

---

# Simple but not Simplistic Investing at Home and Abroad.



Alec Lucas, PhD

Senior Analyst

Manager Research

Morningstar Research Services LLC

November 2018

---

# Agenda

- ▶ Unprecedented Access Does Not Come Alone ...
  - ▷ Choice
  - ▷ Complexity & Conflicts
- ▶ Simplicity as a Guiding Light
  - ▷ Ancient Wisdom: Occam's Razor
  - ▷ Seven Portfolio Building Principles
  - ▷ Model Portfolio Examples
    - ▷ Active and Passive
      - Active Example
      - Passive Example
      - Active vs. Passive: Trailing Three- & Five-Year Results
    - ▷ Benz's Buckets
- ▶ Questions

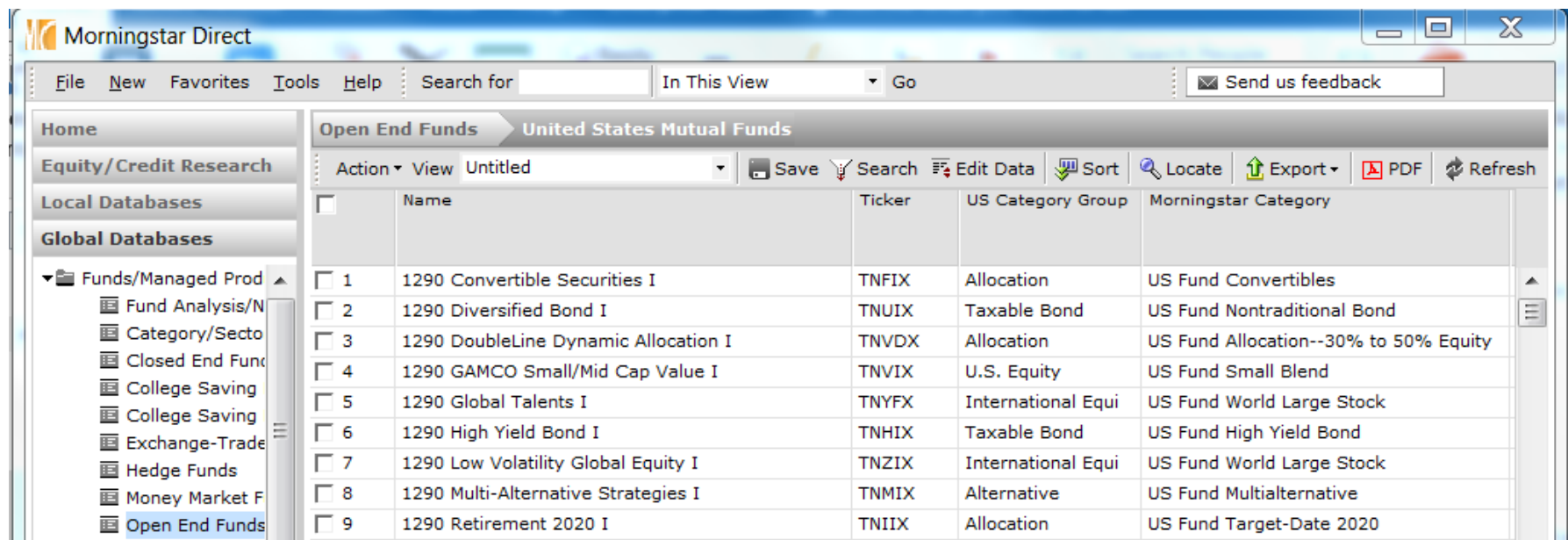
---

# **Unprecedented Access Does Not Come Alone**

## ... Choice, Complexity, & Conflicts

## Unprecedented Access Does Not Come Alone ...

- ▶ Investors have unprecedented access to building low-cost, broadly-diversified portfolios.
- ▶ Morningstar's database of U.S. open-end mutual funds currently contains 7,940 distinct options, which expands into 27,189 different share classes.<sup>1</sup>
  - For context, the CRSP U.S. Total Market Index has nearly 4,000 constituents.<sup>2</sup>



The screenshot shows the Morningstar Direct application window. The title bar reads "Morningstar Direct". The menu bar includes "File", "New", "Favorites", "Tools", and "Help". Below the menu bar is a search bar with the text "Search for" and a dropdown menu set to "In This View". To the right of the search bar is a "Go" button and a "Send us feedback" link. The main content area is titled "Open End Funds" and "United States Mutual Funds". It features a table with columns: "Name", "Ticker", "US Category Group", and "Morningstar Category". The table lists 9 funds, each with a checkbox in the first column. The left sidebar contains a navigation tree with "Home", "Equity/Credit Research", "Local Databases", and "Global Databases". Under "Global Databases", "Funds/Managed Prod" is expanded, showing a list of fund categories including "Fund Analysis/N", "Category/Secto", "Closed End Func", "College Saving", "College Saving", "Exchange-Trade", "Hedge Funds", "Money Market F", and "Open End Funds".

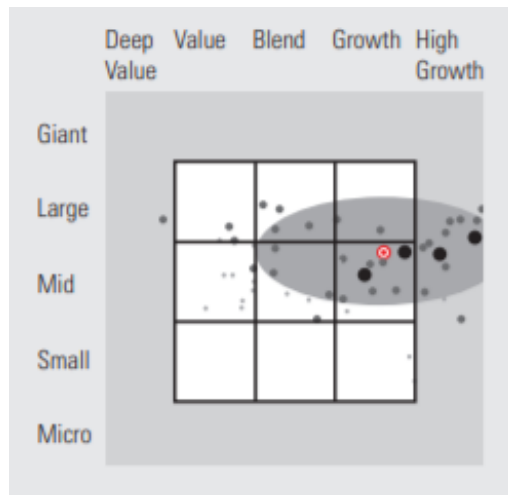
	Name	Ticker	US Category Group	Morningstar Category
<input type="checkbox"/>	1290 Convertible Securities I	TNFIIX	Allocation	US Fund Convertibles
<input type="checkbox"/>	1290 Diversified Bond I	TNUIIX	Taxable Bond	US Fund Nontraditional Bond
<input type="checkbox"/>	1290 DoubleLine Dynamic Allocation I	TNVDX	Allocation	US Fund Allocation--30% to 50% Equity
<input type="checkbox"/>	1290 GAMCO Small/Mid Cap Value I	TNVIX	U.S. Equity	US Fund Small Blend
<input type="checkbox"/>	1290 Global Talents I	TNYFX	International Equi	US Fund World Large Stock
<input type="checkbox"/>	1290 High Yield Bond I	TNHIX	Taxable Bond	US Fund High Yield Bond
<input type="checkbox"/>	1290 Low Volatility Global Equity I	TNZIX	International Equi	US Fund World Large Stock
<input type="checkbox"/>	1290 Multi-Alternative Strategies I	TNMIX	Alternative	US Fund Multialternative
<input type="checkbox"/>	1290 Retirement 2020 I	TNIIX	Allocation	US Fund Target-Date 2020

<sup>1</sup> Source: Morningstar Direct.

<sup>2</sup> <http://www.crsp.com/products/investment-products/crsp-us-total-market-index>

# Unprecedented Access Does Not Come Alone ...

- ▶ Investors have unprecedented access to building low-cost, broadly-diversified portfolios.
- ▶ In the U.S., Morningstar supports **nine category groups**, subdivided into **122 categories**.<sup>3</sup>
  - ▶ **1. U.S. equity**, **2.** sector equity, **3.** allocation, **4.** international equity, **5.** alternative, **6.** commodities, **7.** taxable bond, **8.** municipal bond, and **9.** money market
  - **U.S. equity**: 1. large value, 2. large blend, 3. large growth, 4. mid-cap value, 5. mid-cap blend, 6. mid-cap growth, 7. small value, 8. small blend, 9, small growth, 10. leveraged net long.



<b>The Vertical Axis:</b> <b>Market Capitalization</b>	A stock is classified as large, mid, or small based on its position in the cumulative market capitalization of its style zone. Large-cap stocks are those that together account for the top 70% of the capitalization of each style zone; mid-cap stocks represent the next 20%; and small-cap stocks represent the balance. The market caps that correspond to these breakpoints are flexible and may shift from month to month as the market changes.			
<b>The Horizontal Axis:</b> <b>Style</b>	<b>Value Score Components and Weights</b>		<b>Growth Score Components and Weights</b>	
	<b>Forward looking measures</b> <b>50.0%</b>		<b>Forward looking measures</b> <b>50.0%</b>	
	▶ Price-to-projected earnings		▶ Long-term projected earnings growth	
	<hr/>		<hr/>	
	<b>Historical based measures</b> <b>50.0%</b>		<b>Historical based measures</b> <b>50.0%</b>	
	▶ Price-to-book                                      12.5%		▶ Historical earnings growth                      12.5%	
	▶ Price-to-sales                                     12.5%		▶ Sales growth                                        12.5%	
	▶ Price-to-cash flow                             12.5%		▶ Cash flow growth                                12.5%	
▶ Dividend yield                                   12.5%		▶ Book value growth                               12.5%		

<sup>3</sup> As of the April 29, 2016 Morningstar Methodology Paper “The Morningstar Category Classifications (for portfolios for sale in the United States).”

---

## Unprecedented Access Does Not Come Alone ...

### ► **Challenge of Choice:** Peanut Butters and Jellies, Oh My!

- Calvin-and-Hobbes-inspired conclusion to “When Choice is Demotivating”:
  - “Look at this peanut butter! There must be three sizes of five brands of four consistencies! Who demands this much choice? I know! I’ll quit my job and devote my life to choosing peanut butter! Is ‘chunky’ chunky enough or do I need EXTRA chunky? I’ll compare ingredients! I’ll compare brands! I’ll compare sizes and prices! Maybe I’ll drive around and see what other stores have! So much selection, and so little time!”<sup>4</sup>



This Photo by Unknown Author is licensed under CC BY-SA-NC

<sup>4</sup> Bill Watterson, *It's a Magical World* (Kansas City: Andrews and McMeel, 1996), 107. Cited in Sheena S. Iyengar and Mark R. Lepper, “When Choice Is Demotivating: Can One Desire Too Much of a Good Thing,” *Journal of Personality and Social Psychology* 79.6 (2000): 995–1006[1004].

---

## Unprecedented Access Does Not Come Alone ...

### ► **Challenge of Choice:** Peanut Butters and Jellies, Oh My!

▷ “When Choice is Demotivating” study results:<sup>5</sup>

▷ **24 Jam Options:**

— 145 (60%) of 242 customers stopped at the booth, with 4 (2.8%) purchases

▷ **6 Jam Options:**

— 104 (40%) of 260 customers stopped at the booth, with 31 (30%) purchases



This Photo by Unknown Author is licensed under CC BY-SA-NC

<sup>5</sup> Iyengar and Lepper, “When Choice Is Demotivating,” 996–998.

---

## Unprecedented Access Does Not Come Alone ...

### ► **Challenge of Choice:**

- ▷ “When Choice is Demotivating” on *Choice Overload*:
  - ▷ “Our findings demonstrate that the offer of overly extensive choices in relatively trivial choice-making contexts can have significant demotivating effects, but perhaps the phenomenon of *choice overload* may be further exacerbated in contexts (such as decisions about major stock purchases...) in which (a) the costs associated with making the ‘wrong’ choice, or even beliefs that there are truly ‘wrong’ choices, are much more prominent and/or (b) substantial time and effort would be required for choosers to make truly informed comparisons among alternatives.”<sup>6</sup>

---

<sup>6</sup> Iyengar and Lepper, “When Choice Is Demotivating,” 1004.



---

## Unprecedented Access Does Not Come Alone ...

### ► Challenge of Choice:

- ▷ Applying ***Choice Overload*** to Mutual funds:
  - ▷ Controlling for variables like compensation, overall wealth, gender, and company tenure, a 2004 academic study of more than 600 401(k) retirement plans at Vanguard found:
    - “[T]he more funds offered, the lower the rate of participation. For every ten additional funds included in a plan, there was a 1.5 percent to 2 percent decline in the participation rate.”<sup>7</sup>

<sup>7</sup> Brian Portnoy, *The Investor's Paradox: The Power of Simplicity in a World of Overwhelming Choice*. (New York: Palgrave Macmillan, 2014), 19. For the 2004 academic study, see: Sheena S. Iyengar, Gur Huberman, and Wei Jiang, “How Much Choice Is Too Much? Contributions to 401(k) Retirement Plans,” in *Pension Design and Structure: New Lessons from Behavioral Finance* (ed. Olivia S. Mitchell and Steve Utkus; Oxford: Oxford University, 2004), 83–95.

---

## Unprecedented Access Does Not Come Alone ...

### ► **Challenge of Choice:**

#### ► *Choice Overload*'s consequences:

- ▷ “[T]he more choosers perceive their choice-making task to necessitate expert information, the more they may be inclined not to choose, and further, they may even surrender the choice to someone else — presumably more expert. . . . [O]ne paradox confronting the modern world is that as the freedom of individuals expands, so too does their dependence on institutions and other people.”<sup>8</sup>

---

<sup>8</sup> Iyengar and Lepper, “When Choice Is Demotivating,” 1004.

# Unprecedented Access Does Not Come Alone ...

## ► Dangers of Complexity and (Agency) Conflicts:

	Portfolio Allocation
<b>Equity</b>	<b>58.0%</b>
<b>Large Cap Growth</b>	<b>14.1%</b>
Midwest Bank Growth Fund	5.6
Vanguard Morgan™ Growth Admiral™ Fund	5.6
Wells Fargo Large Cap Growth Fund	2.9
<b>Large Cap Value</b>	<b>12.7%</b>
Midwest Bank Value Fund	5.1
DFA US Large Cap Value Fund	3.8
TIAA-CREF Large-Cap Value Index Fund	3.8
<b>Mid Cap Growth</b>	<b>5.5%</b>
Midwest Bank Mid Cap Growth Fund	2.8
Morgan Stanley Mid Cap Growth Fund	2.7
<b>Mid Cap Value</b>	<b>5.1%</b>
Artisan Mid Cap Value Fund	1.3
iShares Russell Mid-Cap Value ETF	3.8
<b>Small Cap Growth</b>	<b>2.2%</b>
ClearBridge Small Cap Growth Fund	1.3
Eagle Small Cap Growth Fund	0.9
<b>Small Cap Value</b>	<b>3.9%</b>
DFA US Targeted Value Fund	3.9
<b>International - Developed Market Equity</b>	<b>8.8%</b>
MFS® Research International Fund	5.0
T. Rowe Price Overseas Stock Fund	3.0
iShares MSCI Canada ETF	0.8
<b>International - Emerging Market Equity</b>	<b>2.7%</b>
Causeway Emerging Markets Fund	1.3
Invesco Developing Markets Fund	1.4
<b>International - Small Cap Equity</b>	<b>3.0%</b>
Columbia Acorn International Inst3	1.5
Vanguard FTSE All-World ex-US Small Cap Index	1.5

	Portfolio Allocation
<b>Fixed Income</b>	<b>28.0%</b>
<b>Aggregate Bond</b>	<b>25.2%</b>
Midwest Bank Bond Fund	15.1
Dodge & Cox Income Fund	3.8
Vanguard Intermediate-Term Investment Grade Fund	2.5
Wells Fargo Advantage Core Bond Fund	3.8
<b>High Yield/Bank Loan/Hybrid</b>	<b>1.7%</b>
BlackRock High Yield Bond Fund	0.9
Hartford Floating Rate Fund	0.8
<b>International - Emerging Market Bond</b>	<b>1.1%</b>
Fidelity Advisor Emerging Markets Income Fund	0.4
PIMCO Emerging Markets Bond Fund	0.3
PIMCO Emerging Local Bond Fund	0.4
<b>Alternative</b>	<b>14.0%</b>
<b>Hedge Funds</b>	<b>9.5%</b>
AQR Diversified Arbitrage Fund	1.0
AQR Managed Futures Fund	2.0
Boston Partners Long/Short Research Fund	4.5
Swan Defined Risk Fund	2.0
<b>Real Estate</b>	<b>1.5%</b>
Prudential Global Real Fund	1.5
<b>Infrastructure</b>	<b>3.0%</b>
JPMorgan Alerian MLP Index ETN	1.5
Credit Suisse Cushing 30 MLP Index ETN	1.5

Midwest Bank Active	ETF = Exchange-Traded Fund
Externally Managed Active	ETN = Exchange-Traded Note
Externally Managed Passive	

# Unprecedented Access Does Not Come Alone ...

## ► Dangers of Complexity and (Agency) Conflicts:

	Portfolio Allocation
<b>Equity</b>	<b>58.0%</b>
<b>Large Cap Growth</b>	<b>14.1%</b>
Midwest Bank Growth Fund	5.6
Vanguard Morgan™ Growth Admiral™ Fund	5.6
Wells Fargo Large Cap Growth Fund	2.9
<b>Large Cap Value</b>	<b>12.7%</b>
Midwest Bank Value Fund	5.1
DFA US Large Cap Value Fund	3.8
TIAA-CREF Large-Cap Value Index Fund	3.8
<b>Mid Cap Growth</b>	<b>5.5%</b>
Midwest Bank Mid Cap Growth Fund	2.8
Morgan Stanley Mid Cap Growth Fund	2.7
<b>Mid Cap Value</b>	<b>5.1%</b>
Artisan Mid Cap Value Fund	1.3
iShares Russell Mid-Cap Value ETF	3.8
<b>Small Cap Growth</b>	<b>2.2%</b>
ClearBridge Small Cap Growth Fund	1.3
Eagle Small Cap Growth Fund	0.9
<b>Small Cap Value</b>	<b>3.9%</b>
DFA US Targeted Value Fund	3.9
<b>International - Developed Market Equity</b>	<b>8.8%</b>
MFS® Research International Fund	5.0
T. Rowe Price Overseas Stock Fund	3.0
iShares MSCI Canada ETF	0.8
<b>International - Emerging Market Equity</b>	<b>2.7%</b>
Causeway Emerging Markets Fund	1.3
Invesco Developing Markets Fund	1.4
<b>International - Small Cap Equity</b>	<b>3.0%</b>
Columbia Acorn International Inst3	1.5
Vanguard FTSE All-World ex-US Small Cap Index	1.5

	Portfolio Allocation
<b>Fixed Income</b>	<b>28.0%</b>
<b>Aggregate Bond</b>	<b>25.2%</b>
Midwest Bank Bond Fund	15.1
Dodge & Cox Income Fund	3.8
Vanguard Intermediate-Term Investment Grade Fund	2.5
Wells Fargo Advantrage Core Bond Fund	3.8
<b>High Yield/Bank Loan/Hybrid</b>	<b>1.7%</b>
BlackRock High Yield Bond Fund	0.9
Hartford Floating Rate Fund	0.8
<b>International - Emerging Market Bond</b>	<b>1.1%</b>
Fidelity Advisor Emerging Markets Income Fund	0.4
PIMCO Emerging Markets Bond Fund	0.3
PIMCO Emerging Local Bond Fund	0.4
<b>Alternative</b>	<b>14.0%</b>
<b>Hedge Funds</b>	<b>9.5%</b>
AQR Diversified Arbitrage Fund	1.0
AQR Managed Futures Fund	2.0
Boston Partners Long/Short Research Fund	4.5
Swan Defined Risk Fund	2.0
<b>Real Estate</b>	<b>1.5%</b>
Prudential Global Real Fund	1.5
<b>Infrastructure</b>	<b>3.0%</b>
JPMorgan Alerian MLP Index ETN	1.5
Credit Suisse Cushing 30 MLP Index ETN	1.5

- 28.6% Midwest Bank active
- 58.5% externally managed active
  - 9.5% in hedge funds
- 12.9% externally managed passive

## Unprecedented Access Does Not Come Alone ...

### ► Dangers of Complexity and (Agency) Conflicts:

#### ► A Closer Look at the 9.5% Allocation to Hedge Funds

	Portfolio Allocation	Ticker	Morningstar Analyst Rating	Prospectus Date	Prospectus Net Expense Ratio (%)
<b>Hedge Funds</b>	<b>9.5%</b>				
AQR Diversified Arbitrage Fund	1.0	QDARX	Bronze	5/1/2018	2.00
AQR Managed Futures Fund	2.0	AQMRX	Bronze	5/1/2018	1.14
Boston Partners Long/Short Research Fund	4.5	BPIRX	Silver	2/22/2018	2.24
Swan Defined Risk Fund	2.0	SDRIX	Bronze	11/1/2017	1.30
<b>Balanced Fund (65% bonds, 35% stocks)</b>					
Vanguard Wellesley® Income Inv		VWINX	Gold	1/26/2018	0.22

## Unprecedented Access Does Not Come Alone ...

### ► Dangers of Complexity and (Agency) Conflicts:

#### ► A Closer Look at the 9.5% Allocation to Hedge Funds<sup>9</sup>

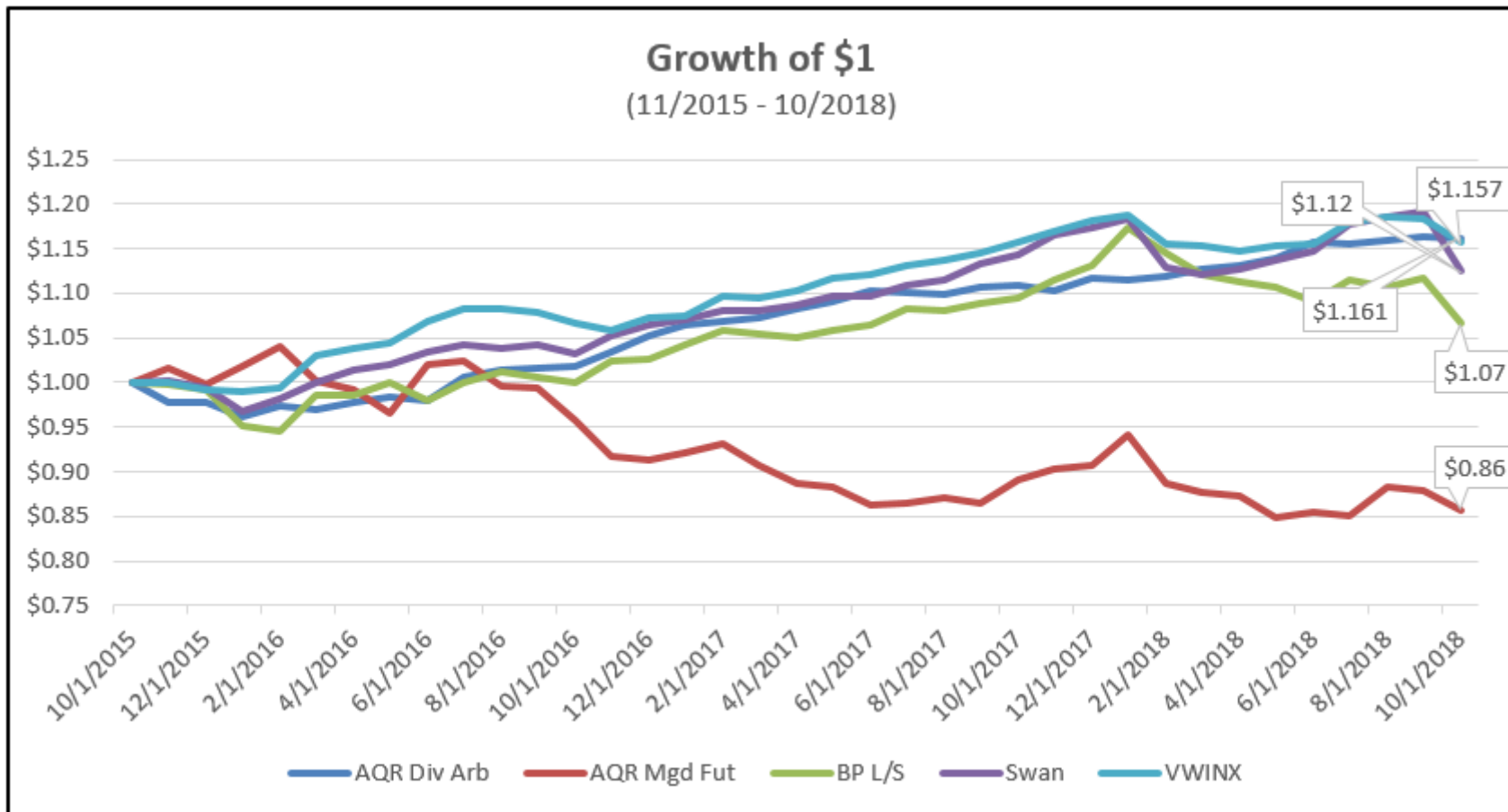
	Portfolio Allocation	Ticker	Morningstar Analyst Rating	Prospectus Date	Prospectus Net Expense Ratio (%)
<b>Hedge Funds</b>	<b>9.5%</b>				
AQR Diversified Arbitrage Fund	1.0	QDARX	Bronze	5/1/2018	2.00
AQR Managed Futures Fund	2.0	AQMRX	Bronze	5/1/2018	1.14
Boston Partners Long/Short Research Fund	4.5	BPIRX	Silver	2/22/2018	2.24
Swan Defined Risk Fund	2.0	SDRIX	Bronze	11/1/2017	1.30
<b>Balanced Fund (65% bonds, 35% stocks)</b>					
Vanguard Wellesley® Income Inv		VWINX	Gold	1/26/2018	0.22

	Portfolio Allocation	3-Year Gross Return	3-Year Net Return	3-Year Std Dev	3-Year Max Loss	3-Year Max Gain
<b>Hedge Funds</b>	<b>9.5%</b>					
AQR Diversified Arbitrage Fund	1.0	7.27	5.10	3.13	-3.84	21.00
AQR Managed Futures Fund	2.0	-3.94	-5.01	8.54	-18.44	4.32
Boston Partners Long/Short Research Fund	4.5	4.19	2.16	6.44	-9.12	24.12
Swan Defined Risk Fund	2.0	5.21	3.99	5.69	-5.67	23.13
<b>Balanced Fund (65% bonds, 35% stocks)</b>						
Vanguard Wellesley® Income Inv		5.21	4.98	4.05	-3.48	20.01

<sup>9</sup> Source: Morningstar Direct. Return data through 10/31/2018..

## Unprecedented Access Does Not Come Alone ...

- **Dangers of Complexity and (Agency) Conflicts:**
- **A Closer Look at the 9.5% Allocation to Hedge Funds<sup>10</sup>**



<sup>10</sup> Source: Morningstar Direct.

## Unprecedented Access Does Not Come Alone ...

### ► Dangers of Complexity and (Agency) Conflicts:

#### ▷ AQR Div Arb vs. Vanguard Wellesley<sup>10</sup>



<sup>10</sup> Source: Morningstar Direct.



---

## Unprecedented Access Does Not Come Alone ...

### ► **Dangers of Complexity and** (Agency) **Conflicts:**

#### ▷ **AQR Co-founder Cliff Asness on Hedge Funds:**

- ▷ “Hedge Funds are investment pools that are relatively unconstrained in what they do. They are relatively unregulated (for now), charge very high fees, will not necessarily give you your money back when you want it, and will generally not tell you what they do. They are supposed to make money all the time, and when they fail at this, their investors redeem and go to someone else who has recently been making money. Every three or four years they deliver a one-in-a-hundred year flood. They are generally run for rich people in Geneva, Switzerland, by rich people in Greenwich, Connecticut.”<sup>11</sup>

---

<sup>11</sup> Cited in Andrew Ang, *Asset Management: A Systematic Approach to Factor Investing* (Financial Management Association Survey and Synthesis Series; New York: Oxford University, 2014), 558.

---

## Simplicity as a Guiding Light

### ► **Ancient Wisdom: Occam's Razor:**<sup>12</sup>

#### ▷ **William of Ockham** (Latin: *Glielmus Occamus*), circa. 1287–1347

- ▷ English Franciscan friar and scholastic philosopher.
- ▷ Credited with the principle:

— “Entities are not to be multiplied without necessity” (*Non sunt multiplicanda entia sine necessitate*).

— In other words, don't overcomplicate things because simplicity is a virtue.

---

<sup>12</sup> [https://en.wikipedia.org/wiki/Wikipedia:Citing\\_sources..](https://en.wikipedia.org/wiki/Wikipedia:Citing_sources..)

---

## Simplicity as a Guiding Light

### ► **Simplicity Is Sorely Needed**

► **Greg Smith**, former executive director and head of Goldman Sachs' United States equity derivatives business in Europe, the Middle East and Africa ("Why I Am Leaving Goldman Sachs," *New York Times*, March 14, 2012):

— "It makes me ill how callously people talk about ripping their clients off.... I don't know of any illegal behavior, but will people push the envelope and pitch lucrative and complicated products to clients even if they are not the simplest investments or the ones most directly aligned with the client's goals? Absolutely. Every day, in fact."<sup>13</sup>

<sup>13</sup> <https://www.nytimes.com/2012/03/14/opinion/why-i-am-leaving-goldman-sachs.html>.

---

## Simplicity as a Guiding Light

### ► **Seven Portfolio Building Principles:**

#### ▷ **1. Keep costs in mind.**

- ▷ Costs of the funds themselves (expense ratios, trading costs, capital gains).
- ▷ Costs paid to financial advisors for fund selection and asset management.

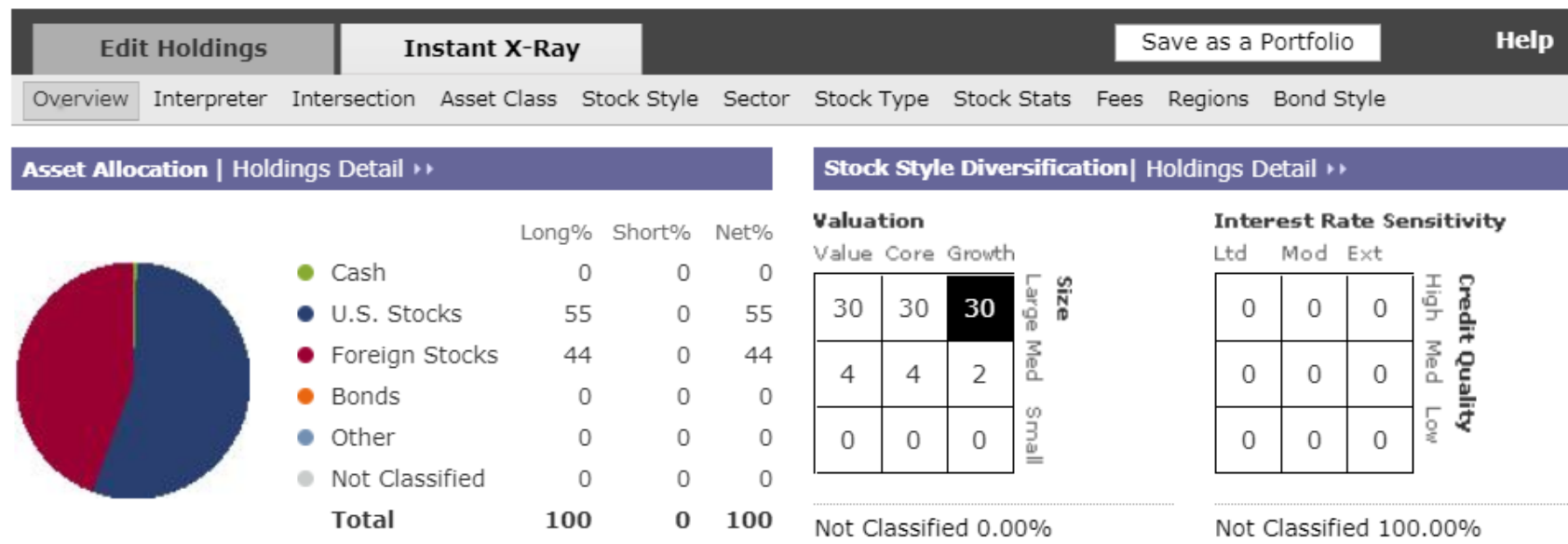
# Simplicity as a Guiding Light

## ► Seven Portfolio Building Principles:

### ▷ 2. Use the market portfolio as a point of reference.

- ▷ Example: Global Equity Portfolio (iShares MSCI ACWI ETF [Ticker: ACWI]) using Morningstar Instant X-Ray:<sup>14</sup>

#### Instant X-Ray



<sup>14</sup> <https://www.morningstar.com/portfolio.html?requestUrl=/RtPort/Free/InstantXRayDEntry.aspx?dt=0.7055475>.

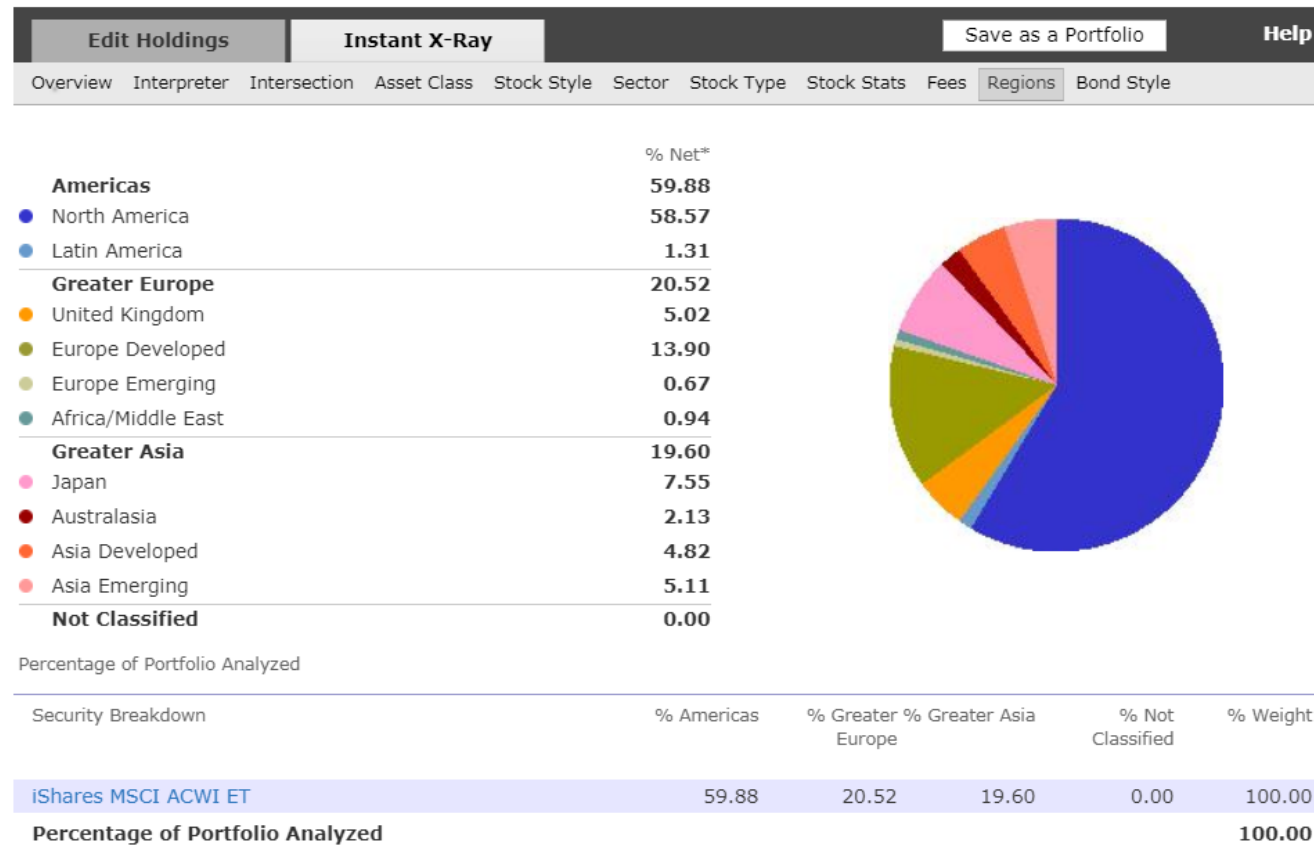
# Simplicity as a Guiding Light

## ► Seven Portfolio Building Principles:

### ▷ 2. Use the market portfolio as a point of reference.

- ▷ Example: Global Equity Portfolio (iShares MSCI ACWI ETF [Ticker: ACWI]) using Morningstar Instant X-Ray:

Instant X-Ray



# Simplicity as a Guiding Light

## ► Seven Portfolio Building Principles:

- 3. Bear in mind that all diversified portfolios are global to a greater or lesser extent.
  - ▷ Domicile matters (e.g. Broadcom AVGO)
  - ▷ Geographic source of revenue matters, too.

S&P 500 Index: Revenue Exposure by Region (10/31/2018)		
Revenue (%)	Region	Region Constituents
61.15	1. United States	United States
1.74	2. Canada	Canada
3.30	3. Latin America	Aruba; Anguilla; Argentina; Antarctica; Antigua & Barbuda; Bahamas; Belize; Bermuda; Bolivia; Brazil; Barbados; Chile; Colombia; Costa Rica; Cuba; Curacao; Cayman Islands; Dominica; Dominican Republic; Ecuador; Falkland Islands (Malvinas); Guadeloupe; Grenada; Guatemala; French Guiana; Guyana; Honduras; Haiti; Jamaica; St. Kitts & Nevis; St. Lucia; Mexico; Montserrat; Martinique; Nicaragua; Panama; Peru; Puerto Rico; Paraguay; El Salvador; Suriname; Turks and Caicos Islands; Trinidad & Tobago; Uruguay; St. Vincent & the Grenadines; Venezuela; British Virgin Islands; US Virgin Islands
3.30	4. United Kingdom	United Kingdom; Isle of Man; British Indian Ocean Territory
8.34	5. Eurozone	Austria; Belgium; Bonaire, Sint Eustatius and Saba; Cyprus; Germany; Spain; Estonia; Finland; France; Greece; Ireland; Italy; Luxembourg; Latvia; Malta; Netherlands; Portugal; St. Pierre & Miquelon; Slovakia; Slovenia; Sint Maarten
1.12	6. Europe ex-euro	Andorra; Switzerland; Denmark; Faroe Islands; Guernsey; Gibraltar; Greenland; Iceland; Jersey; Liechtenstein; Monaco; Norway; Svalbard and Jan Mayen; San Marino; Sweden; Holy See (Vatican City State)
1.73	7. Europe Emerging	Albania; Bulgaria; Bosnia & Herzegovina; Belarus; Czech Republic; Croatia; Hungary; Lithuania; Moldova, Republic of; Macedonia, the Former Yugoslav Republic of; Montenegro; Poland; Romania; Romania; Russia; Serbia; Turkey; Ukraine
0.40	8. Africa	Angola; French Southern Territories; Burundi; Benin; Burkina Faso; Bouvet Island; Botswana; Central African Republic; Cote d'Ivoire; Cameroon; Congo, the Democratic Republic of the; Congo; Comoros; Cape Verde; Djibouti; Algeria; Egypt; Eritrea; Western Sahara; Ethiopia; Gabon; Ghana; Guinea; Gambia; Guinea-Bissau; Equatorial Guinea; Kenya; Liberia; Libyan Arab Jamahiriya; Lesotho; Morocco; Madagascar; Mali; Mozambique; Mauritania; Mauritius; Malawi; Mayotte; Namibia; Niger; Nigeria; Réunion; Rwanda; Sudan; Senegal; St. Helena; Sierra Leone; Somalia; Sao Tome & Principe; Swaziland; Seychelles; Chad; Togo; Tunisia; Tanzania; United Republic of; Uganda; South Africa; Zambia; Zimbabwe
0.78	9. Middle East	United Arab Emirates; Bahrain; Iran, Islamic Republic of; Iraq; Israel; Jordan; Kuwait; Lebanon; Oman; Occupied Palestinian Territory; Qatar; Saudi Arabia; Syrian Arab Republic; West Bank of Gaza; Yemen
3.52	10. Japan	Japan
0.83	11. Australasia	Australia; New Zealand
1.80	12. Asia Developed	Brunei Darussalam; Guam; Hong Kong; South Korea; Macao; New Caledonia; French Polynesia; Singapore; Taiwan
9.88	13. Asia Emerging	Afghanistan; Armenia; American Samoa; Azerbaijan; Bangladesh; Bhutan; Cocos (Keeling) Islands; China; Cook Islands; Christmas Island; Fiji; Micronesia, Federated States of; Georgia; Heard Island and McDonald Islands; Indonesia; India; Kazakhstan; Kyrgyzstan; Cambodia; Kiribati; Laos; Sri Lanka; Maldives; Marshall Islands; Myanmar; Mongolia; Northern Mariana Islands; Malaysia; Norfolk Island; Niue; Nepal; Nauru; Pakistan; Pitcairn; Philippines; Palau; Papua New Guinea; North Korea; Solomon Islands; Thailand; Tajikistan; Tokelau; Turkmenistan; Timor-Leste; Tonga; Tuvalu; Uzbekistan; Vietnam; Vanuatu; Wallis & Futuna Islands; Samoa

<sup>15</sup> Source: Morningstar Direct.

---

## Simplicity as a Guiding Light

### ► **Seven Portfolio Building Principles:**

#### ▷ **4. Determine the degree to which you want to be active or passive.**

- ▷ The asset allocation decision is inherently an active one.
  - 60%: Stocks/40% Bonds is a good starting point
    - » Higher equity allocation => More risk
    - » Lower equity allocation => Less risk
- ▷ Distinguish between:
  - **Active and Very Active:** actively managed funds with wide vs. narrow mandates.
  - **Passive and Passive Aggressive:** Market-cap weighted index funds vs. rules-based, non-market-weighted.
- ▷ Reap the benefits of rebalancing
  - Disciplined way of buying low and selling high by reestablishing target weights.



---

## Simplicity as a Guiding Light

### ► **Seven Portfolio Building Principles:**

▷ **5. Draw on expertise to build a portfolio you understand and that fits your risk tolerance and investing horizon.**

▷ Sources of expertise:

- Well-known investors (e.g. David Swensen, CIO of Yale's endowment).
- Financial advisors (esp. fee only).
- Third-party ratings and recommendations like those of Morningstar Research Services LLC.

---

## Simplicity as a Guiding Light

### ▶ **Seven Portfolio Building Principles:**

#### ▷ **6. Monitor results.**

- ▷ Neither too often nor too seldom.
- ▷ Use benchmarks to assess results
  - Indexes (esp. those with passive funds tracking them).
  - Other one-step options you could own instead:
    - » Global Conservative Portfolio:
      - Vanguard Global Wellesley Income Inv VGWIX
    - » Global Moderately Aggressive Portfolio:
      - Vanguard Global Wellington Investor VGWLX

---

## Simplicity as a Guiding Light

### ▶ **Seven Portfolio Building Principles:**

#### ▷ **7. Stick to the plan.**

- ▷ Realize losses tend to hurt about twice as much as gains.
- ▷ Resist impulsive reactions.
- ▷ Consider writing a personal investment policy statement.

---

## Model Portfolio Examples

### ► Active Example:

#### ► Equal-Weighted, Six-Fund Equity Portfolio:

Fund Name	Ticker	Morningstar Category	Morningstar Analyst Rating	Prospectus Date	Prospectus Net Expense Ratio	Morningstar Fee Level - Distribution	Morningstar Fee Level % Rank - Distribution
American Funds Europacific Growth F1	AEGFX	US Fund Foreign Large Growth	Gold	6/1/2018	0.85	Below Average	34
American Funds Fundamental Invs F1	AFIFX	US Fund Large Blend	Gold	3/1/2018	0.67	Below Average	26
American Funds New Perspective F1	NPFFX	US Fund World Large Stock	Gold	12/1/2017	0.83	Below Average	22
FMI Common Stock	FMIMX	US Fund Mid-Cap Blend	Gold	1/31/2018	1.04	Average	50
FMI International	FMIJX	US Fund Foreign Large Blend	Silver	1/31/2018	0.91	Below Average	39
FMI Large Cap	FMIHX	US Fund Large Blend	Gold	1/31/2018	0.85	Average	46

#### ► Parent Highlights

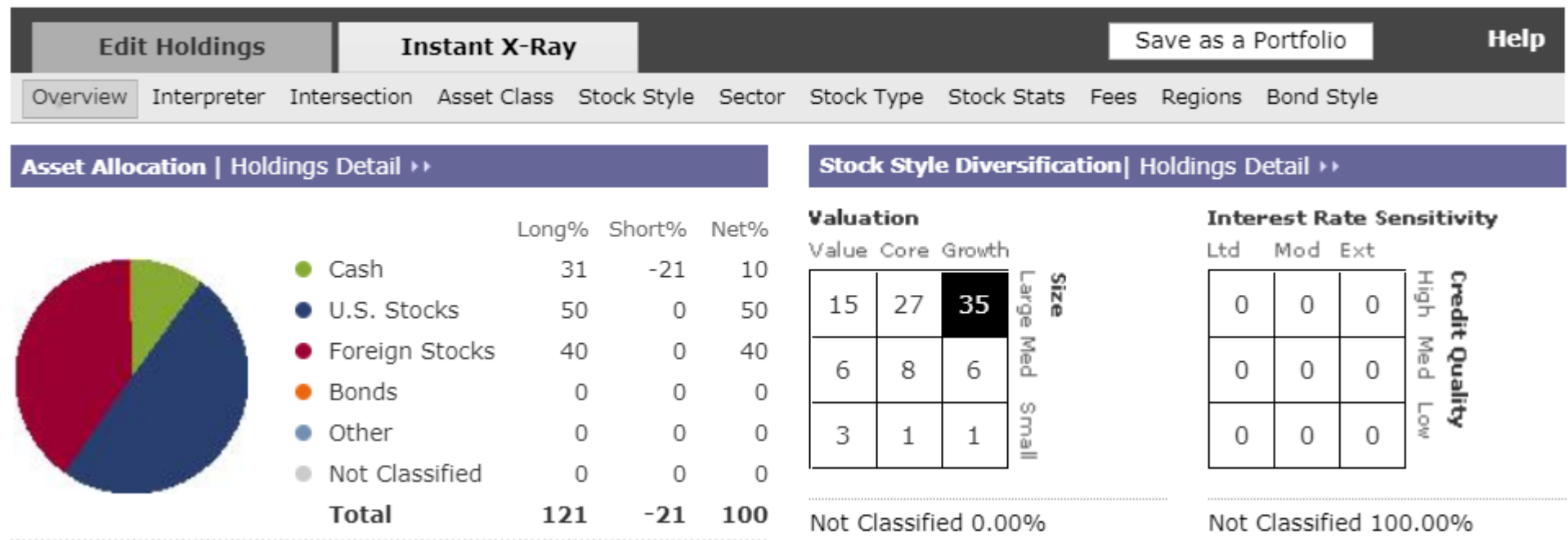
- American Funds (Capital Group) and FMI have strong investment cultures and complementary strengths.
  - » Succession risk is limited at each firm though their management approaches differ.
  - » American Funds is bigger and has more global resources; FMI is smaller and capacity conscious.

# Model Portfolio Examples

## ► Active Example:

### ► Equal-Weighted, Six-Fund Equity Portfolio:

#### Instant X-Ray

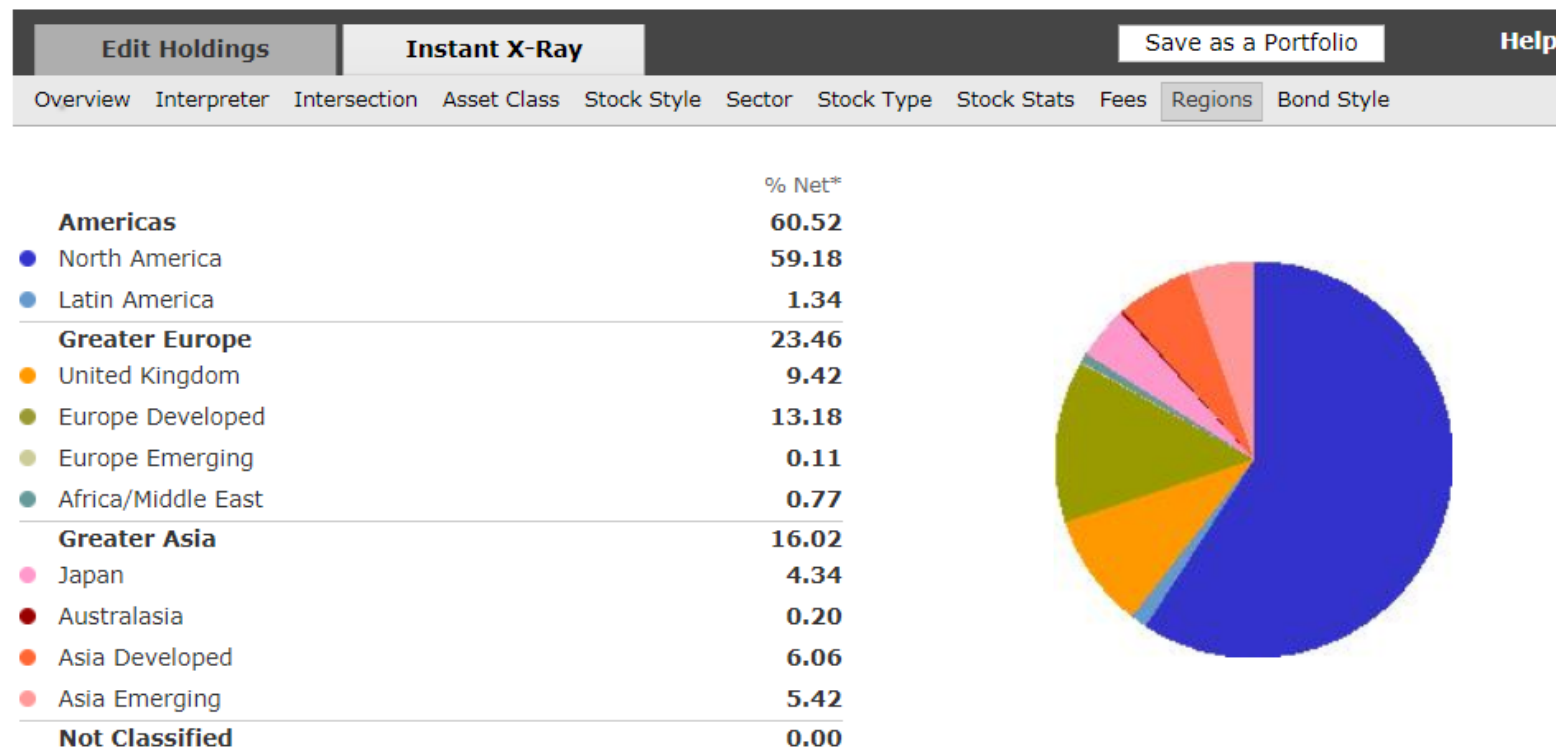


# Model Portfolio Examples

## ► Active Example:

### ▷ Equal-Weighted, Six-Fund Equity Portfolio:

Instant X-Ray



# Model Portfolio Examples

## ► Passive Example:

### ► David F. Swensen's Model Portfolio: Allocation.<sup>16</sup>

TYPE OF INVESTMENT		SHARE
<b>Stocks</b>	<b>Domestic equity:</b> Stocks in U.S.-based companies listed on U.S. exchanges	30%
<b>Stocks</b>	<b>Foreign developed equity:</b> Stocks listed on major foreign markets in developed countries, such as the United Kingdom, Germany, France and Japan	15%
<b>Stocks</b>	<b>Emerging market equity:</b> Stocks from emerging markets around the world, such as Brazil, Russia, India and China	10%
<b>Bonds</b>	<b>U.S. Treasury inflation-protected securities (TIPS):</b> Special types of Treasurys that offer protection from inflation, as measured by the consumer price index.	15%
<b>Bonds</b>	<b>U.S. Treasury securities:</b> Fixed-interest U.S. government debt securities. The income is only taxed at the federal level.	15%
<b>Real Estate</b>	<b>Real estate investment trusts (REIT):</b> Stocks of companies that invest directly in real estate through ownership of property	15%

<sup>16</sup> <https://www.npr.org/2015/10/17/436993646/three-investment-gurus-share-their-model-portfolios>.

---

## Model Portfolio Examples

### ► **Passive Example:**

- ▷ **David F. Swensen's Model Portfolio:** Vanguard passive implementation:
  - ▷ **Domestic Equity (30%):** Vanguard Total Stock Market Index Fund (VTSMX)
  - ▷ **Foreign Developed Equity (15%):** Vanguard Total International Stock Index Fund (VGTSX)
  - ▷ **Emerging Market Equity (10%):** Vanguard Emerging Markets Stock Index Fund (VEIEX)
  - ▷ **TIPs (15%):** Vanguard Inflation-Protected Securities Fund (VIPSX)
  - ▷ **Government Bonds (15%):** Vanguard Short-Term Treasury Fund (VFISX) [5%] | Vanguard Intermediate-Term Treasury Fund (VFITX) [5%] | Vanguard Long-Term Treasury Fund (VUSTX) [5%]
  - ▷ **Real Estate (15%):** Vanguard REIT Index Fund (VGSIX)



# Model Portfolio Examples

## ► Active vs. Passive: Trailing Three- & Five-Year Results:<sup>17</sup>

Portfolio Name	Return Date (Mo-End)	Total Ret Annlzd 3 Yr (Mo-End)	Std Dev 3 Yr (Mo-End)	Sharpe Ratio 3 Yr (Mo-End)	Sortino Ratio 3 Yr (Mo-End)	Total Ret Annlzd 5 Yr (Mo-End)	Std Dev 5 Yr (Mo-End)	Sharpe Ratio 5 Yr (Mo-End)	Sortino Ratio 5 Yr (Mo-End)
American Funds/FMI: Six-Fund Portfolio	10/31/2018	7.86	8.80	0.79	1.14	7.32	9.22	0.75	1.12
MSCI ACWI NR USD	10/31/2018	7.74	9.76	0.71	1.07	6.15	10.34	0.57	0.87
D. F. Swensen Passive Portfolio: 70-30	10/31/2018	5.51	6.85	0.67	1.00	5.22	7.02	0.67	1.00
MSCI ACWI/Bbg U.S. Agg Bond: 70-30	10/31/2018	5.82	6.96	0.70	1.02	4.95	7.27	0.62	0.90

<sup>17</sup> Source: Morningstar Direct. Assumes annual rebalancing back to target weights for each portfolio..

# Model Portfolio Examples

## ► Benz's Buckets:<sup>18</sup>

### About the Author



Christine Benz is Morningstar's director of personal finance and author of *30-Minute Money Solutions: A Step-by-Step Guide to Managing Your Finances* and the Morningstar Guide to Mutual Funds: 5-Star Strategies for Success.

### Model Portfolios for Savers and Retirees

Morningstar director of personal finance Christine Benz has developed a series of hypothetical portfolios for savers and retirees. These portfolios are offered as general examples for investors' reference. These portfolios are not personalized recommendations, nor are they investable products offered by Morningstar.

#### For Retirees

##### [The Bucket Approach to Retirement Allocation](#)

Learn the philosophy underpinning Christine's approach, how she built the portfolios, and how she regularly stress-tests them.

##### [Bucket Portfolios for Retirement Income: Step by Step](#)

In this hour-long video presentation, Christine guides investors through her bucket portfolio-construction process.

##### [Bucket Portfolio Maintenance: There's More Than One Way to Get It Done](#)

The best strategies allow investors to be strategic when tapping long-term assets.

#### Portfolios Available:

- [An Aggressive Retirement Bucket Portfolio \(Mutual Funds\)](#)
- [An Aggressive Retirement Bucket Portfolio \(ETFs\)](#)
- [A Moderate Retirement Bucket Portfolio \(Mutual Funds\)](#)
- [A Moderate Retirement Bucket Portfolio \(ETFs\)](#)
- [A Conservative Retirement Bucket Portfolio \(Mutual Funds\)](#)
- [A Conservative Retirement Bucket Portfolio \(ETFs\)](#)
- [3 Tax-Efficient 'Bucket' Portfolios for Retirees](#)
- [Retirement Bucket Portfolios for Fidelity Investors](#)
- [Tax-Efficient Bucket Retirement Portfolios for Fidelity Investors](#)

<sup>18</sup> [https://www.morningstar.com/content/morningstarcom/en\\_us/model-portfolios.html](https://www.morningstar.com/content/morningstarcom/en_us/model-portfolios.html).

---

# Questions

---

# Disclosures

**This presentation is for investment professional use only.**

The analysts identified on the cover page is employed by Morningstar Research Services LLC, a wholly-owned subsidiary of Morningstar, Inc.

The information, data, and opinions presented herein are provided solely for informational purposes and are not warranted to be correct, complete or accurate. The opinions expressed within are given in good faith, are as of the date of the presentation, are not statements of fact, and are subject to change. Data from third parties used herein are believed to be reliable sources. Except as otherwise required by law, Morningstar shall not be responsible for any trading decisions, damages or other losses resulting from, or related to, the information, data, analyses or opinions or their use. The information contained herein is the property of Morningstar and may not be reproduced, in whole or in part, or used in any manner, without the prior written consent of Morningstar.