The 12-Step Recovery Program for Active Investors
AN EVIDENCE-BASED APPROACH TO INVESTING
May 2019
“I was regularly investing in technology, but I finally entered a 12-step recovery program.”
Founded: March 1999

Mission: To change the way the world invests by replacing speculation with an education

Advice: Invest in a risk appropriate, globally diversified, passively managed portfolio

Support: Scientific findings of peer-reviewed academic research and more than 91 years of risk and return data

Delivery: Our comprehensive website IFA.com, which provides extensive investor education and complete transparency

Accolades*

*See the attached disclosure page for criteria of each accolade.
IFA has more than 2,500 clients located throughout the country and $3.88 billion of assets under management, as of March 31, 2019.
Index Funds

The 12-Step Recovery Program for Active Investors

STEP 1: ACTIVE INVESTORS
STEP 2: NOBEL LAUREATES
STEP 3: STOCK PICKERS
STEP 4: TIME PICKERS
STEP 5: MANAGER PICKERS
STEP 6: STYLE DRIFTERS
STEP 7: SILENT PARTNERS
STEP 8: RISKES™
STEP 9: HISTORY
STEP 10: RISK CAPACITY™
STEP 11: RISK EXPOSURE
STEP 12: INVEST & RELAX
What are Index Funds?

- Index funds are investments that have rules of construction that are adhered to regardless of market conditions.

- Globally diversified portfolios of index funds have about 13,000 stocks from 45 countries.

- Index funds are essentially an investment in capitalism.
## Capitalism, Inc.

### 2018 Summary Statistics*

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Market Value</strong></td>
<td>$51,149,667,000,000</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td>$26,281,682,041,907</td>
</tr>
<tr>
<td><strong>Net Profits</strong></td>
<td>$2,238,476,310,294</td>
</tr>
<tr>
<td><strong>Number of Employees</strong></td>
<td>67,509,175</td>
</tr>
<tr>
<td><strong>Chief Executive Officers</strong></td>
<td>13,421</td>
</tr>
<tr>
<td><strong>General Industries</strong></td>
<td>442</td>
</tr>
<tr>
<td><strong>Countries of Operations</strong></td>
<td>195</td>
</tr>
</tbody>
</table>

*Source: US Stocks, International Stocks, Emerging Stocks and REITS are pulled from Q4 market breakdown provided by Q4. The numbers above are based on a globally diversified portfolio of index funds such as those used in Index Funds Advisors Index Portfolio 100. They are estimated by extrapolating Morningstar Direct Data for US companies only to publicly traded companies around the world. Capitalism, Inc. is a hypothetical company. Data as of 4/24/2016.
Why Invest in a Portfolio of Index Funds?

<table>
<thead>
<tr>
<th></th>
<th>Because you get…</th>
<th>Because you avoid…</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Market rates of returns with lower fees, expenses and taxes.</td>
<td>Speculation through stock, time, manager and style picking</td>
</tr>
<tr>
<td>2.</td>
<td>Increased diversification</td>
<td>Unrewarded concentration</td>
</tr>
<tr>
<td>3.</td>
<td>More than 91 years of risk and return data for IFA Index Portfolios and IFA Indexes</td>
<td>Silent Partners and below market rate of returns</td>
</tr>
<tr>
<td>4.</td>
<td>Style Purity, Asset Allocation Consistency</td>
<td>Style Drift, Asset Allocation Shift</td>
</tr>
<tr>
<td>5.</td>
<td>Relaxation</td>
<td>Stress</td>
</tr>
</tbody>
</table>
Celebrate the Price!

Baked in the Cake
Step 1: Active Investors
“Scoring financially is almost indistinguishable from scoring a hit off an addictive drug.” This is referred to as the “prediction addiction.”

Source: Your Money & Your Brain, Jason Zweig, (Courtesy of Hans Breiter, Harvard Medical School)
IFA Client Success at Capturing Benchmark Index Returns
7 Years (1/1/2008 - 12/31/2014)

Note: Internal analysis of 652 portfolios of IFA clients that were clients as of 1/1/2008 and stayed through 12/31/2014. All client portfolios were evaluated for that seven-year period, which we consider to be a difficult period because it includes a steep drop followed by a full recovery. - Source: ifa.com/articles/updated_article_client_study.
Investors Should “Tie Themselves to the Mast”

The Siren Songs of Speculation
The Dalbar Study: Average Equity Fund Investor vs. Indexes
20 Years (1/1/1999 - 12/31/2018)

Note: IFA Index Portfolio 100 is net of 90bps of advisory fees.

Sources: Dalbar 2019 QAIB Study, IFA
Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
The emotions of active investors go up and down like a roller coaster, leading them to negative returns on average, after expenses and taxes are deducted. The lessons in this 12-Step Program should allow investors to resist the behaviors that have caused them such despair and poor results in the past.
Emotions of Passive Investing

As a contrast, passive investors invest whenever they have the money to invest and *regardless of market conditions*, as seen in the chart.
Emotions of Passive Rebalancing

Rebalancing on average involves selling equities after gains and buying equities after losses. Many investors make the costly mistake of doing the opposite, buying after gains and selling after losses, resulting in a misalignment of risk capacity and risk exposure.
THE PROBLEM:
Not one of them consistently achieves market rates of return. Luck doesn’t persist and the many will always know more than the few.
Step 2: Nobel Laureates
Tenets for Proper Investing

1. Markets move randomly and are efficiently priced
2. The allocation of priced risk factors determines returns
3. Diversification reduces risk and increases returns
4. Risk exposure must be matched to risk capacity
5. Probability and statistics help investors control the risk of investing
Step 3: Stock Pickers
“A Devastating Conclusion…
Success = Luck Rather than Skill”

Source: The Trillion Dollar Bet

"A blindfolded monkey throwing darts at a newspaper's financial pages could select a portfolio that would do just as well as one carefully selected by the experts."

Burton Malkiel, Princeton University Professor Economics, "A Random Walk Down Wall Street” 1973
Statistical Significance of Alpha¹ Among 1,253² U.S. Mutual Funds
20 Years (1/1/1999 - 12/31/2018) Using Morningstar Benchmarks

Sources: © Morningstar, Inc, IFA
Past performance does not guarantee future results. Sources, Updates, and Disclosures: © Morningstar, Inc., IFA. 1. Positive Alpha is defined as the positive excess return relative to a benchmark. 2. Selection Criteria: Equity Style Boxes and Morningstar Categories with at least 90% US equity, including Large Blend, Value and Growth and Small Blend, Value, and Growth. Then funds were sorted by oldest share class with inception date prior to 1999. Some of the funds in this analysis have more than 20 years of data, which could alter the analysis. Buttons along the bottom are non-surviving funds that were either liquidated or merged..
Why Diversify? Stocks vs IFA Indexes and Index Portfolios
43 Years (1/1/1976 – 12/31/2018)

The 188 stocks shown in this chart were all of the U.S. publicly listed stocks that had returns data for the 43 years from 1/1/1976 to 12/31/2018. Sources: Morningstar, Inc., fabt.com

Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refer to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Stock Picking Skill Statistically Indistinguishable from Zero
32 Years (1/1/1975 - 12/31/2006) Sample Size: 2,076 Fund Managers

Fund Managers Without Genuine Stock-Picking Ability

99.4%

0.6%

"Just Lucky" Fund Managers

Sources: "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas" by Laurent Barras, Olivier Scaillet, Russell Wermers; Mark Hulbert, "The Prescient are Few," NY Times, July 13, 2008
Active Funds vs. Their Benchmarks: U.S. Equity
15 Years (1/1/2004 – 12/31/2018)

- Large-Cap Growth: 95% outperformed, 5% underperformed
- Large-Cap Core: 92% outperformed, 8% underperformed
- Large-Cap Value: 79% outperformed, 21% underperformed
- Real Estate: 86% outperformed, 14% underperformed
- Small-Cap Growth: 98% outperformed, 2% underperformed
- Small-Cap Core: 97% outperformed, 3% underperformed
- Small-Cap Value: 94% outperformed, 4% underperformed
- All Domestic: 89% outperformed, 11% underperformed

Source: SPIVA Scorecard Year-Ending 2018
Active Funds vs. Their Benchmarks: International Equity
15 Years (1/1/2004 – 12/31/2018)

- **International Equity Funds**
  - 10% outperformed their respective benchmarks
  - 90% underperformed their respective benchmarks

- **International Small-Cap Funds**
  - 24% outperformed their respective benchmarks
  - 76% underperformed their respective benchmarks

- **Emerging Markets Funds**
  - 4% outperformed their respective benchmarks
  - 96% underperformed their respective benchmarks

- **Global Funds**
  - 17% outperformed their respective benchmarks
  - 83% underperformed their respective benchmarks

Source: SPIVA Scorecard Year-Ending 2018
Active Funds vs. Their Benchmarks: Fixed Income
15 Years (1/1/2004 – 12/31/2018)

- **Government Long-Term**: 2% outperformed, 98% underperformed
- **Govt. Intermediate-Term**: 8% outperformed, 92% underperformed
- **Govt. Short-Term**: 17% outperformed, 83% underperformed
- **High Yield**: 2% outperformed, 98% underperformed
- **Investment-Grade Long-Term**: 2% outperformed, 98% underperformed
- **Investment-Grade Intermediate-Term**: 23% outperformed, 77% underperformed
- **Investment-Grade Short-Term**: 30% outperformed, 70% underperformed
- **Global Income**: 37% outperformed, 63% underperformed

Source: SPIVA Scorecard Year-Ending 2018
“It Seems Almost Hopeless”

“Professor Wermers says his advice has evolved significantly as a result of this study. Until now, he says, he wouldn’t have tried to discourage a sophisticated investor from trying to pick a mutual fund that would outperform the market. Now, he says, ‘it seems almost hopeless.’”

-Mark Hulbert

“The Prescient Are Few”, NY Times 7/13/08
Step 4: Time Pickers
INVEST, BUT NEVER SPECULATE
## Forecast Accuracy: 74% Required to Beat the Market

### Forecasts Range From 2000 to 2012

<table>
<thead>
<tr>
<th>Guru*</th>
<th>Forecasts</th>
<th>Accuracy</th>
<th>Accuracy Required to Outperform the Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharpe's Study**</td>
<td>74.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ken Fisher</td>
<td>120</td>
<td>66.40%</td>
<td></td>
</tr>
<tr>
<td>Louis Navellier</td>
<td>152</td>
<td>60.00%</td>
<td></td>
</tr>
<tr>
<td>Jason Kelly</td>
<td>126</td>
<td>59.70%</td>
<td></td>
</tr>
<tr>
<td>Dan Sullivan</td>
<td>115</td>
<td>59.10%</td>
<td></td>
</tr>
<tr>
<td>Carl Swenlin</td>
<td>128</td>
<td>54.90%</td>
<td></td>
</tr>
<tr>
<td>Bob Doll</td>
<td>161</td>
<td>54.70%</td>
<td></td>
</tr>
<tr>
<td>Mark Arbeter</td>
<td>230</td>
<td>53.20%</td>
<td></td>
</tr>
<tr>
<td>Gary Kaltbaum</td>
<td>144</td>
<td>53.10%</td>
<td></td>
</tr>
<tr>
<td>Don Luskin</td>
<td>201</td>
<td>52.00%</td>
<td></td>
</tr>
<tr>
<td>Tobin Smith</td>
<td>281</td>
<td>50.20%</td>
<td></td>
</tr>
<tr>
<td>Doug Kass</td>
<td>186</td>
<td>49.20%</td>
<td></td>
</tr>
<tr>
<td>Clif Droke</td>
<td>100</td>
<td>48.60%</td>
<td></td>
</tr>
<tr>
<td>S&amp;P Outlook</td>
<td>145</td>
<td>48.30%</td>
<td></td>
</tr>
<tr>
<td>James Stewart</td>
<td>115</td>
<td>47.00%</td>
<td></td>
</tr>
<tr>
<td>Dennis Slothower</td>
<td>145</td>
<td>45.60%</td>
<td></td>
</tr>
<tr>
<td>Bill Cara</td>
<td>208</td>
<td>45.60%</td>
<td></td>
</tr>
<tr>
<td>Gary Savage</td>
<td>134</td>
<td>45.00%</td>
<td></td>
</tr>
<tr>
<td>Marc Faber</td>
<td>164</td>
<td>44.60%</td>
<td></td>
</tr>
<tr>
<td>Tim Wood</td>
<td>182</td>
<td>43.80%</td>
<td></td>
</tr>
<tr>
<td>Jim Jubak</td>
<td>144</td>
<td>43.40%</td>
<td></td>
</tr>
<tr>
<td>Martin Goldberg</td>
<td>109</td>
<td>43.10%</td>
<td></td>
</tr>
<tr>
<td>Price Headley</td>
<td>352</td>
<td>42.00%</td>
<td></td>
</tr>
<tr>
<td>John Mauldin</td>
<td>211</td>
<td>39.90%</td>
<td></td>
</tr>
<tr>
<td>Comstock Partners</td>
<td>224</td>
<td>37.90%</td>
<td></td>
</tr>
<tr>
<td>Bill Fleckenstein</td>
<td>148</td>
<td>37.30%</td>
<td></td>
</tr>
<tr>
<td>Richard Russell</td>
<td>168</td>
<td>36.50%</td>
<td></td>
</tr>
<tr>
<td>Steven Jon Kaplan</td>
<td>104</td>
<td>32.10%</td>
<td></td>
</tr>
<tr>
<td>Robert McHugh</td>
<td>132</td>
<td>28.60%</td>
<td></td>
</tr>
</tbody>
</table>

“It says, ‘buy and hold’”.
Step 5: Manager Pickers
“Wall Street’s favorite scam is pretending that luck is skill.”

-Ron Ross, Ph.D.
The Unbeatable Market, 2002
How Many of Top 100 Funds Remain in the Top 100 the Following Year?
20 Years (1/1/1998 – 12/31/2018)

On average, only about 8 funds remained in the Top 100 the following year.

Source: © Morningstar, Inc.
Performance Chasers Underperform

“We built a unique dataset that comprises hiring and firing decisions by approximately 3,700 plan sponsors over a 10-year period from 1994 to 2003.

Our data represent the allocation of over $737 billion in mandates to hired investment managers.

Plan sponsors hire investment managers after large positive excess returns up to three years prior to hiring.

...return-chasing behavior does not deliver excess returns; post-hiring excess returns [above benchmarks] are indistinguishable from zero.”

Source: The Selection and Termination of Investment Management Firms by Plan Sponsors, May, 2005, Sunil Wahal and Amit Goyal
The bar chart reflects the results of the study minus an estimated annual 0.5% management fee and an annual 0.5% cost of transition in the after hiring manager returns. Source: Amit Goyal and Sunil Wahal, "The Selection and Termination of Investment Management Firms by Plan Sponsors," The Journal of Finance, Volume LXIII, No. 4"
Note: Investment managers’ performances is measured by their average annualized excess returns over the benchmark. The bar chart reflects the results of the study minus an estimated annual 0.5% management fee and an annual 0.5% cost of transition in the after hiring manager returns. Source: Amit Goyal and Sunil Wahal, "The Selection and Termination of Investment Management Firms by Plan Sponsors," The Journal of Finance, Volume LXIII, No. 4
Step 6: Style Drifters
Style Drifters: Can You Pick the Next Asset Class Winner?

20 Years (1/1/1999 - 12/31/2018)

<table>
<thead>
<tr>
<th>Year</th>
<th>EM 72%</th>
<th>RE 28%</th>
<th>SV 6%</th>
<th>ISV 18%</th>
<th>ISV 66%</th>
<th>ISV 35%</th>
<th>EM 30%</th>
<th>RE 35%</th>
<th>EM 36%</th>
<th>1F 4%</th>
<th>EM 72%</th>
<th>SC 31%</th>
<th>LC 2%</th>
<th>RE 23%</th>
<th>SV 43%</th>
<th>RE 23%</th>
<th>ISV 4%</th>
<th>SV 27%</th>
<th>EM 37%</th>
<th>1F 2%</th>
</tr>
</thead>
</table>

Highest

- EM 72%
- RE 28%
- SV 6%
- ISV 18%
- ISV 66%
- ISV 35%
- EM 30%
- RE 35%
- EM 36%
- 1F 4%
- EM 72%
- SC 31%
- LC 2%
- RE 23%
- SV 43%
- RE 23%
- ISV 4%
- SV 27%
- EM 37%
- 1F 2%

Annual Returns

- IV 19%
- SC 16%
- LV 22%
- EM 54%
- SC 51%
- RE 29%
- SC 21%
- EM 30%
- SC 15%
- IV 24%
- SC 21%
- EM 15%
- LC 5%
- SC 36%
- SC 19%
- EM 22%
- SC 36%
- SC 19%
- EM 22%
- SC 36%
- SC 19%

Lowest

- LV 5%
- SC 9%
- EM 7%
- SC 18%
- SC 6%
- ISV 18%
- SC 17%
- SC 3%
- ISV 42%
- SC 30%
- LC 15%
- ISV 18%
- SC 17%
- SC 3%
- ISV 42%
- SC 30%
- LC 15%
- ISV 18%
- SC 17%
- SC 3%
- ISV 42%
- SC 30%

Source: ifabt.com, IFA
Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
24 Tactical Allocation Funds vs. IFA Index Portfolios

20 Years (1/1/1998 - 12/31/2017)

Risk - Annualized Standard Deviation (%) vs. Reward - Annualized Return (%)

Tactical Allocation Funds vs. Index Portfolios

Sources: ifabt.com, © Morningstar, Inc., Includes 24 Tactical Allocation funds that have a 20 year track record.

Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Step 7: Silent Partners
Silent Partners

Numerous “Silent Partners” take bites out of your investments. These can include:

- Sales agents or stockbrokers
- Fund managers
- Accountants
- Investment advisory fees
- Market makers
- Transfer agents
- Mutual fund distributors
- Brokerage firms
Ending Values of the Average Equity Fund vs. Index Fund
15 Years (1/1/1984 - 12/31/1998)

Initial Investment: $10,000
Average Equity Fund
Final Value: $49,000

Market Index Fund
Final Value: $90,000

Investor Return
Taxes
Expense Ratio
Sales Commission
Cash Drag
Transaction Costs

Source: Bogle Financial Markets Research Center
Step 8: Riskese
Roller Coaster of Risk and Return for Five IFA Index Portfolios
50 Years (1/1/1969 - 12/31/2018)

Source: © Morningstar, Inc, IFA, ifabt.com | IFA Index Portfolios are shown net of 90bps advisory fees.
Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Risk & Return Scatter Plot of IFA Index Portfolios & IFA Indexes

50 Years (1/1/1969 -12/31/2018)

Source: © Morningstar, Inc, IFA, ifabt.com   |   IFA Index Portfolios are shown net of 90bps advisory fees.
Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
The job of the free market is to set prices so that investors are compensated for the risk they bear.

The Hebner Model

Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Step 9: History
Large, Small, Value and Growth Indexes Around the World
Annualized Returns and Standard Deviations Over Various Periods

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualized Return (%)</td>
<td>U.S. Large Value 10.04%</td>
<td>U.S. Small Value 13.02%</td>
<td>Int'l. Value Index 13.23%</td>
<td>Emerg. Market Value 12.77%</td>
</tr>
<tr>
<td></td>
<td>S&amp;P 500 Index 9.70%</td>
<td>U.S. Small Blend 11.41%</td>
<td>Int'l. Small Index 14.22%</td>
<td>Emerg. Market Blend 10.16%</td>
</tr>
<tr>
<td></td>
<td>U.S. Large Growth 9.28%</td>
<td>U.S. Small Growth 8.73%</td>
<td>MSCI EAFE Index 9.37%</td>
<td>Emerg. Market Growth 9.11%</td>
</tr>
<tr>
<td>Risk</td>
<td>25.83%</td>
<td>29.47%</td>
<td>17.96%</td>
<td>24.18%</td>
</tr>
<tr>
<td>Annualized Standard Deviation (%)</td>
<td>18.75%</td>
<td>26.04%</td>
<td>17.41%</td>
<td>22.11%</td>
</tr>
<tr>
<td></td>
<td>18.50%</td>
<td>27.82%</td>
<td>16.87%</td>
<td>21.81%</td>
</tr>
</tbody>
</table>

Sources: Center for Research in Security Prices, Fama/French Data
Positive vs. Negative Returns in IFA Index Portfolio 100
50 Years and 3 Months (1/1/1969 - 3/31/2019) Monthly Rolling Data

<table>
<thead>
<tr>
<th>Period</th>
<th>% of Mo. Rolling Periods with Positive Returns</th>
<th>% of Mo. Rolling Periods with Negative Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days**</td>
<td>51.30%</td>
<td>48.70%</td>
</tr>
<tr>
<td>Months</td>
<td>64.18%</td>
<td>35.82%</td>
</tr>
<tr>
<td>Quarters</td>
<td>68.72%</td>
<td>31.28%</td>
</tr>
<tr>
<td>1-Year</td>
<td>77.70%</td>
<td>22.30%</td>
</tr>
<tr>
<td>5-Year</td>
<td>95.40%</td>
<td></td>
</tr>
<tr>
<td>10-Year</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>15-Year</td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

### Monthly Rolling Time Periods

**Trading days are assumed to occur 22 times/month and are calculated using a normal distribution.** Periods less than 1 year are not annualized.

<table>
<thead>
<tr>
<th>Period</th>
<th># of Mo. Rolling Periods</th>
<th>Median Growth of $1.00</th>
<th>Med. Ann’lzd Return (%)</th>
<th>Range (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days**</td>
<td>13,266</td>
<td>$1.00</td>
<td>0.03%</td>
<td>N/A</td>
</tr>
<tr>
<td>Months</td>
<td>603</td>
<td>$1.01</td>
<td>1.39%</td>
<td>45.04%</td>
</tr>
<tr>
<td>Quarters</td>
<td>601</td>
<td>$1.04</td>
<td>3.77%</td>
<td>77.32%</td>
</tr>
<tr>
<td>1-Year</td>
<td>592</td>
<td>$1.15</td>
<td>15.32%</td>
<td>126.90%</td>
</tr>
<tr>
<td>5-Year</td>
<td>544</td>
<td>$1.81</td>
<td>12.64%</td>
<td>38.35%</td>
</tr>
<tr>
<td>10-Year</td>
<td>484</td>
<td>$3.22</td>
<td>12.42%</td>
<td>20.85%</td>
</tr>
<tr>
<td>15-Year</td>
<td>424</td>
<td>$6.46</td>
<td>13.24%</td>
<td>18.75%</td>
</tr>
</tbody>
</table>

Source: © Morningstar, Inc, IFA, ifabt.com | IFA Index Portfolios are shown net of 90bps advisory fees. Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Step 10: Capacity
The Five Dimensions of Risk Capacity
Knowledge

Attitude
Choose a Survey

Each survey will result in a risk capacity score based on five specific risk dimensions of an investor: 1) time horizon and liquidity needs; 2) attitude toward risk; 3) net worth; 4) income and savings rate; and 5) investment knowledge.

5 Questions
This quick 5 question survey takes approximately 5 minutes.

25 Questions
This comprehensive 25 question survey takes approximately 15-20 minutes.

Take the Risk Capacity Survey online at: www.ifa.com/survey/
Step 11: Risk Exposure
The Five Dimensions of Risk Factors
Dimensions of Annualized Returns (%)

Illustrative Index Performance

<table>
<thead>
<tr>
<th>Dimensions of Annualized Returns (%)</th>
<th>US STOCKS</th>
<th>INTERNATIONAL STOCKS</th>
<th>EMERGING MARKETS STOCKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SIZE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative performance of small cap stocks vs. large cap stocks (%)</td>
<td>2.16%</td>
<td>4.85%</td>
<td>1.87%</td>
</tr>
<tr>
<td>1928–2018</td>
<td>11.86</td>
<td>13.93</td>
<td>11.41</td>
</tr>
<tr>
<td><strong>VALUE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative performance of value stocks vs. growth stocks (%)</td>
<td>3.30%</td>
<td>5.01%</td>
<td>3.66%</td>
</tr>
<tr>
<td>1928–2018</td>
<td>12.41</td>
<td>13.23</td>
<td>12.77</td>
</tr>
<tr>
<td><strong>PROFITABILITY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative performance of high profitability stocks vs. low profitability stocks (%)</td>
<td>3.98%</td>
<td>4.14%</td>
<td>5.60%</td>
</tr>
<tr>
<td>1964–2018</td>
<td>12.12</td>
<td>6.03</td>
<td>8.19</td>
</tr>
<tr>
<td>1990–2018</td>
<td>8.15</td>
<td>1.89</td>
<td>2.58</td>
</tr>
</tbody>
</table>

Source: © Dimensional Fund Advisors LP

Information provided by Dimensional Fund Advisors LP. All returns are in USD. Premiums are calculated as the difference in annualized returns between the two indices described over the period shown. MSCI indices are gross div.

For US stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional US Small Cap Index minus the S&P 500 Index. Value minus Growth: Fama/French US Value Research Index minus the Fama/French US Growth Research Index. High Prof minus Low Prof: Dimensional US High Profitability Index minus the Dimensional US Low Profitability Index. For developed ex US stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional International Small Cap Index minus the MSCI World ex USA Index (gross div.). Value minus Growth: Fama/French International Value Index minus the Fama/French International Growth Index. High Prof minus Low Prof: Dimensional International High Profitability Index minus the Dimensional International Low Profitability Index. For Emerging Markets stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional Emerging Markets Small Cap Index minus MSCI Emerging Markets Index (gross div.). Value minus Growth: Fama/French Emerging Markets Value Index minus Fama/French Emerging Markets Growth Index. High Prof minus Low Prof: Dimensional Emerging Markets High Profitability Index minus the Dimensional Emerging Markets Low Profitability Index. Profitability is measured as operating income before depreciation and amortization minus interest expense, scaled by book.

Indices are not available for direct investment. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Past performance is no guarantee of future results. Actual returns may be lower. See “Index Descriptions” in the appendix for descriptions of Dimensional and Fama/French index data. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to, Dimensional Fund Advisors LP. S&P data © 2019 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. MSCI data © MSCI 2019, all rights reserved.
Vanguard vs. Dimensional Fund Advisors
20 Years and 3 Months (1/1/1999 - 3/31/2019)

<table>
<thead>
<tr>
<th>United States</th>
<th>International</th>
<th>Emerging Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wtd Avg Mkt Cap</strong></td>
<td><strong>Expense Ratio</strong></td>
<td><strong>Book to Market</strong></td>
</tr>
<tr>
<td>Small Value</td>
<td>Small Value</td>
<td>Small Cap</td>
</tr>
<tr>
<td>$1.70B</td>
<td>0.52%</td>
<td>0.86</td>
</tr>
<tr>
<td>$3.48B</td>
<td>0.07%</td>
<td>0.58</td>
</tr>
<tr>
<td>$1.82B</td>
<td>0.37%</td>
<td>0.53</td>
</tr>
<tr>
<td>$3.92B</td>
<td>0.05%</td>
<td>0.45</td>
</tr>
<tr>
<td>$60.0B</td>
<td>0.27%</td>
<td>0.58</td>
</tr>
<tr>
<td>$89.2B</td>
<td>0.05%</td>
<td>0.45</td>
</tr>
<tr>
<td>$101.8B</td>
<td>0.08%</td>
<td>0.32</td>
</tr>
<tr>
<td>$101.8B</td>
<td>0.04%</td>
<td>0.32</td>
</tr>
<tr>
<td>$1.30B</td>
<td>0.68%</td>
<td>1.24</td>
</tr>
<tr>
<td>$1.46B</td>
<td>0.53%</td>
<td>0.76</td>
</tr>
<tr>
<td>$26.9B</td>
<td>0.43%</td>
<td>1.06</td>
</tr>
<tr>
<td>$34.6B</td>
<td>0.38%</td>
<td>0.77</td>
</tr>
<tr>
<td>$0.84B</td>
<td>0.70%</td>
<td>0.85</td>
</tr>
<tr>
<td>$9.21B</td>
<td>0.54%</td>
<td>1.09</td>
</tr>
<tr>
<td>$19.1B</td>
<td>0.47%</td>
<td>0.64</td>
</tr>
<tr>
<td>$20.8B</td>
<td>0.14%</td>
<td>0.59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Standard Deviation</strong></th>
<th><strong># of Holdings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Value</td>
<td>Small Value</td>
</tr>
</tbody>
</table>

Wtd Avg Mkt Cap: Weighted Average Market Cap ($ Billion). *DFA US Large Company (backtested): 1/99-9/99 = DFLCX (closed), 11/99-Present = DFUSX. **No comparable passive Vanguard funds for DISVX, DFISX, DEMENTX and DFEVX. All Vanguard funds are Admiral Share Class, except the International Value fund, which is an Investor Share Class. This chart starts in 1999 because it is the first full year of data for VSIA - 5/98, DFEVX - 4/98, and DFMSX - 3/98. Source: © Morningstar, Inc.
### Risk and Return of IFA Index Portfolios and S&P 500 Index

#### 91 Years (1/1/1928 - 12/31/2018)

<table>
<thead>
<tr>
<th>Yearly Data</th>
<th>S&amp;P 500</th>
<th>IFA Index Portfolios</th>
<th>Bidirectional Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD</td>
<td>1 Year</td>
<td>1 Year</td>
<td>1 Year</td>
</tr>
<tr>
<td>3/2019</td>
<td>$1.02</td>
<td>$1.14</td>
<td>$0.96</td>
</tr>
<tr>
<td>Risk %</td>
<td>1.94%</td>
<td>13.65%</td>
<td>-4.39%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$1.11</td>
<td>$0.86</td>
<td>$0.86</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>14.68%</td>
</tr>
<tr>
<td>1/1/1928</td>
<td>$0.99</td>
<td>$1.10</td>
<td>$0.87</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>13.16%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$0.99</td>
<td>$1.09</td>
<td>$0.89</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>11.65%</td>
</tr>
<tr>
<td>1/1/1928</td>
<td>$0.99</td>
<td>$1.08</td>
<td>$0.90</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>10.14%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$0.99</td>
<td>$1.07</td>
<td>$0.92</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>8.64%</td>
</tr>
<tr>
<td>1/1/1928</td>
<td>$1.00</td>
<td>$1.06</td>
<td>$0.93</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>7.15%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$1.00</td>
<td>$1.05</td>
<td>$0.95</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>5.66%</td>
</tr>
<tr>
<td>1/1/1928</td>
<td>$1.00</td>
<td>$1.04</td>
<td>$0.96</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>3.93%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$1.00</td>
<td>$1.03</td>
<td>$0.98</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>1.49%</td>
</tr>
<tr>
<td>1/1/1928</td>
<td>$1.00</td>
<td>$1.02</td>
<td>$0.99</td>
</tr>
<tr>
<td>Risk %</td>
<td>N/A</td>
<td>N/A</td>
<td>0.31%</td>
</tr>
<tr>
<td>12/31/2018</td>
<td>$1.00</td>
<td>$1.02</td>
<td>$0.99</td>
</tr>
</tbody>
</table>

Annualized Return (%) net of IFA and DFA fees. Risk Measured in Annualized Standard Deviation (%)

Source: © Morningstar, Inc, IFA, ifabt.com   IFA Index Portfolios are shown net of 90bps advisory fees.

Past performance does not guarantee future results. Performance contains both live and backtested data. IFA Index Portfolio numbers refers to the percentage of stock indexes versus bond indexes in the asset allocation. See the attached disclosures or ifabt.com for more details on the construction and historical data of IFA Index Portfolios.
Term Risk Factor for Fixed Income
91 Years (1/1/1928 - 12/31/2018)

U.S. Fixed Income: Ranked by the Ratio of Long Term Gov't Bonds to 30 Day T-Bills

1. 100% 30-Day T-Bills
   0% L.T. Gov't Bonds
2. 80% 30-Day T-Bills
   20% L.T. Gov't Bonds
3. 60% 30-Day T-Bills
   40% L.T. Gov't Bonds
4. 40% 30-Day T-Bills
   60% L.T. Gov't Bonds
5. 20% 30-Day T-Bills
   80% L.T. Gov't Bonds
6. 0% 30-Day T-Bills
   100% L.T. Gov't Bonds

Note: The dollar amount reflects the growth of $1

Sources: Morningstar, Inc., IFA
Default Risk Factor for Fixed Income
35 Years and 6 Months (7/1/1983 - 12/31/2018)

Default Indexes of U.S. Fixed Income (Ranked by Low to High Default Risk)
1. BarCap US Govt Intern TR
2. BarCap US Corp Aaa Intern TR
3. BarCap US Corp A Intern TR
4. BarCap US Corp Baa Intern TR
5. BarCap US HY Ba Intern TR

Note: The dollar amount reflects the growth of $1

Sources: Morningstar, Inc., IFA
Step 12: Invest and Relax
Rebalancing

Asset Location
Glide Path Strategy

Tax Loss Harvesting

Glide Path Strategy
Members of the list are ranked by ten-year asset growth. Firms must be performing wealth management services for individual clients as their primary focus and can not be a broker-dealer or bank. Firms cannot have any regulatory, civil or criminal disclosures.

Members of this list are ranked by total assets under management, must be independent registered investment advisors and file their own ADV statement with the SEC. Firms must have at least $50 million in assets under management as of December 31, 2017 and they must provide financial planning and related services to individual clients. Corporate RIA firms, investment advisor representatives (IARs) and hybrids are not eligible for this ranking.

Members of this list were assembled using scoring based on six broad factors, including areas of consideration such as AUM, asset growth, company age, industry certifications, SEC compliance, and online accessibility. www.ft.com/content/31e1e108-4d54-11e8-97e4-13af622d86d4

Members of this list were assembled using data from Meridian-iQ and are ranked by total assets under management. Firms must have a focus on financial and retirement planning for individual and high-net-worth clients, institutional clients must not make up a substantial portion of businesses, and firms must not be owned by a bank, broker/dealer or investment company.

Members of the list include RIA Firms from the Top 150 list and are ranked based on client accounts (excluding broker-dealers and insurance companies).

Members of this list were assembled using data from Discovery Data and ranked based on discretionary and nondiscretionary assets under management. To capture independent fee-only planning firms, firms with broker-dealer and insurance company affiliations and those with substantial outside ownership stakes held by private equity firms and some outside investors are excluded. To capture firms that provide true holistic financial advice to individuals, only firms with 50% or more individual clients are included.

All rankings are not representative of client experience and not representative of future performance.
Disclosures for the Backtested Performance of Model IFA Index Portfolios and IFA Indexes

1. Past performance does not guarantee future results. There is a potential for loss in any investment. Index Fund Advisors, Inc. (IFA) does not guarantee any minimum level of investment performance or the success of any index portfolio or investment strategy. All investments involve risk and investment recommendations will not always be profitable. Impacts of federal and state taxes are not included in the results of index portfolio or index returns. Tax liabilities will vary per investor and can result from various activities in taxable and tax-deferred accounts. These activities include, but are not limited to re-balancing of portfolios, any sale of securities, tax loss harvesting, interest, dividends and capital gains distributions from equity funds and individual securities in taxable accounts. There are also tax liabilities associated with distributions from tax-deferred accounts.

2. Index Fund Advisors, Inc. is an SEC registered Investment Adviser. Information pertaining to IFA’s advisory operations, services, and fees is set forth in IFA’s current Form ADV Part 2 (Brochure) which is available upon request and at www.adviserinfo.sec.gov.

3. The IFA investment strategy is based on principles generally known as Modern Portfolio Theory and the Fama and French Four Factor Model for Equities and Two Factor Model for Fixed Income. Index portfolios are designed to provide substantial global diversification in order to reduce investment concentration and the resulting potential increased risk caused by the volatility of individual companies, indexes, or asset classes.

4. IFA defines index funds as funds that follow a set of rules of ownership that are held constant regardless of market conditions. An important characteristic of an index fund is that its rules of ownership are not based on a forecast of short-term events or the mispricing of securities. Therefore, an investment strategy that is limited to the buying and rebalancing of a portfolio of index funds is often referred to as passive investing, as opposed to active investing.

5. The performance information presented in certain charts or tables represents backtested performance based on a combination of simulated index data and live (or actual) mutual fund results from January 1, 1928 to the period ending date shown, using the strategy of buy and hold and annually rebalancing on the first of each year of the globally diversified portfolios of indexes. Backtested performance is hypothetical and does not reflect trading in actual accounts. It is provided for informational purposes only to indicate historical performance had the index portfolios been available over the relevant time period. IFA did not offer the index portfolios until November 1999. Prior to 1999, IFA did not manage client assets. There are limitations inherent in model results, particularly that model returns do not reflect actual trading and may not reflect the impact that material economic and market factors may have had on the advisor’s decision-making had the advisor actually managed client funds.

6. Simulated index data is based on the performance of indexes and live mutual funds as described in the IFA Indexes Data Sources page (see www.ifaindexes.com). A review of the IFA Index Data Sources, IFA Indexes Time Series Construction (http://www.ifa.com/disclosures/charts/#timeseries) and several of the Dimensional Indexes (http://www.ifa.com/disclosures/charts/#difaunds) is an integral part of this disclosure and should be read in conjunction with this explanation of backtested performance information presented.

7. The index mutual funds used in IFA’s Index Portfolios are IFA’s best estimate of a mutual fund that will come closest to the index data provided in the simulated indexes. Simulated index data is used for the period prior to the inception of the relevant live mutual fund data and a mutual fund expense ratio is deducted from simulated index data. Live (or actual) mutual fund performance is used after the inception date of each mutual fund. The IFA Indexes Times Series Construction goes back to January 1928, with an increasing diversification to international markets, emerging markets and real estate investment trusts as data became available. As of January 1928, there are four equity indexes and two bond indexes; in January 1970 there a total of 8 indexes, and there are 15 indexes in March 1998 to present. See (https://www.ifa.com/disclosures/charts/#IFA_evolution) to see the analysis of the evolution of these portfolios.

8. Backtested performance is calculated by using a software program and monthly returns data set that starts with the first day of the given time period and evaluates the returns of simulated indexes minus fund fees and mutual funds returns. In 1999, tax-managed funds became available for many different mutual funds. The tax-managed funds are not used in calculating the backtested performance of the index portfolios, unless specified in the table or chart. Whenever the term IFA Index Portfolio Value Data is used, it is based on a starting value of one at the beginning of stated time period.

9. Backtested performance does not represent actual performance, trading costs or the impact of taxes and should not be interpreted as an indication of such performance. Actual performance for client accounts may be materially lower than that of the index portfolios. Backtested performance results have certain inherent limitations. Such results do not represent the impact that material economic and market factors might have on an investment adviser’s decision-making process if the advisers were actually managing client money. Backtested performance also differs from actual performance because it is achieved through the retroactive application of model portfolios (in this case, IFA’s Index Portfolios) designed with the benefit of hindsight. As a result, the models theoretically may be changed from time to time and the effect on performance results could be either favorable or unfavorable. The next section includes details of changes in the models since inception.

10. History of Changes to the IFA Indexes: 1992-2000: IFA’s Original Index Portfolios 10, 30, 50, 70 and 90 were suggested by Dimensional Fund Advisors (DFA) in 1992 (ifa.com/pdfs/1992.pdf), as an example of globally diversified asset classes, with moderate modifications in 1995 (ifa.com/pdfs/1995.pdf), to reflect the availability of mutual funds that tracked the emerging markets asset class. Index Portfolios between each of the above listed portfolios were created by IFA in 2000 by interpolating between the above portfolios. Portfolios 5, 95 and 100 were created by IFA in 2000, as a lower and higher extension of the DFA 1992 risk and return line. There are numerous other changes that occurred from 2002 to present and they are all described in on www.ifa.com/disclosures/history.
11. Backtested performance results assume the re-investment of dividends and capital gains and annual rebalancing at the beginning of each year. It is important to understand that the assumption of annual rebalancing has an impact on the monthly returns reported for IFA Index Portfolios. For monthly rebalancing, the monthly return would be calculated with the assumption that the portfolio is perfectly in balance at the beginning of each month. For annual rebalancing, the year-to-date return is calculated with the assumption that the portfolio is perfectly in balance only at the beginning of each year. The latter assumption underlies the returns shown for the IFA Index Portfolios. In actual client portfolios, however, rebalancing occurs at no set time, and such actions are dependent on both market conditions and individual client cash inflows and outflows, along with the cost impact of such transactions on the overall portfolio.

12. The past performance of all IFA Index Portfolios is shown net of IFA's annual maximum investment management fee of 0.9%, billed monthly, unless stated otherwise. We choose this method because the creation, choice, monitoring and rebalancing of diversified index portfolios are the services of the independent investment advisor and therefore the fees are appropriate to deduct from the whole portfolio returns. Monthly fee deduction is used for backtesting. Actual IFA advisory fees are deducted quarterly, in advance. Depending on the amount of assets under management and other factors, investment management fees may be less. Unless indicated otherwise, data shown for each individual IFA Index is shown without a deduction of the IFA advisory fee. Since IFA accepts no fees from investment product firms, IFA compares funds based on net asset value returns, which are net of the mutual fund company expense ratios only. Although index mutual funds minimize tax liabilities from short- and long-term capital gains, any resulting tax liability is not deducted from performance results. Performance results also do not reflect transaction fees and other expenses charged directly by custodians to the clients, which reduce returns.

13. For all data periods, annualized standard deviation is presented as an approximation by multiplying the monthly standard deviation number by the square root of 12. Please note that the number computed from annual data may differ materially from this estimate. We have chosen this methodology because Morningstar uses the same method. In those charts and tables where the standard deviation of daily returns is shown, it is estimated as the standard deviation of monthly returns divided by the square root of 22.

14. Performance results for clients that invested in accordance with the IFA Index Portfolio Models will vary from the backtested performance due to the use of funds for implementation that differ from those in the index data, market conditions, investments cash flows, mutual fund allocations, changing index allocations over time, frequency and precision of rebalancing, not following IFA's advice, retention of previously held securities, tax loss harvesting and glide path strategies, cash balances, lower than 0.9% advisory fees, varying custodian fees, and/or the timing of fee deductions.

15. Not all IFA clients follow IFA's recommendations and depending on unique and changing client and market situations, IFA may customize the construction and implementation of the index portfolios for particular clients. IFA provides various index portfolio implementation strategies, such as the use of tax-managed mutual funds, global extended maturity bond funds, municipal bond funds, social or sustainable screens added to funds, diversified portfolios of various index fund providers, use of core funds or global asset allocation funds. These various Implementations of IFA Index Portfolios will likely have risks and returns that vary from the IFA Index Portfolio Models. As the result of these and other variances, actual performance for client accounts have been and are likely to be materially different and may be less than from the results shown in the IFA Index Portfolio Models. Clients should consult their account statements for information about how their actual performance compares to that of the index portfolios and ask your IFA Wealth Advisor to explain any differences.

16. IFA licenses the use of data, in part, from Morningstar Direct, a third-party provider of stock market data. Where data is cited from Morningstar Direct, the following disclosures apply: ©2019 Morningstar, Inc. All rights reserved. The information provided by Morningstar Direct and contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of the information. IFA Index Portfolios, times series, standard deviations, and returns calculations are derived using IFA software. Our software applies rebalancing rules, monthly fee adjustments and time series construction of data. Our source data comes from many places including Dimensional Fund Advisors and Morningstar Direct software.

17. IFA is not paid any brokerage commissions, sales loads, 12b-1 fees, or any form of compensation from any mutual fund company or broker dealer. The only source of compensation from client investments is obtained from asset-based advisory fees paid by clients. More information about advisory fees, expenses, mutual fund fees, and prospectuses for mutual funds can be found at https://www.ifa.com/fees/.

18. DISCLAIMER: THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, AS TO ACCURACY, COMPLETENESS, OR RESULTS OBTAINED FROM ANY INFORMATION PROVIDED HEREBIN OR ON THE MATERIAL PROVIDED. This document does not constitute a complete description of our investment services and is for informational purposes only. It is in no way a solicitation or an offer to sell securities or investment advisory services. Any statements regarding market or other financial information is obtained from sources which we and our suppliers believe to be reliable, but we do not warrant or guarantee the timeliness or accuracy of this information. Neither our information providers nor we shall be liable for any errors or inaccuracies, regardless of cause, or the lack of timeliness of, or for any delay or interruption in the transmission thereof to the user. All investments involve risk, including foreign currency exchange rates, political risks, market risk, different methods of accounting and financial reporting, and foreign taxes. Your use of these and all materials provided by IFA, including www.ifa.com website is your acknowledgement that you have read and understood the full disclaimer as stated above. Updated 3-22-2019. For additional updates please refer to www.ifabt.com.
Sources and Description of Data

The following descriptions of IFA Indexes indicate how indexes are strung together to simulate similar risk and return characteristics back to 1928. This long-term data reduces the possible errors of interpreting a short-term return as being representative of other short-term returns. Such errors are especially high for periods of 20 years or less. When IFA Indexes are shown in Index Portfolios, all return data reflects a deduction of 0.9% annual investment advisory fee, which is the maximum advisory fee charged by IFA. Unless indicated otherwise, data shown for each individual IFA Index is shown without a deduction of the IFA advisory fee. This method is used because the creation, choice, monitoring and rebalancing of diversified index portfolios are the services of the independent investment advisor. Therefore, fees are deducted from the whole portfolio data but not the individual index data. Live Dimensional Fund Advisors’ (DFA) fund data reflects the deduction of mutual fund advisory fees, brokerage fees, other expenses incurred by the mutual funds, incorporates actual trading results, and is sourced from DFA. Simulated index data also reflects DFA’s current mutual fund expense ratios for the entire period. Both simulated and live data reflect total returns, including dividends, except for IFA/NSQ Index. For updates on sources and descriptions of data see www.ifaindexes.com.

**IFA U.S. Large Company Index (LC)**

**Investment Objective:** The Schwab S&P 500 index (SWPPX): The investment seeks to track the total return of the S&P 500 Index. The fund generally invests at least 80% in stocks included in the S&P 500 Index. The fund may invest in derivative instruments, which may include futures, options, and forward contracts, and it may invest in one or more index funds to achieve its investment objectives.

**Time-Series Construction**
- Jan 1928 - Dec 1950: Dimensional U.S. Large Cap Index minus 0.00107% (mutual fund exp ret)
- Jan 1951 - Apr 2013: DFA U.S. Large Company Fund (DFAIX)
- July 2017 - Present: Schwab S&P 500 Index (SWPPX)

**Average Annual Return Total Return**
- Schwab S&P 500 Index: 9.45% One Year, 13.45% Three Years, 10.62% Five Years, 15.81% Ten Years
- S&P 500 Index: 9.95% One Year, 13.81% Three Years, 10.91% Five Years, 14.84% Ten Years

**Number of Holdings**
- 500

**Turnover Ratio (as of 10/31/18)**
- 2.71%

**Expense Ratio**
- 0.02%

*All Data as of March 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

**IFA U.S. Large Cap Value Index (LV)**

**Investment Objective:** The DFA U.S. Large Cap Value Portfolio I (DFLVX) is to achieve long-term capital appreciation. The Portfolio is a value-oriented fund that primarily invests in U.S. stocks that have been undervalued by the market. The fund may invest in derivative instruments, and it may invest in one or more index funds to achieve its investment objectives.

**Time-Series Construction**
- Jan 1928 - Feb 1993: Dimensional Large Value Index minus 0.0225% (mutual fund exp ret)
- Mar 1993 - Present: DFA U.S. Large Cap Value Fund (DFFVX)

**Average Annual Return Total Return**
- DFA U.S. Large Cap Value Portfolio I (DFA): 0.24% One Year, 11.41% Three Years, 7.89% Five Years, 15.49% Ten Years
- Russell 1000 Value Index: 6.27% One Year, 10.45% Three Years, 7.39% Five Years, 14.62% Ten Years

**Number of Holdings**
- 314

**Turnover Ratio (as of 10/31/18)**
- 13.00%

**Expense Ratio**
- 2.52%

*All Data as of March 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

**IFA U.S. Small Cap Index (SC)**

**Investment Objective:** The DFA U.S. Small Cap Portfolio I (DFSPX) is to achieve long-term capital appreciation. The Portfolio is a small-cap fund that primarily invests in U.S. stocks that have been undervalued by the market. The fund may invest in derivative instruments, and it may invest in one or more index funds to achieve its investment objectives.

**Time-Series Construction**
- Jan 1928 - Mar 1992: Dimensional Small Cap Index minus 0.033% (mutual fund exp ret)
- Apr 1992 - Present: DFA U.S. Small Cap Fund (DFSPX)

**Average Annual Return Total Return**
- DFA U.S Small Cap Portfolio I (DFA): -2.83% One Year, 6.73% Three Years, 6.15% Five Years, 14.32% Ten Years
- Russell 2000 Index: 2.05% One Year, 12.92% Three Years, 7.02% Five Years, 15.30% Ten Years

**Number of Holdings**
- 2,076

**Turnover Ratio (as of 10/31/18)**
- 13.06%

**Expense Ratio**
- 0.27%

*All Data as of March 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

**IFA U.S. Small Cap Value Index (SV)**

**Investment Objective:** The DFA Targeted Value Portfolio I (DFFVX) is to achieve long-term capital appreciation. The Portfolio is a value-oriented fund that primarily invests in U.S. stocks that have been undervalued by the market. The fund may invest in derivative instruments, and it may invest in one or more index funds to achieve its investment objectives.

**Time-Series Construction**
- Jan 1958 - Feb 2003: Dimensional Targeted Value Index minus 0.033% (mutual fund exp ret)
- Mar 2003 - Present: DFA Targeted Value Fund (DFFVX)

**Average Annual Return Total Return**
- DFA U.S Targeted Value Portfolio I (DFA): -2.45% One Year, 0.59% Three Years, 4.52% Five Years, 15.34% Ten Years
- Russell 2000 Value Index: 0.17% One Year, 10.86% Three Years, 5.59% Five Years, 14.12% Ten Years

**Number of Holdings**
- 1,512

**Turnover Ratio (as of 10/31/18)**
- 23.09%

**Expense Ratio**
- 0.37%

*All Data as of March 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.
### RE: IFA Global REIT Index (RE)

**Investment Objective:** DFA Global Real Estate Securities Portfolio (DPREX) is to achieve long-term capital appreciation.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Global Real Estate Sec. Portfolio</td>
<td>15.81%</td>
<td>6.26%</td>
<td>5.10%</td>
<td>16.10%</td>
<td>441</td>
<td>0.00</td>
<td>$10.60SM</td>
<td>4.00%</td>
<td>0.24%</td>
</tr>
<tr>
<td>5Amp P Global REIT Index*</td>
<td>13.95%</td>
<td>4.47%</td>
<td>6.03%</td>
<td>14.84%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Net Dividends

### IV: IFA International Value Index (IV)

**Investment Objective:** DFA International Value Portfolio (DIFVX) is to achieve long-term capital appreciation. The portfolio pursues its objectives by investing substantially all of its assets in its corresponding Master Fund. The International Value Series, which has the same investment objective and policies as the DFA International Value Portfolio.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFA Intl Value Index Portfolio</td>
<td>-10.30%</td>
<td>5.64%</td>
<td>1.77%</td>
<td>4.26%</td>
<td>041</td>
<td>0.84</td>
<td>$52.48SM</td>
<td>4.36%</td>
<td>0.43%</td>
</tr>
<tr>
<td>MSCI EAFE Index*</td>
<td>-3.14%</td>
<td>7.29%</td>
<td>2.00%</td>
<td>8.82%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Net Dividends

### IS: IFA International Small Company Index (IS)

**Investment Objective:** DFA International Small Company Fund (DISFX) is to achieve long-term capital appreciation.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Intl Small Cap Index</td>
<td>-11.99%</td>
<td>5.92%</td>
<td>3.00%</td>
<td>11.84%</td>
<td>447</td>
<td>0.60</td>
<td>$52.16SM</td>
<td>2.95%</td>
<td>0.05%</td>
</tr>
<tr>
<td>MSCI World ex USA Small Cap Index*</td>
<td>-4.60%</td>
<td>7.28%</td>
<td>3.00%</td>
<td>12.25%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Price-Only

### ISV: IFA International Small Cap Value Index (ISV)

**Investment Objective:** DFA International Small Cap Value Portfolio (DISFXV) is to achieve long-term capital appreciation.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Intl Small Cap Value Index</td>
<td>-14.78%</td>
<td>5.11%</td>
<td>3.60%</td>
<td>11.98%</td>
<td>143</td>
<td>0.82</td>
<td>$54.57SM</td>
<td>5.11%</td>
<td>0.66%</td>
</tr>
<tr>
<td>MSCI EAFE Small Cap Index*</td>
<td>-6.60%</td>
<td>7.28%</td>
<td>3.00%</td>
<td>12.25%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Price-Only

### EM: IFA Emerging Market Index (EM)

**Investment Objective:** DFA Emerging Markets Portfolio (DIFEMX) is to achieve long-term capital appreciation. The portfolio pursues its objective by investing substantially all of its assets in its corresponding Master Fund. The Emerging Markets Series, which has the same investment objective and policies as the Emerging Markets Portfolio.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Emerging Markets Index</td>
<td>-7.41%</td>
<td>10.65%</td>
<td>3.68%</td>
<td>8.94%</td>
<td>1201</td>
<td>0.95</td>
<td>$54.57SM</td>
<td>5.11%</td>
<td>0.67%</td>
</tr>
<tr>
<td>MSCI Emerging Markets Index*</td>
<td>-7.41%</td>
<td>5.05%</td>
<td>3.45%</td>
<td>9.11%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Gross Dividend

### EV: IFA Emerging Market Value Index (EV)

**Investment Objective:** DFA Emerging Markets Value Portfolio (DIFEMV) is to achieve long-term capital appreciation. The portfolio pursues its objective by investing substantially all of its assets in its corresponding Master Fund. The Emerging Markets Value Series, which has the same investment objective and policies as the Emerging Markets Value Portfolio.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Turnover Ratio</th>
<th>Weighted Avg Dividend-to-Price</th>
<th>Aggregated Price-to-Book</th>
<th>Expense Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Emerging Markets Value Portfolio</td>
<td>-7.41%</td>
<td>10.65%</td>
<td>3.68%</td>
<td>8.94%</td>
<td>2538</td>
<td>0.95</td>
<td>$35.54SM</td>
<td>3.05%</td>
<td>0.54%</td>
</tr>
<tr>
<td>MSCI Emerging Markets Index*</td>
<td>-7.41%</td>
<td>5.05%</td>
<td>3.45%</td>
<td>9.11%</td>
<td></td>
<td></td>
<td>$0.00</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

*Gross Dividend

### Notes:
- All data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions.
- For updates, see www.faindexes.com.
### IFA Emerging Market Small Cap Index (ES)

**Time-series Construction**
- Jan 1928 - Dec 1989: IFA U.S. Small Cap Index (SC)
- Jan 1970 - Dec 1985: IFA Emerging Markets Index (EM)
- Jan 1989 - Mar 1989: IFA/Reuters Emerging Markets Small minus 0.0001% (mutual fund exp ratio)
- Apr 1989 - Present: IFA Emerging Markets Small Index (DLIMAX)

**Investment Objective**
- The Dimensional Emerging Markets Value Fund, which has the same investment objective and policies as the Emerging Markets Value Portfolio.

**Average Annual Total Return**
- One Year: -11.56%
- Three Years: 8.57%
- Five Years: 4.13%
- Ten Years: 2.86%

**MSCI Emerging Market Index**
- -7.41%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Emerging Markets Small Cap Portfolio</td>
<td>-11.56%</td>
<td>8.57%</td>
<td>4.13%</td>
<td>2.86%</td>
</tr>
<tr>
<td>MSCI Emerging Market Index*</td>
<td>-7.41%</td>
<td>10.66%</td>
<td>3.56%</td>
<td>9.94%</td>
</tr>
</tbody>
</table>

*Gross Distributions: All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

### IFA One-Year Fixed Income Index (1F)

**Time-series Construction**
- Jan 1925 - Jun 1963: One-Month T-Bills minus 0.00124% (mutual fund exp ratio)
- Jul 1932 - Jul 1962: ICBM/AWI 1-Year Treasury Note Index minus 0.00124% (mutual fund exp ratio)
- Aug 1963 - Present: DFA U.S. One-Year Fixed Income Fund (DFA1F)

**Investment Objective**
- To achieve a stable and steady inflation-adjusted return.

**Average Annual Total Return**
- One Year: 2.53%
- Three Years: 1.32%
- Five Years: 0.97%
- Ten Years: 0.96%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA One-Year Fixed Income Index Portfolio</td>
<td>2.53%</td>
<td>1.32%</td>
<td>0.97%</td>
<td>0.96%</td>
</tr>
<tr>
<td>One-Year US Treasury Note*</td>
<td>2.04%</td>
<td>0.85%</td>
<td>0.72%</td>
<td>0.72%</td>
</tr>
</tbody>
</table>

*ICBM/BAA Muni/Yield Index: All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

### IFA Two-Year Global Fixed Income Index (2F)

**Time-series Construction**
- Jan 1928 - Jun 1977: Five-Year T Notes minus 0.01424% (mutual fund exp ratio)
- Jul 1977 - Dec 1989: ICBM/AWI U.S. Treasury Index 1-3 Years minus 0.01624% (mutual fund exp ratio)
- Jan 1996 - Feb 1998: FTSE World Government Bond Index 1-3 Years (hedged to USD) minus 0.01424% (mutual fund exp ratio)
- Mar 1999 - Present: DFA 2-Year Global Fixed Income Fund (DF2G)

**Investment Objective**
- To provide a stable long-term return.

**Average Annual Total Return**
- One Year: 2.93%
- Three Years: 1.39%
- Five Years: 1.07%
- Ten Years: 1.07%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Two-Year Global Fixed Income Index Portfolio</td>
<td>2.93%</td>
<td>1.39%</td>
<td>1.07%</td>
<td>1.07%</td>
</tr>
<tr>
<td>World Govt Bond Index 1-3 Years*</td>
<td>2.57%</td>
<td>1.45%</td>
<td>1.24%</td>
<td>1.24%</td>
</tr>
</tbody>
</table>

*CitiGop Index: Hedged: All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

### IFA Short Term Government Index (3G)

**Time-series Construction**
- Jan 1928 - Dec 1972: Five-Year T Notes minus 0.01595% (mutual fund exp ratio)
- Jan 1973 - Jun 1957: Bloomberg Barclays U.S. Government Bond Index Intermediate minus 0.0153% (mutual fund exp ratio)
- Jul 1957 - Present: DFA Short-Term Government Portfolio (DF3G)

**Investment Objective**
- To provide a stable and steady return.

**Average Annual Total Return**
- One Year: 2.62%
- Three Years: 0.65%
- Five Years: 1.23%
- Ten Years: 1.62%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Short-Term Govt Portfolio</td>
<td>2.62%</td>
<td>0.65%</td>
<td>1.23%</td>
<td>1.62%</td>
</tr>
<tr>
<td>Capital US Govt Bond Index*</td>
<td>3.14%</td>
<td>0.99%</td>
<td>1.34%</td>
<td>1.43%</td>
</tr>
</tbody>
</table>

*Barclays Index: All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

### IFA Five-Year Global Fixed Income Index (5F)

**Time-series Construction**
- Jan 1928 - Dec 1964: IFA Short-Term Government Index (3G)
- Jan 1955 - Nov 1996: Global Government Bond Composite Index (hedged C6) minus 0.0259% (mutual fund exp ratio)
- Dec 1993 - Present: DFA Five-Year Global Fixed Income Fund (DF5G)

**Investment Objective**
- To provide a stable long-term return.

**Average Annual Total Return**
- One Year: 3.70%
- Three Years: 2.13%
- Five Years: 1.61%
- Ten Years: 2.97%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFA Five-Year Global Fixed Portfolio</td>
<td>3.70%</td>
<td>2.13%</td>
<td>1.61%</td>
<td>2.97%</td>
</tr>
<tr>
<td>World Govt Bond 1-5 Years*</td>
<td>3.13%</td>
<td>1.56%</td>
<td>1.65%</td>
<td>1.73%</td>
</tr>
</tbody>
</table>

*CitiGop Index: Hedged: All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindexes.com.

### Sim. S&P 500 Index (SP)

**Time-series Construction**
- Jan 1928 - Dec 1996: Dimensional US Large Cap Index Minus 0.000167% (mutual fund exp ratio)
- Jan 1991 - Apr 2010: DFA U.S. Large Company Fund (DFL50)
- May 2010 - May 2017: DFA U.S. Large Company Fund DFL50
- July 2017 - Present: Schwab S&P 500 Index (SPX)

**Investment Objective**
- The fund seeks to track the total return of the S&P 500 Index. The fund generally invests at least 80% of its net assets in stocks that are included in the S&P 500 Index.

**Average Annual Total Return**
- One Year: 5.85%
- Three Years: 13.45%
- Five Years: 10.82%
- Ten Years: 5.81%

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schwab S&amp;P 500 Index</td>
<td>5.85%</td>
<td>13.45%</td>
<td>10.82%</td>
<td>5.81%</td>
</tr>
</tbody>
</table>

Average Market Cap: $105.6B

*All Data as of Mar 31, 2019. Returns include dividends. For updates see www.ifaindexes.com.
IFA NSDQ Index (N)

Investment Objective of IFA NSDQ Index: The Nasdaq Composite Index is the market capitalization-weighted index of common equities listed on the Nasdaq stock exchange. The types of securities in the index include American depositary receipts, common stocks, real estate investment trusts (REITs) and tracking stocks, as well as limited partnership interests.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Average Market Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASDAQ Composite Total Return</td>
<td>10.63%</td>
<td>17.97%</td>
<td>14.29%</td>
<td>18.93%</td>
<td>2,644</td>
<td>$72.07B</td>
</tr>
</tbody>
</table>

*All Data as of Mar 31, 2019. For updates see www.ifaindices.com.

IFA U.S. Total Market Index (TM)

Investment Objective of IFA U.S. Total Market Index (VITIX): The investment seeks to track the performance of a benchmark index that measures the investment return of the overall stock market. The fund employs a passive management strategy designed to track the performance of the MSCI US Broad Market Index, which consists of all the U.S. common stocks traded regularly on the New York Stock Exchange and the Nasdaq over-the-counter market. It typically holds 1,200-1,300 of the stocks in its target index.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Average Market Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard U.S. Total Market Index</td>
<td>8.81%</td>
<td>13.52%</td>
<td>10.34%</td>
<td>16.09%</td>
<td>3,615</td>
<td>$60.99B</td>
</tr>
</tbody>
</table>

*All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindices.com.

IFA U.S. Large Growth Index (LG)

Investment Objective of Vanguard Growth Index (VGIDX): The investment seeks to track the performance of a benchmark index that measures the investment return of large-capitalization growth stocks. The fund employs a passive management investment approach designed to track the performance of the MSCI US Prime Market Growth index, a broadly diversified index of growth stocks of large U.S. companies. It attempts to replicate the target index by investing all, or substantially all, of assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Average Market Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard Growth Index</td>
<td>11.67%</td>
<td>15.17%</td>
<td>12.20%</td>
<td>16.82%</td>
<td>302</td>
<td>$115.72B</td>
</tr>
</tbody>
</table>

*All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindices.com.

IFA U.S. Small Growth Index (SG)

Investment Objective of Vanguard Small-Cap Growth Index (VSGIX): The investment seeks to track the performance of a benchmark index that measures the investment return of small-capitalization growth stocks. The fund employs a passive management investment approach designed to track the performance of the MSCI U.S. Small Cap Growth Index, a broadly diversified index of growth stocks of smaller U.S. companies. It attempts to replicate the target index by investing all, or substantially all, of assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

<table>
<thead>
<tr>
<th>Average Annual Total Return</th>
<th>One Year</th>
<th>Three Years</th>
<th>Five Years</th>
<th>Ten Years</th>
<th>Number of Holdings</th>
<th>Average Market Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanguard Small-Cap Growth Index</td>
<td>10.42%</td>
<td>15.76%</td>
<td>8.73%</td>
<td>17.30%</td>
<td>626</td>
<td>$4.46B</td>
</tr>
</tbody>
</table>

*All Data as of Mar 31, 2019. Returns include the impact of reinvested dividends and capital gains distributions. For updates see www.ifaindices.com.