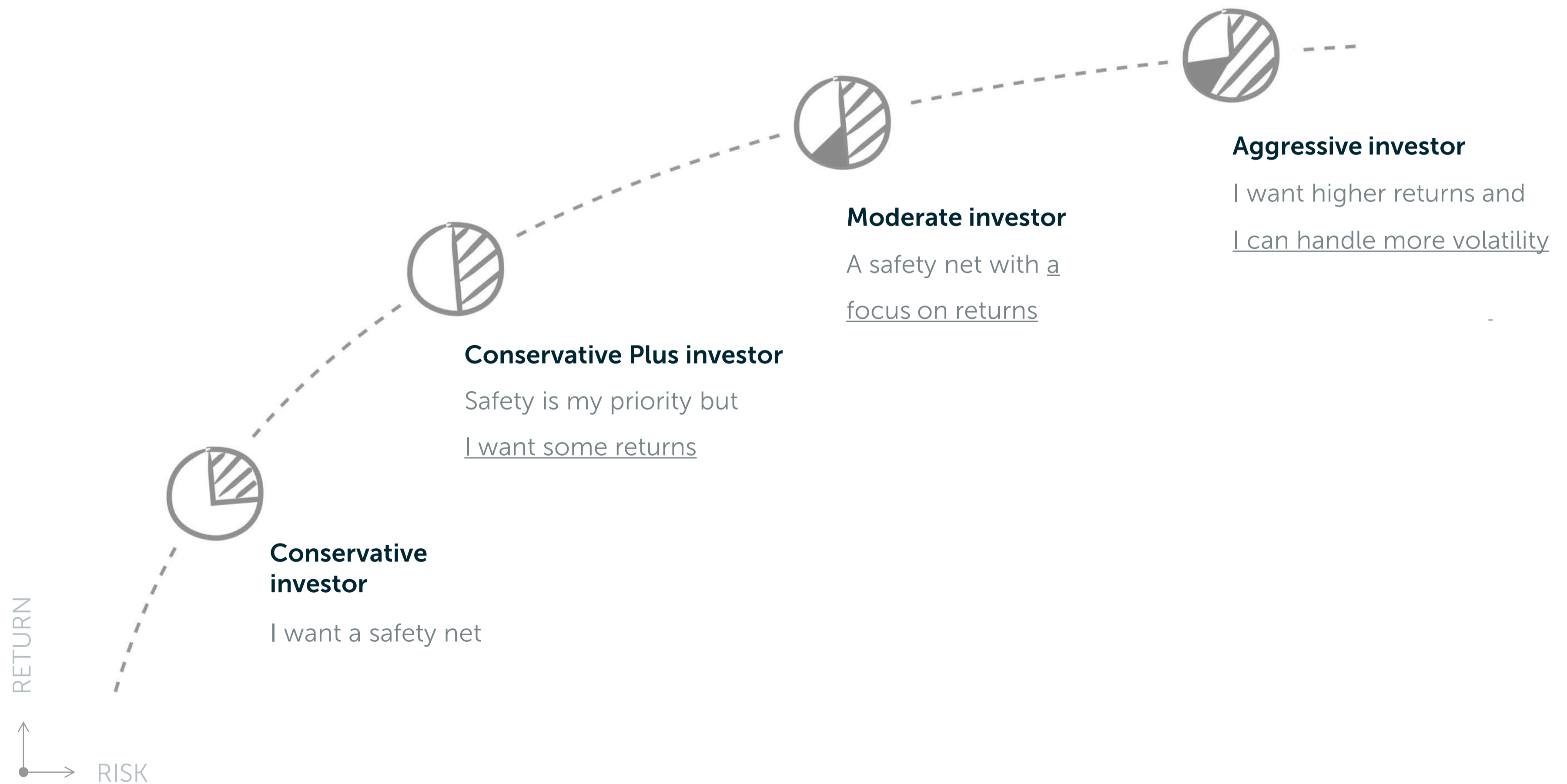


A smart, disciplined game plan will keep you focused on the goal.



# Four different models to suit different investor profiles



## Let us manage your investment portfolio professionally using these time-tested principles:

### Asset Allocation

Achieve a diversified portfolio by selecting the different underlying broad categories, sub-categories and regions.

### Stay Invested

History tells us that long term investment strategies are more successful than short-horizon ones

### Disciplined Rebalancing

Periodic monitoring allows for the timely identification and response to portfolio imbalances

### Institutional-level approach

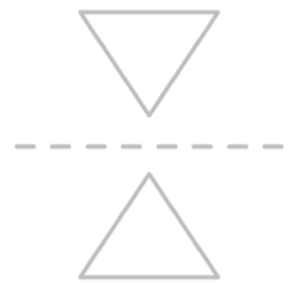
All decisions are made by a professional Investment Committee

### Daily liquidity

You can always withdraw from your portfolio if needed

### Risk management

Managing volatility to stay within the investor's risk appetite



## The fiduciary standard aligns us to your objectives.

### Our relationship should be built on trust.

Under this agreement **the fees you pay are our only source of remuneration**; this reduces conflicts of interest and aligns us to your goals and objectives.

### A note on cost controls:

Most trading or administrative expenses are included in the agreed-on fee (calculated as a % of assets under management)<sup>1</sup>.

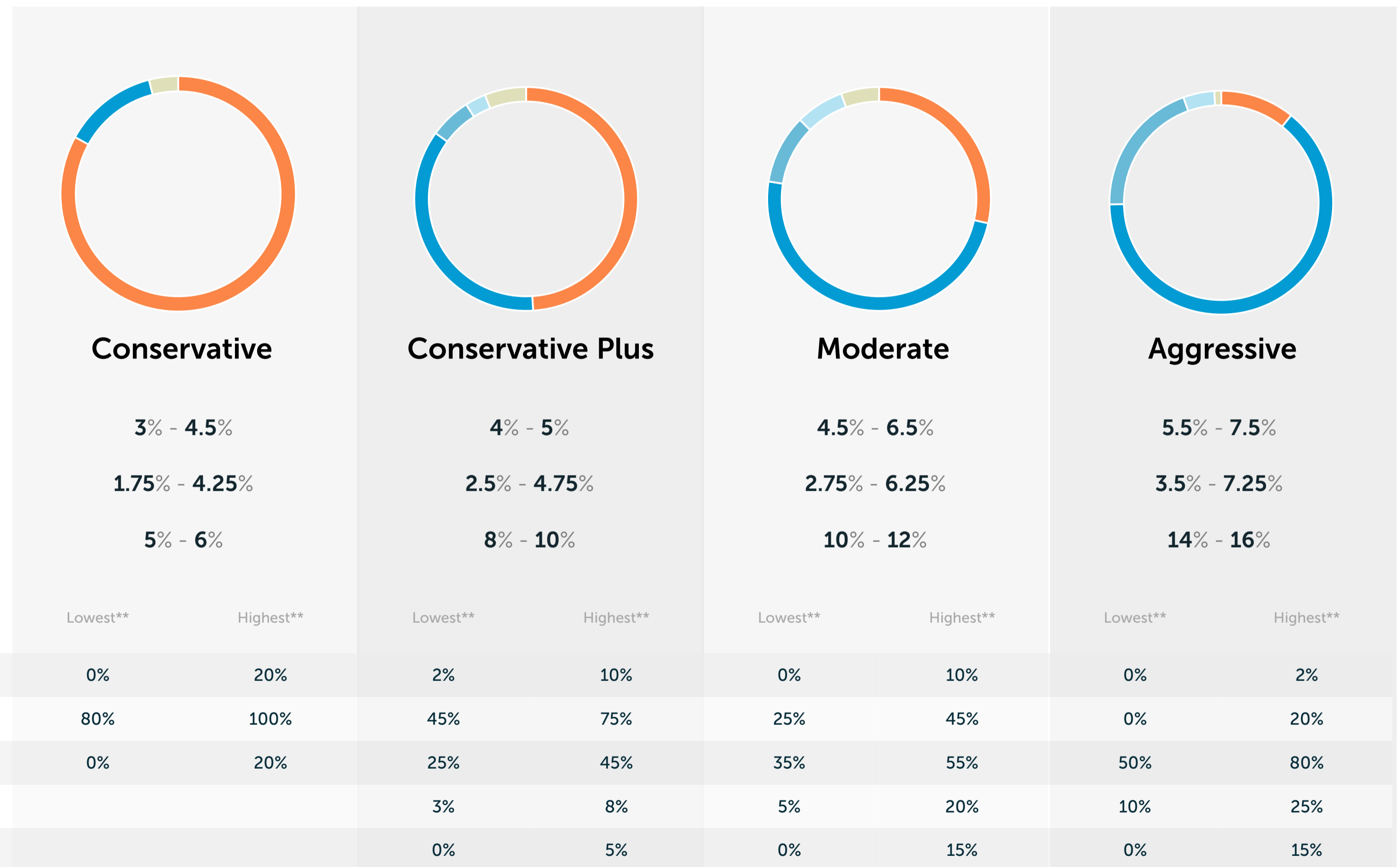
It is worth mentioning that when investing in funds, our model portfolios will only buy into institutional or advisory share classes. You will pay only the embedded fund manager fee and will not pay sales loads, distribution or 12b-1 fees.

**And yes, we pay close attention to manager fees and how they affect performance.**

**Note:** Fiduciary accounts are open under Insigneo Advisory Services, LLC our Registered Investment Advisor, regulated by the Securities Exchange Commission.

<sup>1</sup> Some charges such as wire fees are not included

## Realistic returns with clear risk metrics to help you select the right portfolio



\*Insigneo partners with **Forefront Analytics** to produce forecasts. Refer to [page 27](#) for further information on capital market expectations and [page 32](#) of disclaimer section for an explanation on calculations. Refer to [pages 18 to 25](#) for further information on each individual model. Target annualized net of fees returns are calculated by netting the lower gross-of-fees band with the highest possible management fee and the upper gross-of-fees band with the minimum fee of 0.25%. \*\* Lowest and highest boundaries are defined by the investment committee and may be revised from time to time.

A person is swimming underwater in a pool. The scene is illuminated with vibrant red and blue lights, creating a dramatic, ethereal atmosphere. The swimmer is positioned horizontally, moving from left to right. Behind them, a large, billowing trail of bubbles is visible, also colored in shades of red and blue. The water is dark, and the overall composition is artistic and dynamic. In the bottom right corner, the word "insigneo" is written in a white, sans-serif font.

insigneo

**Let's dive into the key principles.**



## Selecting the right allocation for you is the most adequate risk management strategy.

Asset allocation is the science -and the art- of selecting the different broad categories, sub-categories and regions that will comprise an investment portfolio.

- Based on the principle of **diversification**
- Most **institutional managers, global pensions and endowments** follow an asset allocation discipline when investing
- In the long run, much of an **investor's returns** can be attributed to the allocation
- It **eliminates the need for guessing** which markets will outperform or underperform
- It will help you maintain a **long-term perspective** and avoid impulsive reactions

### Fixed Income

More conservative assets that provide steady income and show minor fluctuation in price. A diversified fixed income portfolio should return close to inflation.

### Real Assets

Commodities and physical property. They hedge against inflation and provide additional return.



Portfolio composition:  
Asset classes

### Equity

Considered to be the growth portion of a portfolio. Much more volatile than fixed income and therefore expected to provide higher returns.

### Alternatives

More exotic strategies that combine different asset categories, seeking to generate non-correlated returns while minimizing volatility as the key objective.

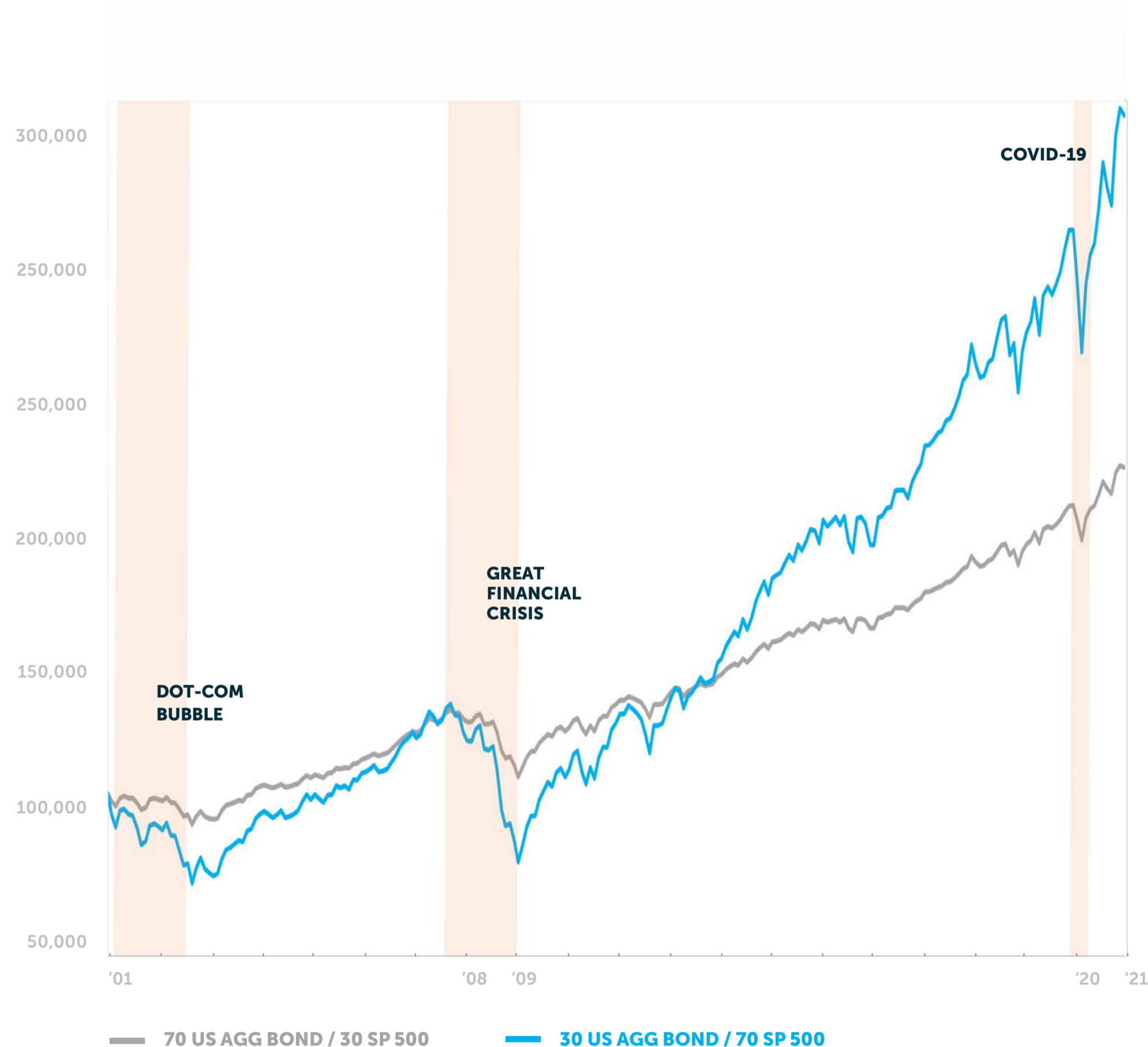


## Asset Category performance varies over time

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
Global Bonds 12.00%	Emerging Markets 79.02%	U.S. Small/Mid Cap 26.71%	U.S. Bonds 7.84%	Emerging Markets 18.63%	U.S. Small/Mid-Cap 36.80%	U.S. Large Cap Value 13.45%	U.S. Large Cap Growth 5.67%	U.S. Small/Mid Cap 17.59%	Emerging Markets 37.75%	Cash 1.86%	U.S. Large Cap Growth 36.39%	U.S. Large Cap Growth 38.49%	Emerging Markets 9.59%
U.S. Bonds 5.24%	U.S. Large Cap Growth 37.21%	Emerging Markets 19.20%	Global Bonds 7.22%	U.S. Small/Mid-Cap 17.88%	U.S. Large Cap Growth 33.48%	U.S. Large Cap Growth 13.05%	U.S. Bonds 0.55%	U.S. Large Cap Value 17.34%	U.S. Large Cap Growth 30.21%	U.S. Bonds 0.01%	U.S. Small/Mid Cap 27.77%	U.S. Small/Mid Cap 19.99%	U.S. Small/Mid Cap 9.44%
Cash 1.80%	U.S. Small/Mid Cap 34.39%	U.S. Large Cap Growth 16.71%	U.S. Large Cap Growth 2.64%	U.S. Large Cap Value 17.51%	U.S. Large Cap Value 32.53%	U.S. Small/Mid-Cap 7.07%	Cash 0.03%	Emerging Markets 11.60%	Global ex-U.S. 25.03%	Global Bonds -0.66%	U.S. Large Cap Value 26.54%	Emerging Markets 18.31%	U.S. Large Cap Growth 8.27%
Diversified Portfolio -29.20%	Global ex-U.S. 31.78%	U.S. Large Cap Value 15.51%	U.S. Large Cap Value 0.39%	Global ex-U.S. 17.32%	Global ex-U.S. 22.78%	U.S. Bonds 5.97%	Global ex-U.S. -0.81%	Diversified Portfolio 8.46%	Diversified Portfolio 18.73%	U.S. Large Cap Growth -1.51%	Global ex-U.S. 22.01%	Diversified Portfolio 16.29%	Diversified Portfolio 7.52%
U.S. Small/Mid Cap -36.79%	Diversified Portfolio 29.14%	Diversified Portfolio 14.51%	Cash 0.08%	U.S. Large Cap Growth 15.26%	Diversified Portfolio 15.80%	Diversified Portfolio 4.72%	Diversified Portfolio -2.51%	U.S. Large Cap Growth 7.08%	U.S. Small/Mid Cap 16.81%	Diversified Portfolio -6.62%	Diversified Portfolio 20.77%	Global Bonds 9.20%	U.S. Large Cap Value 6.82%
U.S. Large Cap Value -36.85%	U.S. Large Cap Value 19.69%	Global ex-U.S. 7.75%	Diversified Portfolio -1.72%	Diversified Portfolio 13.29%	Cash 0.05%	Global Bonds 0.67%	Global Bonds -2.61%	U.S. Bonds 2.65%	U.S. Large Cap Value 13.66%	U.S. Large Cap Value -8.27%	Emerging Markets 18.88%	Global ex-U.S. 7.82%	U.S. Bonds 4.83%
U.S. Large Cap Growth -38.44%	U.S. Bonds 5.93%	U.S. Bonds 6.54%	U.S. Small/Mid-Cap -2.51%	U.S. Bonds 4.21%	U.S. Bonds -2.02%	Cash 0.03%	U.S. Small/Mid Cap -2.90%	Global Bonds 1.57%	Global Bonds 6.83%	U.S. Small/Mid Cap -10.00%	U.S. Bonds 8.72%	U.S. Bonds 7.51%	Global Bonds 4.76%
Global ex-U.S. -43.38%	Global Bonds 1.90%	Global Bonds 6.42%	Global ex-U.S. -12.14%	Global Bonds 1.30%	Emerging Markets -2.27%	Emerging Markets -1.82%	U.S. Large Cap Value -3.83%	Global ex-U.S. 1.00%	U.S. Bonds 3.54%	Global ex-U.S. -13.79%	Global Bonds 6.02%	U.S. Large Cap Value 2.80%	Global ex-U.S. 4.50%
Emerging Markets -53.18%	Cash 0.16%	Cash 0.13%	Emerging Markets -18.17%	Cash 0.07%	Global Bonds -4.50%	Global ex-U.S. -4.90%	Emerging Markets -14.60%	Cash 0.27%	Cash 0.84%	Emerging Markets -14.24%	Cash 2.25%	Cash 0.58%	Cash 1.43%

A globally diversified investor (**shown in black**) will be able to benefit from broad markets and their behavior during different cycles

Source: MFS Investments, 20 years of the best and worst - a case for diversification, as of 12/31/2020. See last page for Legal Disclaimer.



## History shows that remaining invested is key.

The chart to the left depicts more than twenty years of track record for two portfolios.

An investor in any of these two portfolios would have lived through the dot.com bubble of 2002 , the 2008 financial crisis and the COVID-19 market crash.

**Yes, returns do vary on a yearly basis.**  
But long-term gains have offset short-term losses for the long-horizon investor.

“A majority of the S&P 500's biggest gains came within two weeks of its biggest losses.”

“...The [annualized 20 year] return went from positive to negative by missing the 20 best days of the [SP &500] market ...”

The Motley Fool

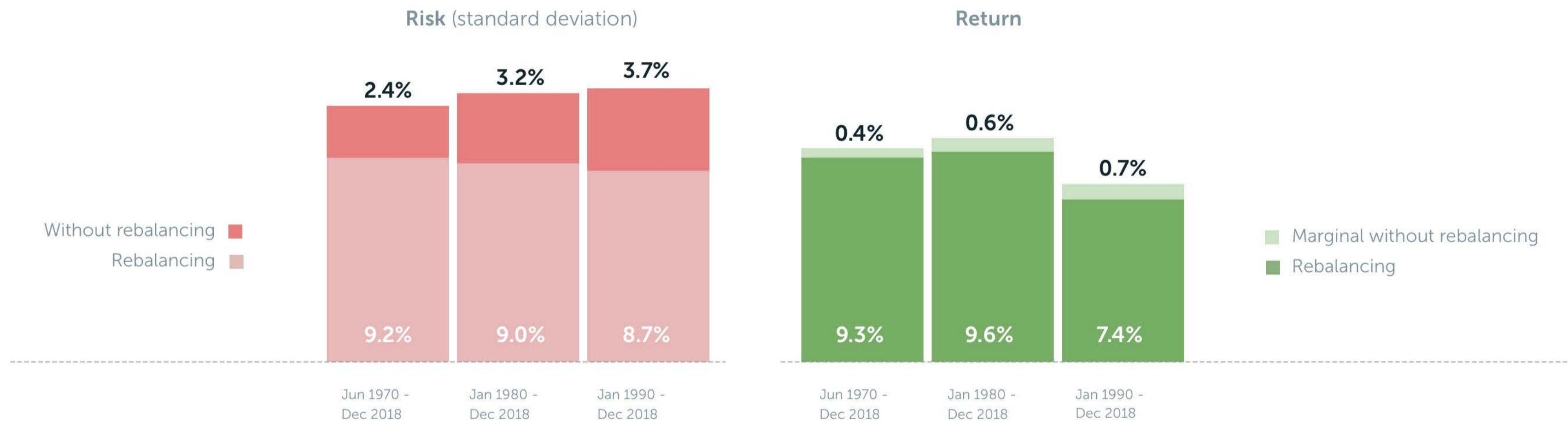
# An unattended portfolio will drift away.

Rebalancing is the process of buying and selling securities to realign a portfolio with its pre-specified objectives.

Periodic rebalancing will keep your portfolio “anchored” to the assigned asset allocation, maintaining it aligned to your investment mandate.



## Adrift portfolios may end up returning more... but you pay a high price.



**The excess return you get is not worth the additional risk.**  
Leaving portfolios unattended will lead to more volatility over time.

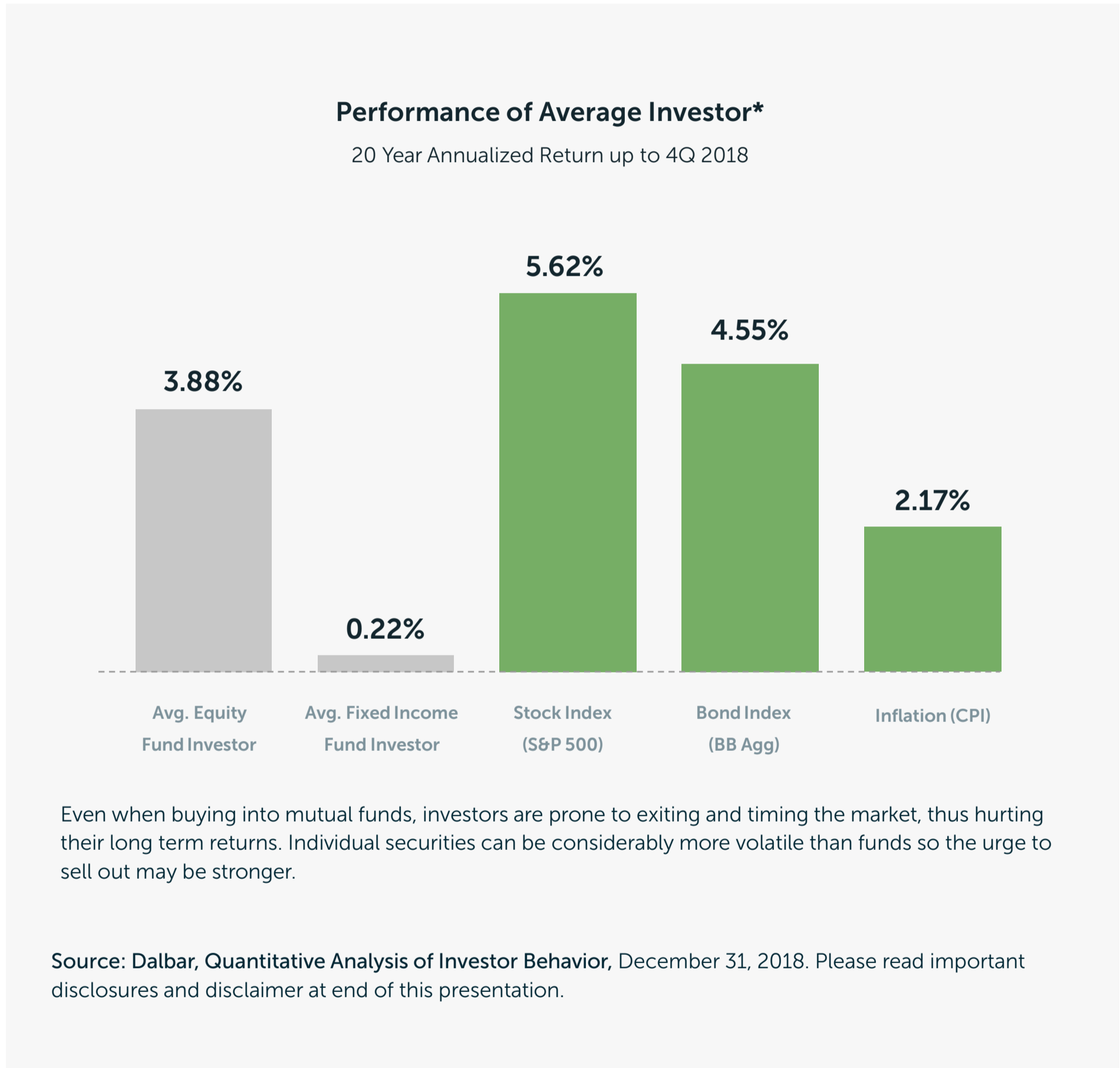
Source: Morningstar, Based on a Portfolio: 60% Stocks, 30% FI, 10% Cash.

Morningstar: Past performance is no guarantee of future results. Risk and return are measured by monthly annualized standard deviation and compound annual return, respectively. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. © Morningstar. All Rights Reserved.

# Let's face it, individual security picking is not for everyone.

Comingled vehicles allow broad access to markets and mitigate many of the underlying risks associated with investing, such as individual defaults or bankruptcies.

They also enhance diversification and access to otherwise inaccessible assets, leveraging on the expertise of some of the brightest professionals in the industry.



Some names that will show up on portfolios:

BLACKROCK

Schrodgers

P I M C O

Morgan Stanley  
INVESTMENT MANAGEMENT

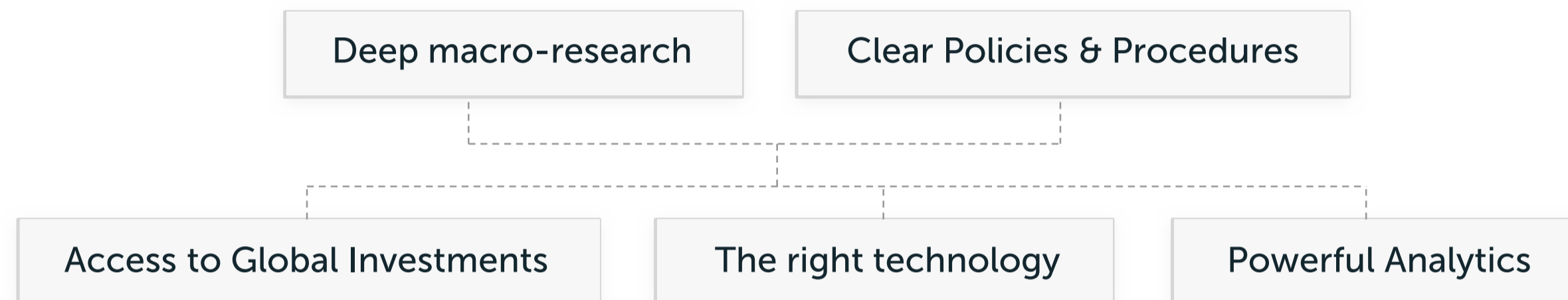
J.P.Morgan  
Asset Management

VIRTUS  
INVESTMENT PARTNERS

POLEN | CAPITAL

# I-maps, a closer look

# A robust investment solution



Ahmed Riesgo  
CIO



Mariano Scandizzo  
Managing Director - IAS



Christopher Geczy  
Wharton Business School  
[fnc.e.wharton.upenn.edu/profile/geczy/](https://fnc.e.wharton.upenn.edu/profile/geczy/)



Jacobo Gadala-Maria  
Unimar Financal



Miguel Reyes  
Product head

Biographies available in:  
<https://www.insigneo.com/en/about>



## Detailed reporting to always know where you stand.

Sophisticated reporting, monthly market commentary and factsheets complement accounts statements issued by our Custodian: **BNY Mellon Pershing**.



ion	Total Ret 1 Mo (Mo-end)
1.80	-5.38
5.16	-3.63
5.16	-5.50
4.31	-5.77
7.38	-4.48
11.3	-7.02
1.3	1.52
0.3	0.95
.2	-0.8
.84	-3.63
.56	-5.50
.63	-5.77
.81	-4.48
.24	-7.02

	YTD	2017	2016	2015
	1.84	15.74	3.51	—
	1.84	15.74	3.51	—

	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
	0.66	-0.14	0.75	0.47	0.02				1.84
	1.62	0.04	1.56	0.81	1.12	2.30	1.02	1.24	15.74
	1.25	-0.70	2.53	0.08	0.48	-0.52	-0.14	1.18	3.51

	Inv	Bmk1	+/- Bmk1
	7.77	5.60	2.17
	6.27	8.30	-2.03
	3.00	0.00	3.00
	3.84	0.00	3.84
	0.60	1.00	-0.40
	61.50	100.00	-38.50
	1.57	0.83	0.74
	5.10	0.00	5.10

Sample of our Montly Factsheet



## I-maps Features



# An established custodian: BNY Mellon Pershing.

With more than 80 years of experience, BNY Mellon Pershing is a proven leader in the financial services industry.

Learn more at [www.pershing.com](http://www.pershing.com)

### BNY Mellon at a glance

\$45.0 trillion  
assets under custody and/or administration

\$2.3 billion  
global client assets under management

### BNY Mellon Pershing at a glance

\$2.0 billion  
net capital

\$2.0 trillion  
Global client assets

As of 2Q 2021



insigneo

Insigneo Advisory Services, LLC ("IAS")  
Securities are offered through  
Insigneo Securities, LLC  
777 Brickell Ave. - 10th Floor, Miami, FL 33131  
Tel: (305) 373-9000  
Member FINRA/SIPC

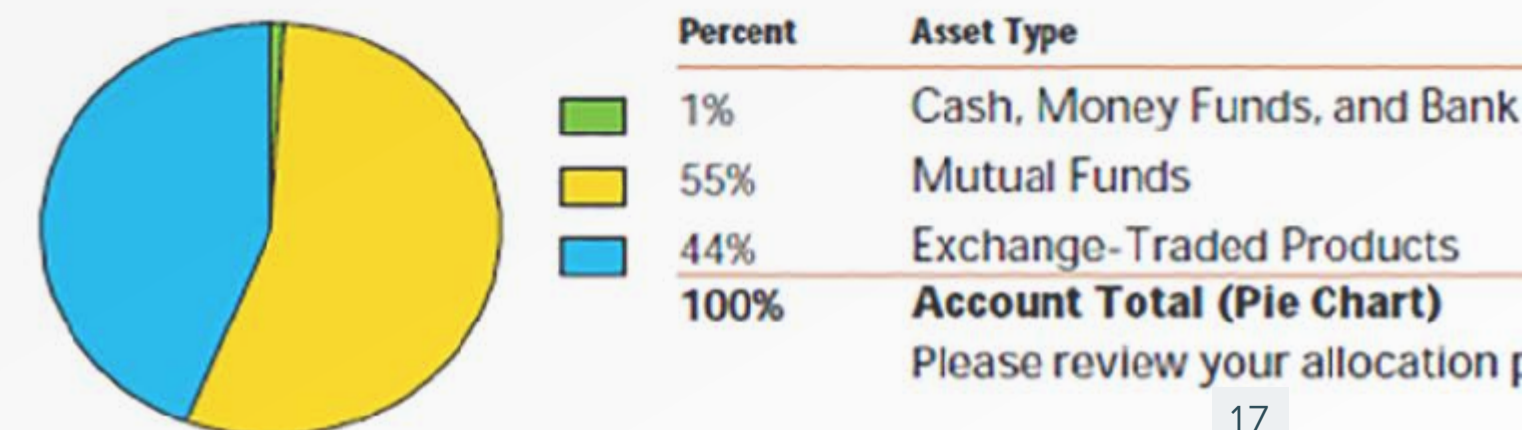
BNY MELLON | PERSHING

Portfo

**BEGINNING**  
Dividends, Interest  
Other Transactions  
**Net Change**  
**ENDING AC**  
Accrued Interest  
**Account Va**  
Estimated Annual  
Total Purchasing  
<sup>1</sup> Net Change  
beginning a

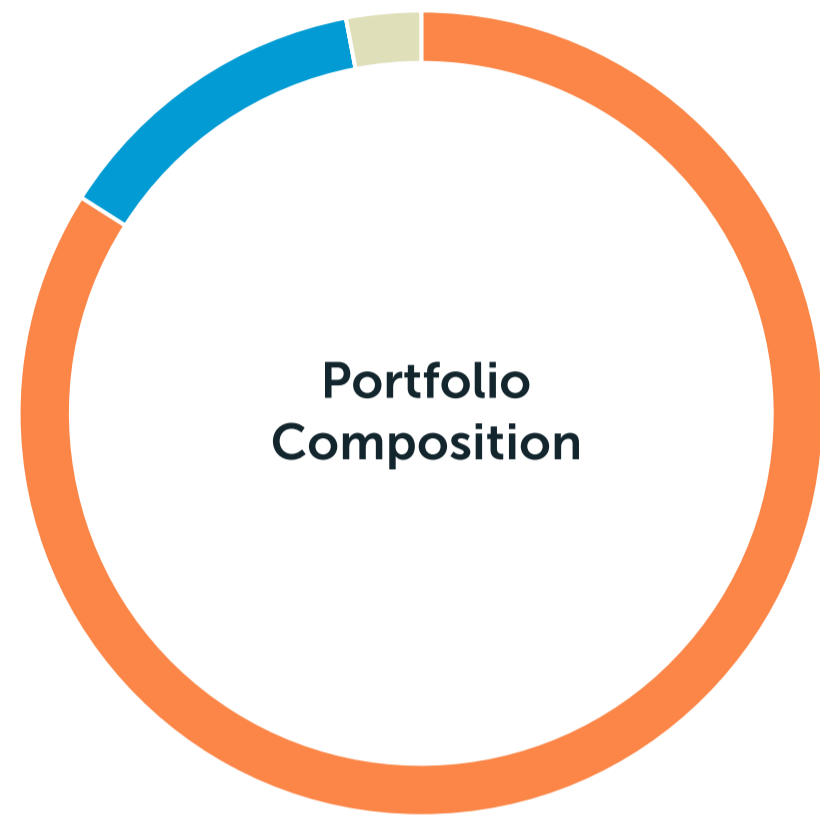
**The Bank Deposits in your account are FDIC insured bank deposits.**  
FDIC insured bank deposits are not securities and are not covered by the  
Insurance Corporation (FDIC), up to allowable limits.

### Asset Summary



# Conservative Portfolio

12/31/2021



Target annualized gross of fees returns\*:  
3.00% to 4.50%

Target annualized net of fees returns\*:  
1.75% to 4.25%

Volatility (standard deviation)\*:  
5.00% to 6.00%

Asset Class	Sub Asset Class	Weight
84% Global Fixed Income	U.S. Government	40.0%
	Investment Grade	26.0%
	China Government & Related	3.0%
	US Dollar High Yield Bonds	10.0%
	Emerging Markets Bonds	5.0%
13% Developed Market Equities	US Equities	10.0%
	European Equities	3.0%
3% Cash	Money Market	3.0%

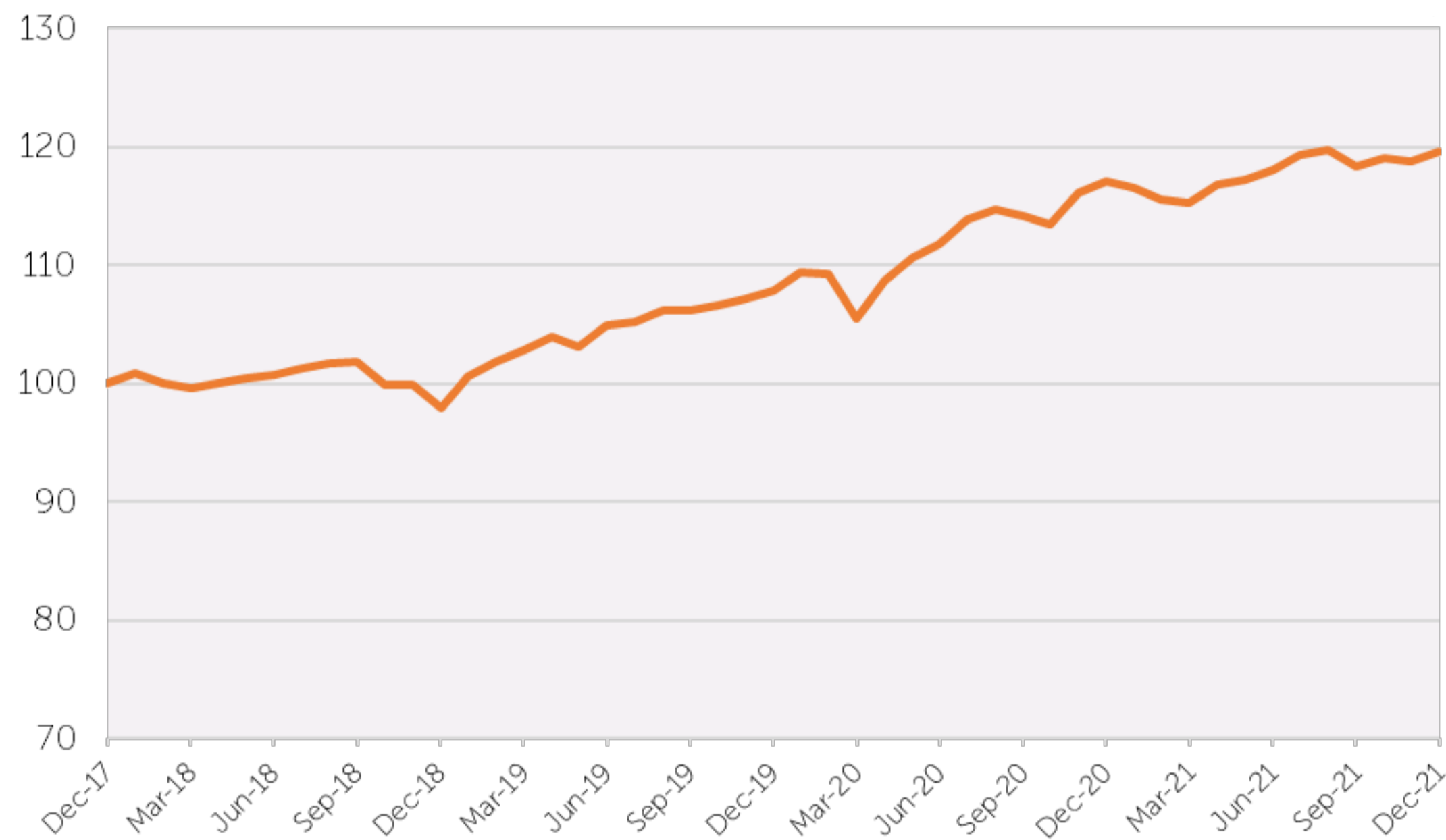
\*Insigneo partners with **Forefront Analytics** to produce forecasts. Refer to [page 27](#) for further information on capital market expectations and [page 32](#) of disclaimer section for an explanation on calculations. Target annualized net of fees returns are calculated by netting the lower gross-of-fees band with the highest possible management fee and the upper gross-of-fees band with the minimum fee of 0.25%.

# Conservative Portfolio

12/31/2021

## Model returns since inception\*

Gross of fees, Total return 12/31/2017 (inception) to 12/31/2021



- 4.1** Years since inception
- 4.6%** Annualized Time Weighted Return (gross)
- 4.1%** Annualized Standard Deviation
- 119.6** Growth of one hundred (gross)
- 33.3%** Probability of a negative month (gross)
- 3.8%** Max Drawdown (gross)

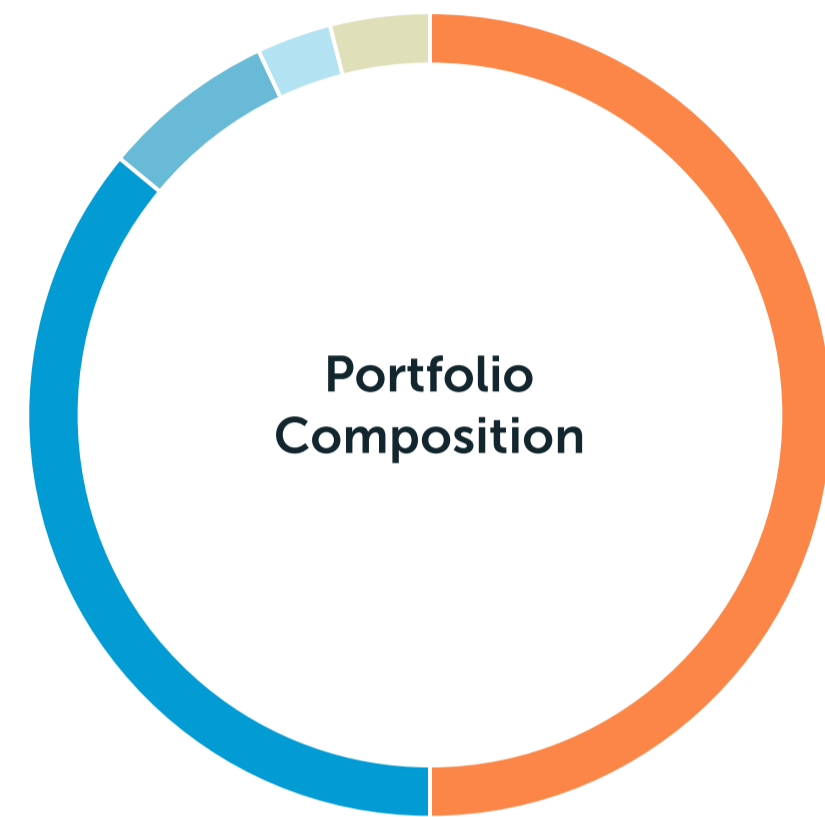
---

- 3.3%** Time Weighted Return (net of 1.25% max fee)

\*Model Return kept with Morningstar Direct application. Reflected results are for the offshore master portfolio. All calculations are gross of any fees unless indicated otherwise. The I-Maps Conservative Model Portfolio was previously an unnamed investment strategy established in December 2017 that was utilized by certain Insigneo Advisory Services, LLC clients. The I-Maps program institutionalizes the strategy and provides access to the portfolio to all investors that meet the suitability and investment minimum criteria.

# Conservative Plus Portfolio

12/31/2021



Target annualized gross of fees returns\*:  
4.00% to 5.00%

Target annualized net of fees returns\*:  
2.50% to 4.75%

Volatility (standard deviation)\*:  
8.00% to 10.00%

Asset Class	Sub Asset Class	Weight
50% Global Fixed Income	Developed Sovereigns	15.0%
	High Grade Corp	17.3%
	Asia Sovereigns	4.0%
	US High Yield	8.8%
	Emerging Market Bonds	5.0%
36% Developed Market Equities	US Equities	25.4%
	European Equities	6.8%
	Japanese Equities	3.8%
7% Emerging Market Equities	Broad Emerging Markets Equities	7.0%
3% Market Neutral Gold	Gold	3.0%
4% Cash	Money Market	4.0%

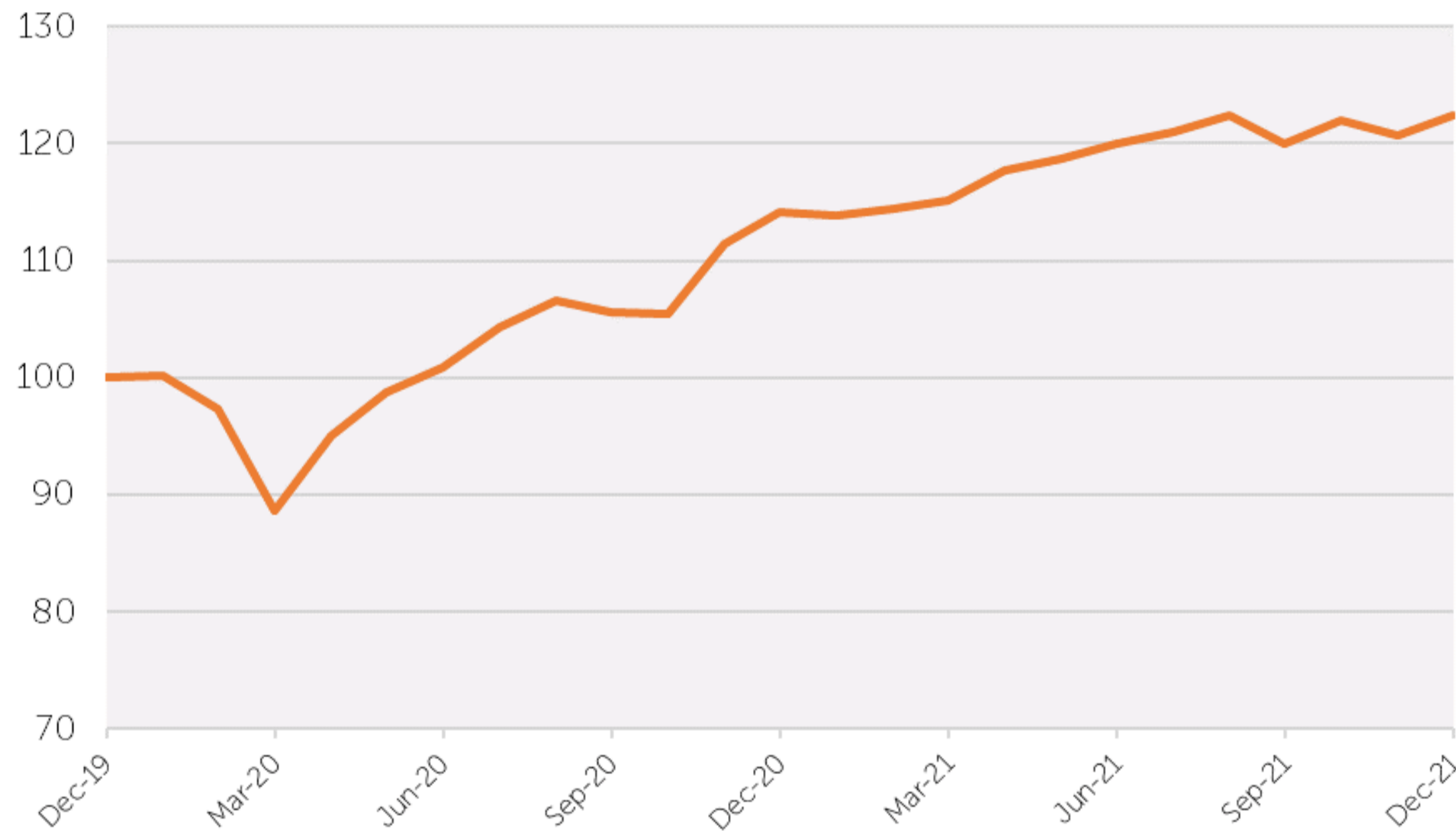
\*Insigneo partners with **Forefront Analytics** to produce forecasts. Refer to [page 27](#) for further information on capital market expectations and [page 32](#) of disclaimer section for an explanation on calculations. Target annualized net of fees returns are calculated by netting the lower gross-of-fees band with the highest possible management fee and the upper gross-of-fees band with the minimum fee of 0.25%.

# Conservative Plus Portfolio

12/31/2021

## Model returns since inception\*

Gross of fees, Total return 12/31/2019 (inception) to 12/31/2021



- 2.0** Years since inception
- 10.6%** Annualized Time Weighted Return (gross)
- 10.6%** Annualized Standard Deviation
- 122.4** Growth of one hundred (gross)
- 29.2%** Probability of a negative month (gross)
- 11.5%** Max Drawdown (gross)

---

- 8.98%** Time Weighted Return (net of 1.50% max fee)

\*Model Return kept with Morningstar Direct application. Reflected results are for the offshore master portfolio. All calculations are gross of any fees unless indicated otherwise.

# Moderate Portfolio

12/31/2021



Target annualized gross of fees returns\*:  
4.50% to 6.50%

Target annualized net of fees returns\*:  
2.75% to 6.25%

Volatility (standard deviation)\*:  
10.00% to 12.00%

Asset Class	Sub Asset Class	Weight
● 29.5% Global Fixed Income	Developed Sovereigns	10.0%
	High Grade Corp	4.5%
	Asia Sovereigns	4.0%
	US High Yield	6.0%
	Emerging Market Bonds	5.0%
● 49% Developed Market Equities	US Equities	34.5%
	European Equities	9.3%
	Japanese Equities	5.3%
● 11% Emerging Market Equities	Broad Emerging Markets Equities	11.0%
● 7% Alternatives	Market Neutral	2.0%
	Gold	5.0%
● 3.5% Cash	Money Market	3.5%

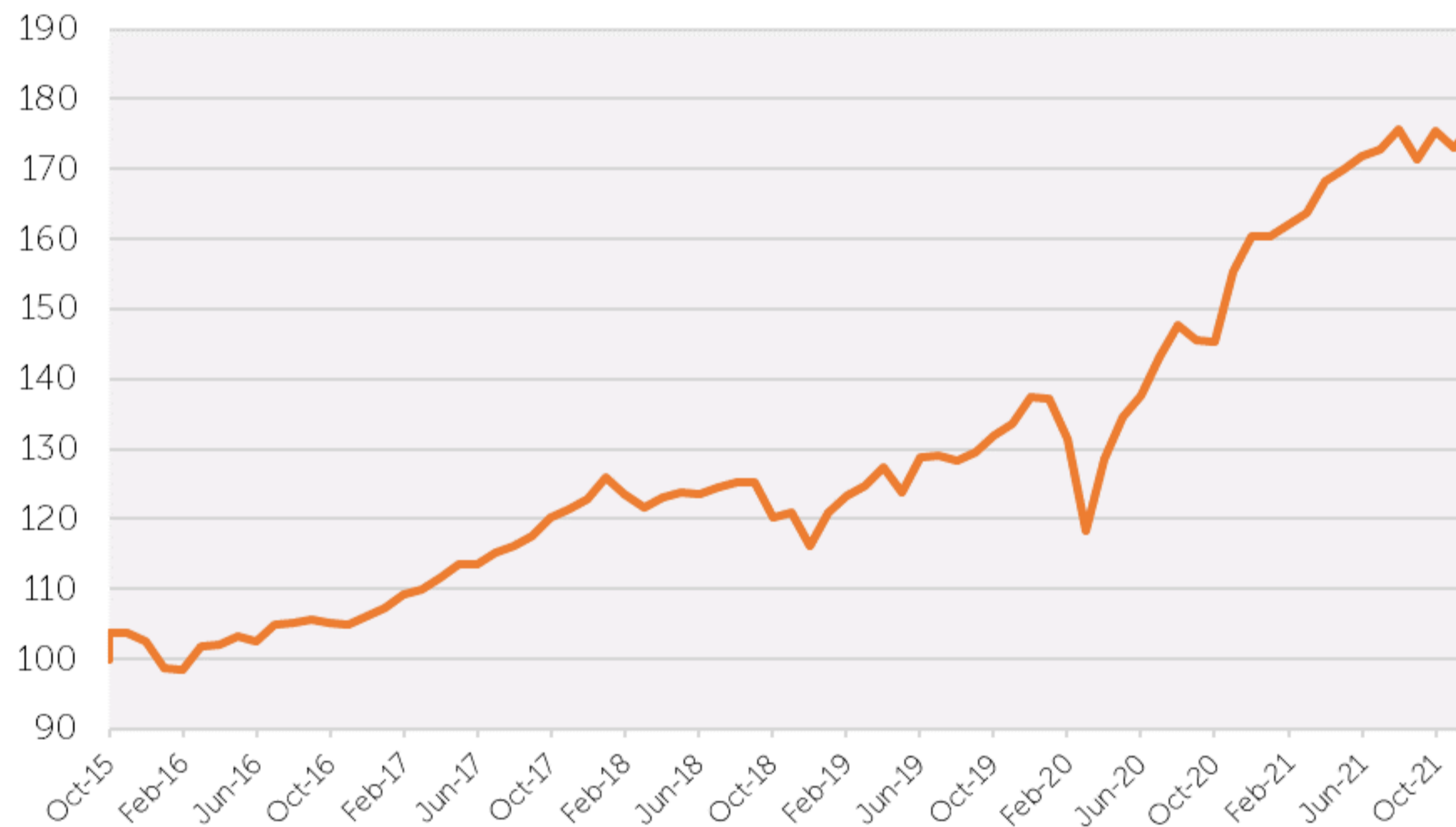
\*Insigneo partners with **Forefront Analytics** to produce forecasts. Refer to [page 27](#) for further information on capital market expectations and [page 32](#) of disclaimer section for an explanation on calculations. Target annualized net of fees returns are calculated by netting the lower gross-of-fees band with the highest possible management fee and the upper gross-of-fees band with the minimum fee of 0.25%.

# Moderate Portfolio

12/31/2021

## Model returns since inception\*

Gross of fees, Total return 10/01/2015 (inception) to 12/31/2021



- 6.3** Years since inception
- 9.5%** Annualized Time Weighted Return (gross)
- 8.8%** Annualized Standard Deviation
- 176.3** Growth of one hundred (gross)
- 29.3%** Probability of a negative month (gross)
- 13.8%** Max Drawdown (gross)

---

- 7.6%** Time Weighted Return (net of 1.75% max fee)

\*Model Return kept with Morningstar Direct application. Reflected results are for the offshore master portfolio. All calculations are gross of any fees unless indicated otherwise. The I-Maps Moderate Model Portfolio was previously an unnamed investment strategy established in October 2015 that was utilized by certain Insigneo Advisory Services, LLC clients. The I-Maps program institutionalizes the strategy and provides access to the portfolio to all investors that meet the suitability and investment minimum criteria.

# Aggressive Portfolio

12/31/2021



Target annualized gross of fees returns\*:  
5.50% to 7.50%

Target annualized net of fees returns\*:  
3.50% to 7.25%

Volatility (standard deviation)\*:  
14.0% to 16.0%

Asset Class	Sub Asset Class	Weight
● 10.7% Global Fixed Income	US High Yield	6.0%
	Emerging Market Bonds	4.7%
● 64% Developed Market Equities	US Equities	44.9%
	European Equities	12.8%
	Japanese Equities	6.4%
● 20% Emerging Markets Equities	Broad Emerging Market Equities	6.8%
	Asia Ex-Japan Equities	12.9%
● 4.5% Alternatives	Commodities	4.5%
● 1% Cash	Money Market	1.0%

\*Insigneo partners with **Forefront Analytics** to produce forecasts. Refer to [page 27](#) for further information on capital market expectations and [page 32](#) of disclaimer section for an explanation on calculations. Target annualized net of fees returns are calculated by netting the lower gross-of-fees band with the highest possible management fee and the upper gross-of-fees band with the minimum fee of 0.25%.

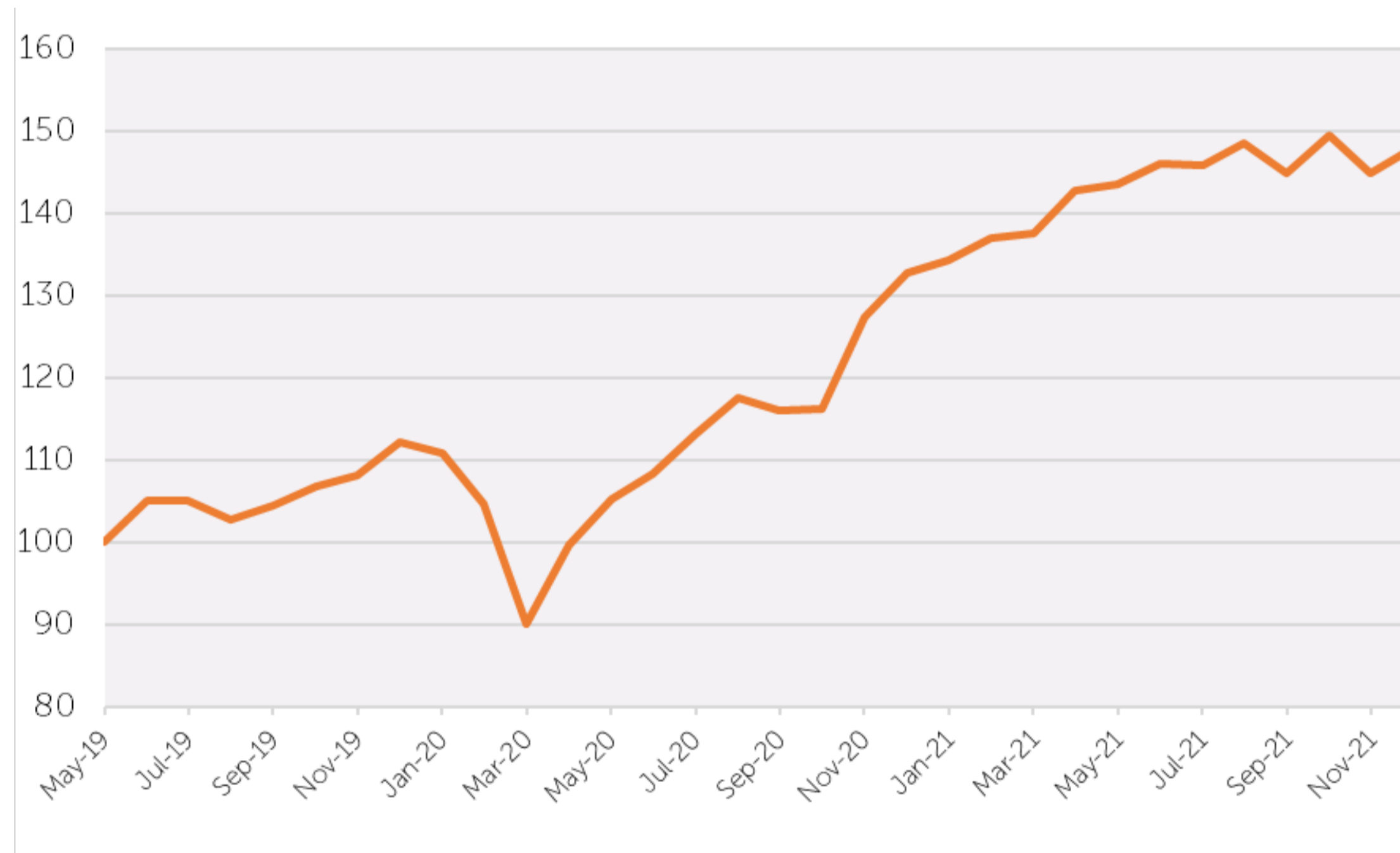


# Aggressive Portfolio

12/31/2021

## Model returns since inception\*

Gross of fees, Total return 05/31/2019 (inception) to 12/31/2021



- 2.6** Years since inception
- 16.3%** Annualized Time Weighted Return (gross)
- 15.2%** Annualized Standard Deviation
- 147.8** Growth of one hundred (gross)
- 29.0%** Probability of a negative month (gross)
- 19.7%** Max Drawdown (gross)

---

- 14.1%** Time Weighted Return (net of max 2.00% fee)

\*Model Return kept with Morningstar Direct application. Reflected results are for the offshore master portfolio. All calculations are gross of any fees unless indicated otherwise.

# Insigneo Global Allocation Committee Report

	Tactical (up to 3 months)	Cyclical (up to 12 months)
US Equities	Neutral	Overweight
European Equities	Overweight	Overweight
Japanese Equities	Overweight	Neutral
Emerging Market Equities	Overweight	Overweight
Chinese Equities	Overweight	Overweight
US Treasuries	Underweight	Underweight
Investment Grade Fixed Income	Underweight	Neutral
High Yield Fixed Income	Neutral	Overweight
Emerging Market Sovereign	Neutral	Neutral
US Dollar	Underweight	Underweight
Energy	Overweight	Overweight
Precious Metals	Neutral	Overweight
Cash	Neutral	Neutral

**Overweight:** conviction that the market will perform better than broadly expected

**Neutral:** implies that it will perform in line with expectations

**Underweight:** consensus that this market will underperform when compared to expectations

# 20-year Capital Market Assumptions

Source: Forefront Analytics, 2019

	Expected Return	Volatility
<b>US Large Cap</b>	<b>6.96%</b>	<b>18.87%</b>
<b>US Small Cap</b>	<b>7.94%</b>	<b>28.43%</b>
<b>Developed Equity</b>	<b>6.43%</b>	<b>19.08%</b>
<b>Emerging markets equity</b>	<b>8.82%</b>	<b>22.34%</b>
<b>Global Macro / Absolute Return</b>	<b>7.08%</b>	<b>8.57%</b>
<b>Gold</b>	<b>1.50%</b>	<b>19.43%</b>
<b>US Agg Bonds - Inv. Grade</b>	<b>2.73%</b>	<b>4.36%</b>
<b>US Mortgage Backed Securities</b>	<b>2.75%</b>	<b>5.31%</b>
<b>US High Yield</b>	<b>3.64%</b>	<b>11.67%</b>
<b>Emerging Markets Corp Bonds</b>	<b>6.69%</b>	<b>12.48%</b>
<b>US Cash/ T Bills</b>	<b>0.56%</b>	<b>0.00%</b>

## Forefront Analytics Capital Market Expectations

Using both historic observations and forward-looking models, expected return and expected volatility estimates are based on robust factor estimators and factor structure.

The premise of this methodology (called the Building Blocks Model) is that the return of an asset class can be broken down into several factors which are more predictable than the asset class returns themselves. With the Building Blocks model, the expected return on an asset class represents the sum of the current risk-free rate and one or more historical factors or building blocks. By combining current expectations with historical risk premia, you take into account current market conditions (the economic expectations of investors) and historical market returns.

The use of factors versus a pure historical return increases the predictive power of the model since historical risk premia are more stable over time than the pure historical return of an asset class.

*Continued on page 34...*

insigneo

# Your Partners

# insigneo

**We specialize in wealth management services catered to individuals and families in Latin America.**

Three decades in Latin America. Having navigated through the regions' many changes, we have acquired a unique understanding of its complexities.

We have a presence in key markets and our management team has a combined 150+ years of experience.

\$13<sub>b+</sub>

assets under management\*

175<sub>+</sub>

financial advisors and growing\*

10,000<sub>+</sub>

clients\*

30<sub>+</sub>

years of experience\*

\*As of December 2021

## Important legal disclaimer

This document has been prepared by Insigneo Advisory Services, LLC ("Insigneo") solely for use by you for general information only and does not contain and is not to be taken as containing any securities advice, recommendation, offer or invitation to subscribe for or purchase or redemption of any securities regarding Insigneo. Copies of this document may not be sent to jurisdictions, or distributed in or sent from jurisdictions, in which this is barred or prohibited by law. The information contained herein shall not constitute an offer to sell or the solicitation of an offer to buy, in any jurisdiction in which such offer or solicitation would be unlawful prior to registration, exemption from registration or qualification under the securities laws of any jurisdiction. This presentation contains specific forward-looking statements, e.g. statements which include terms like "believe", "assume", "expect", "target" or similar expressions. Such forward-looking statements represent Insigneo's judgments and expectations and are subject to known and unknown risks, uncertainties and other factors which may result in a substantial divergence between the actual results, the financial situation, and/or the development or performance of the company and those explicitly or implicitly presumed in these statements. These factors include, but are not limited to: (1) general market, macroeconomic, governmental and regulatory trends, (2) movements in securities markets, exchange rates and interest rates, (3) competitive pressures, and (4) other risks and uncertainties inherent in the business of Insigneo. Insigneo is not under any obligation to (and expressly disclaims any such obligation to) update or alter its forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law or regulation. The financial and other data contained in this presentation has not been independently verified by us and accordingly, we assume no responsibility for such information and other data being true and accurate. The information provided herein is not an offer to buy or sell or the solicitation of an offer to buy or sell any investment product. Performance may be volatile, and an investor could lose all or a substantial portion of his or her investment. Brokerage and investment advisory account investments are subject to market risk including loss of principal. Insigneo Advisory Services, LLC is an investment advisor registered with the Securities and Exchange Commission, "SEC".

Insigneo Financial Group ("Insigneo") is comprised of a family of financial companies that provide variety of products and services to retail and institutional investors throughout various jurisdictions throughout the world. Insigneo collectively refers to the activities of its financial industry regulatory authority ("FINRA") member broker-dealer, Insigneo Securities, LLC (formerly known as Global Investor Services), and its affiliated Securities Exchange Commission ("SEC") investment adviser, Insigneo Advisory Services, LLC (formerly known as Global Investor Advisory Services).

**Gross of fees performance:** Performance results do not reflect the deduction of investment advisory fees and other expenses. Actual performance results will be reduced by the investment advisory fees and expenses that you would pay. For example, if \$100,000 were invested and experienced a 4% annual return compounded monthly for 10 years, its ending value, without giving effect to the deduction of advisory fees, would be \$149,083 with a compounded annual return of 4.07%. If an advisory fee of 0.25% of the average market value of the account were deducted monthly for the 10-year period, the compounded annual return would be 3.82% and the ending dollar value would be \$145,414. For a description of all fees, costs and expenses, please refer to Insigneo's Form ADV Part 2A, which is available upon request. The figures refer to the past and past performance is not a reliable indicator of future results.

**Hypothetical (simulated) performance:** The performance shown for the models on pages 18-25 is hypothetical, or back-tested performance. It is not actual performance. This performance is for illustrative purposes only, and should not be used to predict future performance. Performance shown is based on current asset allocations, which may not represent past asset allocations had these portfolios existed during the time periods shown. Asset allocations are subject to change without notice. Past performance is no guarantee of future results.

Hypothetical performance results have certain inherent limitations. They include: 1) They are prepared with the benefit of hindsight; 2) Unlike an actual performance record, these results do not represent actual investment performance or trading and do not demonstrate Insigneo's ability to manage money; 3) Insigneo did not recommend the models used in the hypothetical portfolios for any clients during the period shown, and no clients invested money in accounts offered by Insigneo in accordance with those strategies; 4) The results actual clients might have achieved would have differed from those shown because of differences in market conditions and in the timing and amounts of their investments; and 5) Because the trades were not actually executed, the results may have under- or over-compensated for the impact, if any, of certain market factors, such as the effect of limited trading liquidity. No representation is made that any client will or is likely to achieve profits or losses similar to those shown.

Diversification strategies do not ensure a profit and do not protect against losses in declining markets.

**MFS Disclaimer from page 10 and disclosure for Index performance:** The historical performance of each index cited is provided to illustrate market trends; it does not represent the performance of a particular MFS® investment product. It is not possible to invest directly in an index. Index performance does not take into account fees and expenses. Past performance is no guarantee of future results. The investments you choose should correspond to your financial needs, goals, and risk tolerance. For assistance in determining your financial situation, consult in investment professional. For more information on any MFS product, including performance, please visit mfs.com. Note that the diversified portfolio's assets were rebalanced at the end of every quarter to maintain the equal allocations throughout the period. Diversification does not guarantee a profit or protect against a loss.

Learn more at [www.insigneo.com](http://www.insigneo.com)

## Important legal disclaimer (Continued)

insigneo

DALBAR DISCLAIMER FROM PAGE 13: Equity benchmark performance and systematic equity investing examples are represented by the Standard & Poor's 500 Composite Index, an unmanaged index of 500 common stocks generally considered representative of the U.S. stock market. Indexes do not take into account the fees and expenses associated with investing, and individuals cannot invest directly in any index. Past performance cannot guarantee future results.

Bond benchmark performance are represented by the BloombergBarclays Aggregate Bond Index, an unmanaged index of bonds generally considered representative of the bond market. Indexes do not take into account the fees and expenses associated with investing, and individuals cannot invest directly in any index. Past performance cannot guarantee future results.

Average stock investor, average bond investor and average asset allocation investor performance results are based on a DALBAR study, "Quantitative Analysis of Investor Behavior (QAIB), 2019." DALBAR is an independent financial research firm. Using monthly fund data supplied by the Investment Company Institute, QAIB calculates investor returns as the change in assets after excluding sales, redemptions and exchanges. This method of calculation captures realized and unrealized capital gains, dividends, interest, trading costs, sales charges, fees, expenses and any other costs. After calculating investor returns in dollar terms, two percentages are calculated for the period examined: Total investor return rate and annualized investor return rate. Total return rate is determined by calculating the investor return dollars as a percentage of the net of the sales, redemptions, and exchanges for the period.

FOREFRONT ANALYTICS DISCLAIMER: Data provided by Forefront Analytics for this report is for informational purposes only and is not intended, and should not be relied upon, as investment or financial advice.

Forefront is an SEC registered investment adviser that maintains a principal place of business in the Commonwealth of Pennsylvania. Forefront and its representatives are in compliance with the current registration and filing requirements imposed upon federally registered investment advisers by those states in which Forefront maintains clients. The Firm may only transact business in those states in which it is registered or qualifies for a corresponding exclusion from registration requirements. Additional information about Forefront can be found in the Firm's Form ADV disclosure documents, the most recent versions of which can be found on the SEC's Investment Adviser Public Disclosure website at [www.adviserinfo.sec.gov](http://www.adviserinfo.sec.gov).

Learn more at [www.insigneo.com](http://www.insigneo.com)

## Methodology of Calculating Portfolio Expected Performance

Insigneo partners with Forefront Analytics. Forefront Analytics calculated each model's expected performance. The methodology are described in the following.

Firstly, Forefront Analytics assigns each underlying asset with a proxy index that closely tracks the corresponding asset class or the most appropriate asset class based on each underlying asset's market cap focus, geography focus, and investment strategy focus.

Secondly, Forefront Analytics uses their own expected return about the proxy indices and Horizon Actuarial expected return of asset classes to calculate each model's expected return. The mathematical equation is shown in the following:

$$E(R_p) = \sum_{k=1}^n W_k * E(R_k)$$

Subject to:  $\sum_{k=1}^n W_k = 1$

$E(R_p)$ : portfolio expected return;  
 $W_k$ : k<sup>th</sup> proxy index or k<sup>th</sup> asset class capital weight;  
 $E(R_k)$ : k<sup>th</sup> proxy index or k<sup>th</sup> asset class expected return.

Thirdly, Forefront Analytics uses their own expected covariance matrix as well as uses the Horizon Actuarial expected covariance matrix of asset classes to calculate each model's expected standard deviation.

The mathematical equation to calculate covariance between two underlying assets is shown in the following:

$$Cov(i, j) = \sigma_i * \sigma_j * \rho(i, j);$$

$\sigma_i$ : i<sup>th</sup> proxy index or i<sup>th</sup> asset class expected standard deviation;  
 $\sigma_j$ : j<sup>th</sup> proxy index or j<sup>th</sup> asset class expected standard deviation;  
 $\rho(i, j)$ : correlation between i<sup>th</sup> and j<sup>th</sup> proxy index or asset class.

If a portfolio has N underlying assets, then it needs to calculate  $\binom{N}{2}$  pairs of covariance between each two proxy indices or underlying assets, and put each covariance into the relevant  $(i, j)$  location of a matrix, and then form a N row and N column expected covariance matrix *ExpCov*.

Learn more at [www.insigneo.com](http://www.insigneo.com)



## Methodology of Calculating Portfolio Expected Performance

Then, the mathematical equation to calculate portfolio expected standard deviation is shown in the following:

$$E(\sigma_p) = \sqrt{W' * ExpCov * W}$$

$E(\sigma_p)$ : portfolio expected standard deviation;

$W$ : N \* 1 matrix containing N proxy indices or asset classes capital weight;

$W'$ : the transpose matrix of  $W$ ;

$ExpCov$ : N \* N covariance matrix for the N proxy indices or asset classes.

Using methodology said above, Forefront Analytics calculated expected performance for Insigneo models.

Please note that underlying assets expected return and expected standard deviation said in the methodology are all annualized.

Target annualized net of maximum fees returns are calculated by netting target annualized gross of fees return with highest possible management fee. Target annualized net of minimum fees returns are calculated by netting target annualized gross of fees return with 25 bps fee.

The highest management fee is 125 bps, 150 bps, 175 bps, and 200 bps for Conservative Model, Conservative Plus Model, Moderate Model, and Aggressive Model, respectively.

Trading fee is eliminated beginning from March 1, 2021.

Expectations are not guaranteed. It is possible that the markets will perform better or worse than shown in the projections, the actual results of an investor who invests in the manner these projections suggest will be better or worse than the projections, and an investor may lose money by investing in the manner the projections suggest.

Learn more at [www.insigneo.com](http://www.insigneo.com)

*Continued from page 27*

Special emphasis on numerical stability

The CME process is run on an annual basis strategically and dynamically/tactically more frequently over shorter horizons (e.g., shorter term volatility forecasts and intermediate expected return forecasts)

Equities:

- Domestic Equity : use all four domestic stock factors in regression ignoring other factors.
- International Equity : use all four international stock factors in regression ignoring other factors.

Fixed income:

- Domestic Bonds (Including TIPS) : use both domestic bond factors but only use a domestic stock factor with a specific asset class only if the factor is statistically significant for that asset class for the regression.
- International Bonds (Including International TIPS) : use both international bond factors but only use an international stock factor with a specific asset class only if the factor is statistically significant for that asset class for the regression.

Commodity:

Use an international factor unhedged with a specific asset class only if the factor is statistically significant for that asset class for the regression.

Real estate:

- Domestic Real Estate : Use all domestic factors.
- International Real Estate : Use all international factors.

Hedge funds:

- Use an international factor unhedged with a specific asset class only if the factor is statistically significant for that asset class for the regression via variable selection

Learn more at [www.insigneo.com](http://www.insigneo.com)



Forecasting U.S. equities as a benchmark expected return:

- Real return approach :
  - Calculate the strategic geometric real return adjusting for inflation over time.
  - Adjust real return by removing estimated contribution to return from PE multiple expansion.
  - Add back expected inflation rate.
- Risk premium approach :
  - Calculate the long run risk premium net of one-month Treasury bills from over time.
  - Adjust the long run risk premium by removing estimated contribution to return from PE multiple expansion.
  - Add back expected risk-free rate.
  - Final expected return is relative uncertainty weighted combination of the expected returns from two approaches (empirical Bayes).

Forecasting US 20-year Treasury bond expected return:

- The expected return of US 20-year Treasury bond index is the yield on a US 20-year Treasury bond at the defined date.
- Term structure evolves similarly.

Forecasting US inflation rate:

- The compounded difference between the yield on a US 20-year Treasury bond and the yield on a 20-year inflation linked security.

Forecasting risk-free rate:

- The expected risk-free rate is calculated as the expected return of the US 20-year Treasury bond multiplied by the historic geometric return difference between US one-month Treasury bill index and US 20-year Treasury bond index.
- Functional adjustments are in place for long-run deflationary expectation.

### Domestic factors:

- Expected return of four equity factors
  - Market factor: For the difference between stocks and bonds, the expected premium is the expected U.S. equity benchmark return minus expected risk-free rate.
  - Expected returns are calculated for a mimicking portfolios (size effect, valuation effect, momentum effect, possibly quality effect)
- Expected return of two bond factors
  - Slope of the term structure of interest rates: Difference between US 20-year Treasury bond index and US one-month Treasury bill.
  - A default spread is calculated as the difference between US 20-year corporate bond index and US 20-year Treasury bond index.

### International factors:

- Six factors for international market correspond to six domestic factors listed above.
- The expected return of each international factor is where deemed appropriate (based on data availability and other considerations) calculated based on regression approach on correspond domestic factors.
  - For example:  $E(\text{SMB}_{\text{international}}) = a + b \times E(\text{SMB})$ .  $b$  is the beta from regression,  $a$  is the intercept, and  $E(\text{SMB})$  is the expected return of domestic size factor.

### Commodity factors:

- The expected returns of commodity momentum and value factors are also calculated.

### Note:

Quality factors are sometimes excluded for the benchmark model.

Factor mimicking portfolios are robust deciles, not optimized for trading

Adjustments have been added over time for refinement of mimicking portfolios (e.g., unfunded pension liabilities are taken into account in valuation metrics as appropriate)

Learn more at [www.insigneo.com](http://www.insigneo.com)



Expected returns estimates:

- The expected return of each asset class is calculated using beta from the regression analysis described in the previous slide multiplying the expected return of selected factors, and plus the intercept from the regression and the expected risk-free rate.

$$E(\text{Asset}) = a + \sum_{i=1}^n b_i * E(F_i) + E(R_f)$$

Expected covariance estimates:

- Estimate the covariance of the 16 factors:
  - Covariance between each pair of the factors are estimated via a Bayesian procedure incorporating information about series whose histories are of different lengths.
- Estimate the covariance of the asset classes as follows:

$$\Sigma = B \Sigma_F B' + S$$

Where,

$\Sigma_F$  is the covariance of the factors.

B is the beta of the asset class on selected factors.

S is the residual variance of each assets from regression. It is a diagonal matrix.

### Disclaimer:

Expectations calculated by Forefront Analytics LLC are not guaranteed, actual results will likely vary. Capital market expectations (CMEs) are long-term estimates as of 2018. CMEs are generally calibrated with index performance and are gross of assumed fees. CMEs are not guaranteed, actual results will likely vary. Certain information as provided by Forefront Analytics as set forth herein contains “forward-looking information”, such forward-looking statements necessarily involve known and unknown risks and uncertainties. These statements are not guarantees of future performance and undue reliance should not be placed on them. It is possible that the markets will perform better or worse than shown in the projections, the actual results of an investor who invests in the manner these projections suggest will be better or worse than the projections, and an investor may lose money by investing in the manner the projections suggest. The projections created using indices assume the reinvestment of dividends and that assets are allocated in the manner the projections suggest for the time period and are rebalanced at a given frequency.

Learn more at [www.insigneo.com](http://www.insigneo.com)



## Horizon Actuarial Capital Market Expectations

- Each year, Horizon Actuarial asks different investment firms to provide their “capital market assumptions” – their expectations for future risk and returns for different asset classes in which pension plans commonly invest.
- Horizon Actuarial first conducted this survey in 2010, and it included 8 investment advisors. In 2012, we first published a report on the survey results, which included 17 advisors. The survey has expanded considerably over the past few years; the 2018 survey includes assumptions from 34 different investment firms.
- Of the 34 sets of capital market assumptions included in the 2018 edition of the survey, 27 were provided by investment advisors to multiemployer plans, 4 were obtained from published white papers, and 3 were provided by investment advisors who do not consult with multiemployer plans.
- Survey participants were requested to provide their most recent capital market assumptions: expected returns for different asset classes, standard deviations (i.e., volatilities) for those expected returns, and a correlation matrix. The survey participants were also requested to indicate the investment horizon(s) to which their assumptions apply. If the participant develops separate assumptions for different time horizons, they were requested to provide each set of assumptions.

