp Val® Indx NL CI C	Large Value	34.87	30.79	34.34	1.36	97.03	1.60	73.22
5	ClearBridge Mid Cap Growth IS	Mid-Cap Growth	29.59	21.38	49.00	2.82	94.88	2.31	17.26
6	Vanguard Mid-Cap Value Index Admiral	Mid-Cap Value	43.78	28.95	27.26	0.41	97.96	1.63	21.77
7	State St Russell Sm Cap® Gr Indx NL CI C	Small Growth	22.71	29.84	47.46	0.92	97.19	1.90	2.51
8	State St Russell Sm Cp® Val Indx NL CI C	Small Value	53.43	19.23	27.35	0.33	98.10	1.57	1.82

#### Non-US Stock Funds

	Category	Super Sectors %			Regional Exposure %			Market Maturity %			
		Cyclical	Defensive	Sensitive	Americas	Greater Asia	Greater Europe	Developed	EM%	Avg Mkt Cap M\$	
1	American Funds New World R6	Diversified Emerging Mkts	40.45	23.60	35.96	36.28	39.06	24.67	60.61	39.39	52.53
2	American Funds Intl Gr and Inc R6	Foreign Large Blend	37.80	26.38	35.82	14.47	28.83	56.70	85.71	14.29	45.50
3	Vanguard International Growth Adm	Foreign Large Growth	35.62	24.85	39.52	19.40	30.58	50.02	79.91	20.09	51.99
4	DFA International Value I	Foreign Large Value	57.27	11.11	31.63	9.86	31.28	58.86	99.51	0.49	29.32
5	American Funds New Perspective R6	Global Stock	31.85	28.05	40.11	56.45	12.38	31.17	95.03	4.97	91.08

#### Fixed Income Funds

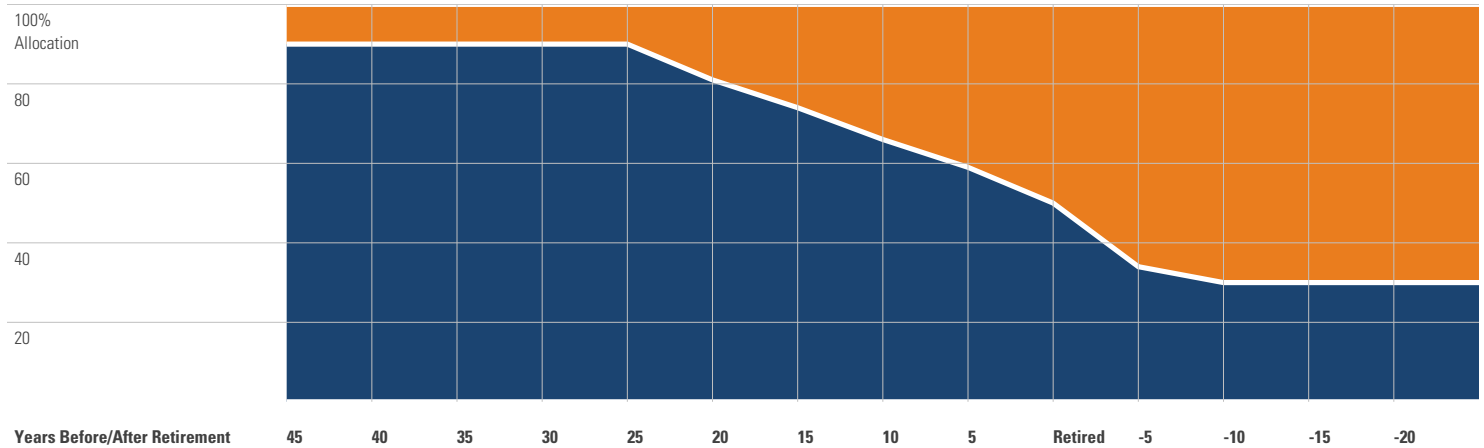
	Category	Super Sectors %				Other Stats	Credit Quality %			
		US Govt Debt	Mtg	US Credit	Non US		Avg Eff Duration	Inv Grade	Below Inv Grade	NR/NA
1	PIMCO International Bond (USD-Hdg) Instl	Global Bond	40.62	2.82	6.35	0.00	6.67	94.31	5.70	0.00
2	PIMCO High Yield Instl	High Yield Bond	3.55	0.00	82.07	0.00	3.78	16.54	83.46	0.00
3	BlackRock Inflation Protected Bond K	Inflation-Protected Bond	83.52	0.00	1.92	0.00	0.03	97.74	0.14	2.12
4	Baird Aggregate Bond Inst	Intermediate-Term Bond	25.92	25.01	47.20	0.00	6.17	99.70	0.30	0.00
5	PIMCO Income Instl	Multisector Bond	27.36	2.53	12.71	0.00	3.22	71.23	28.78	0.00
6	Federated Hermes Govt Ultrashort R6	Ultrashort Bond	7.01	31.43	0.00	0.00	0.30	100.00	0.00	0.00

# CITY OF RICHMOND 457B DEFERRED

## Target Date Analysis (Data as of 12-31-2022)

### Target Date Allocation

● Stocks ● Cash ● Bonds ● Other



### Target Date Portfolio Data

#### Asset Allocation %

	Total Stock	US Stock	Non-US Stock	Total Bond	Infl Prot Bond	HY Bond	Cash	Other	Avg Mkt Cap \$M
Vanguard Target Retirement 2020 Fund	41.82	24.85	16.97	54.88	15.54	0.18	3.27	0.03	57.23
Vanguard Target Retirement 2025 Fund	54.03	31.84	22.19	42.94	6.25	0.15	2.99	0.03	56.84
Vanguard Target Retirement 2030 Fund	62.61	36.80	25.81	34.55	0.00	0.13	2.80	0.04	56.72
Vanguard Target Retirement 2035 Fund	69.63	40.88	28.75	27.40	0.00	0.10	2.93	0.04	56.67
Vanguard Target Retirement 2040 Fund	76.99	45.29	31.70	20.13	0.00	0.08	2.84	0.03	56.76
Vanguard Target Retirement 2045 Fund	84.31	49.69	34.62	12.96	0.00	0.05	2.69	0.04	56.84
Vanguard Target Retirement 2050 Fund	88.00	51.89	36.11	9.33	0.00	0.04	2.64	0.04	56.87
Vanguard Target Retirement 2055 Fund	87.93	51.89	36.04	9.30	0.00	0.04	2.73	0.04	56.90
Vanguard Target Retirement 2060 Fund	87.82	51.88	35.94	9.27	0.00	0.04	2.86	0.04	56.95
Vanguard Target Retirement 2065 Fund	87.85	52.34	35.51	9.12	0.00	0.04	2.99	0.04	57.35
Vanguard Target Retirement 2070 Fund	88.29	53.23	35.06	9.78	0.00	0.04	1.89	0.04	57.92
Vanguard Target Retirement Income Fund	28.79	16.96	11.83	67.58	19.62	0.20	3.60	0.02	56.82