



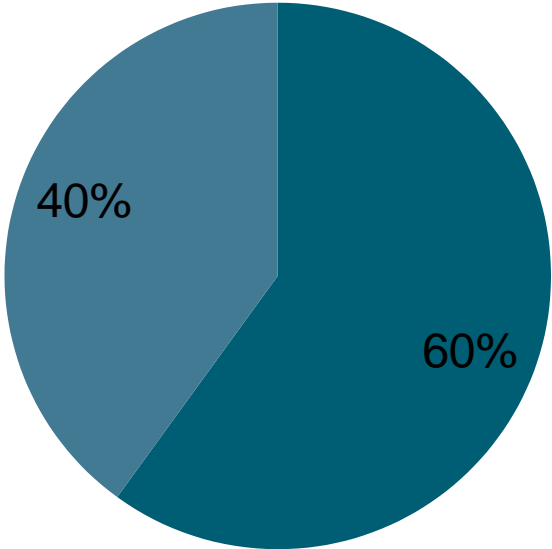
How to Build an Institutional Portfolio

Executive Summary: “Structure Determines Performance”

In the following presentation, investors will learn how to build an institutionally weighted portfolio that is considered optimized and efficient. Each slide adds a different asset class (type of investment), and investors will be able to see how each slice of the portfolio’s pie affects returns and risk. The portfolio was constructed with data explained by the **Fama/French Five-Factor Model**. This model was built by professor Eugene Fama (Nobel Laureate) and his research partner, professor Kenneth French of Dartmouth.

By **increasing diversification** combined with **tilting portfolios** toward the **three equity factors** that tend to produce higher expected long-term investment returns (**small companies, value companies, and highly profitable companies**), investors will be able to see the effects of each change on the long-term returns and expected volatility (risk). Likewise, investors will see how adding the **two defensive factors (term and credit)** reduces risk and adds to the portfolio’s expected return. This portfolio does a great job of showing how structure can impact risk and return.

Model Portfolio 1



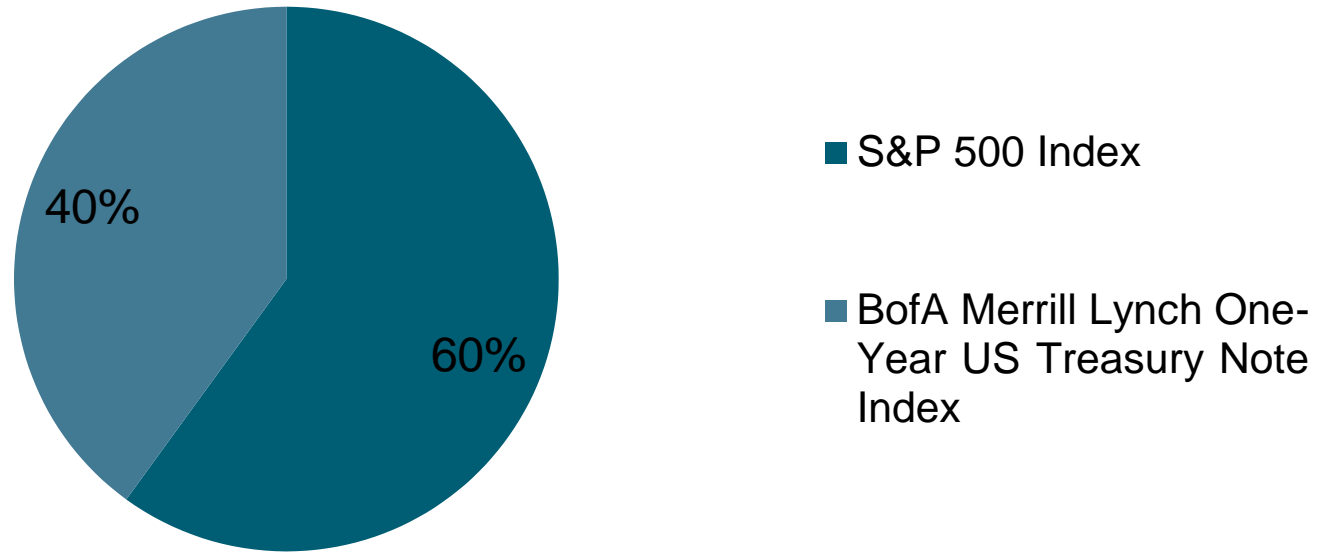
- S&P 500 Index
- Barclays Capital US Government/Credit Bond Index

	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 1	10.53	9.76

For illustrative purposes only. Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Not to be construed as investment advice.

Model Portfolio 2

Substitute short-term fixed income for long-term fixed income



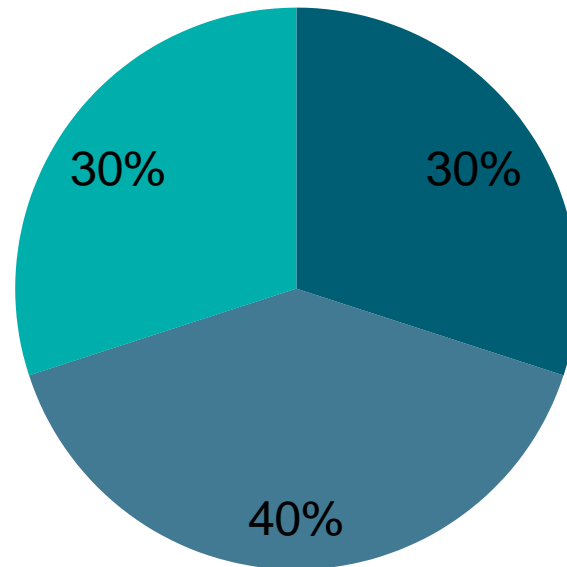
	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 2	9.69	9.11

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Model Portfolio 3

Add US Small Cap exposure



- S&P 500 Index
- BofA Merrill Lynch One-Year US Treasury Note Index
- Fama/French US Small Cap Index

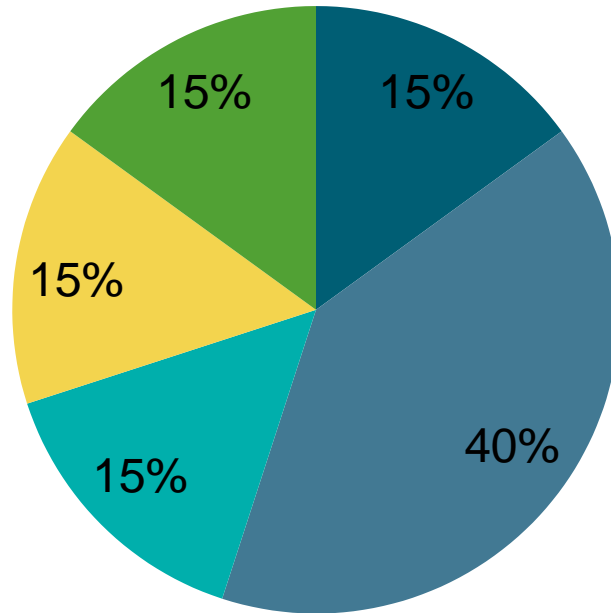
	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 3	10.67	10.16

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Model Portfolio 4

Add US Value exposure



- S&P 500 Index
- BofA Merrill Lynch One-Year US Treasury Note Index
- Fama/French US Small Cap Index
- Fama/French US Large Cap Value Research Index
- Fama/French US Small Cap Value Research Index

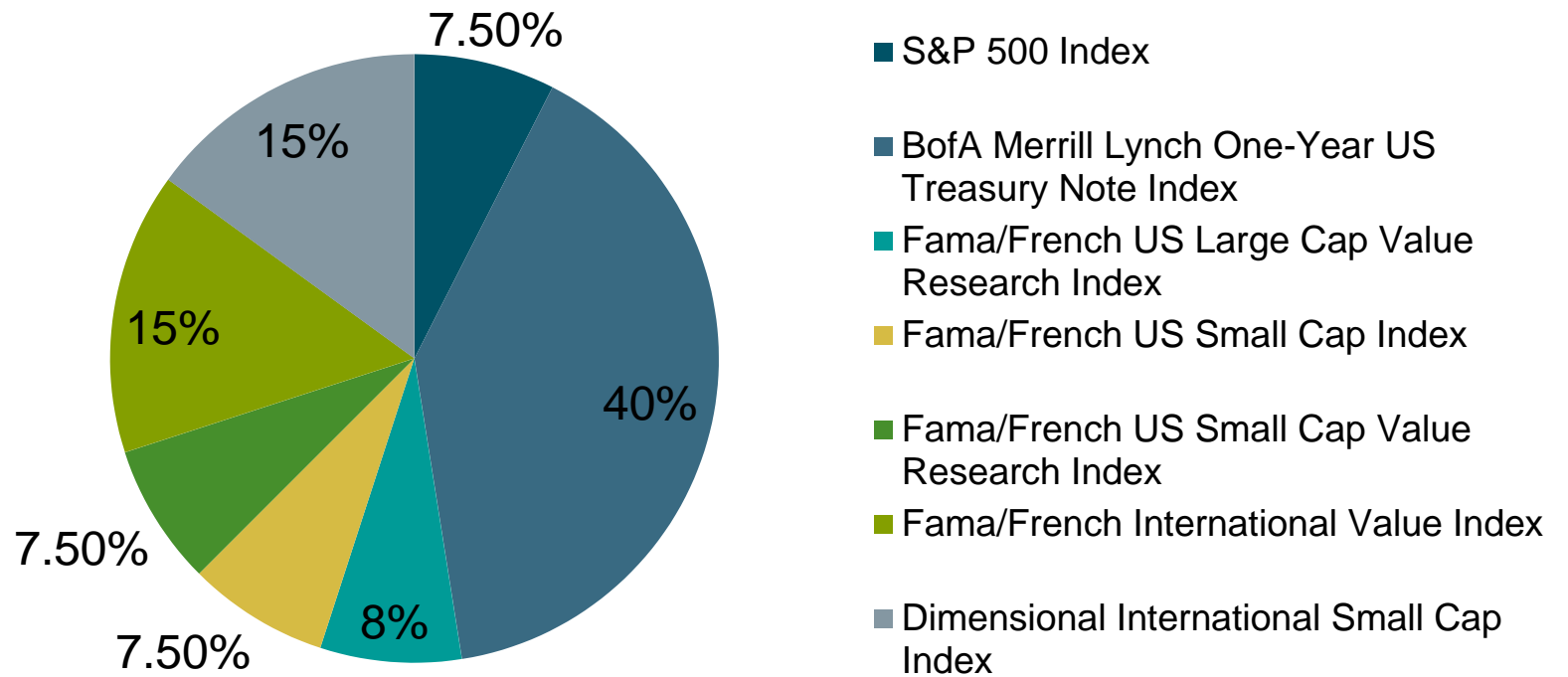
	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 4	11.44	10.00

For illustrative purposes only.

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Model Portfolio 5

Add International Small and Value exposure



	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 5	11.46	9.27

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Model Portfolio: Allocations

		Model Portfolio 1	Model Portfolio 2	Model Portfolio 3	Model Portfolio 4	Model Portfolio 5
EQUITY		60%	60%	60%	60%	60%
US STOCKS		60%	60%	60%	60%	30%
US Large Cap	S&P 500 Index	60.0%	60.0%	30.0%	15.0%	7.5%
US Large Cap Value	Fama/French US Large Cap Value Research Index	—	—	—	15.0%	7.5%
US Small Cap	Fama/French US Small Cap Index	—	—	30.0%	15.0%	7.5%
US Small Cap Value	Fama/French US Small Cap Value Research Index	—	—	—	15.0%	7.5%
NON-US STOCKS		—	—	—	—	30%
International Value	Fama/French International Value Index	—	—	—	—	15.0%
International Small Cap	Dimensional International Small Cap Index	—	—	—	—	15.0%
FIXED INCOME		40%	40%	40%	40%	40%
One-Year US Fixed	BofA Merrill Lynch One-Year US Treasury Note Index	—	40.0%	40.0%	40.0%	40.0%
US Fixed (all maturities)	Barclays Capital US Government/Credit Bond Index	40.0%	—	—	—	—

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Model Portfolio: Historical Returns

January 1975–December 2015

	Annualized Return (1975–2015)	Annual Standard Deviation (1975–2015)
Model Portfolio 1	10.53	9.76
Model Portfolio 2	9.69	9.11
Model Portfolio 3	10.67	10.16
Model Portfolio 4	11.44	10.00
Model Portfolio 5	11.46	9.27

For illustrative purposes only.

Assumes all strategies have been rebalanced quarterly. Standard deviation is a statistical measurement of historical volatility. A volatile stock tends to have a higher standard deviation.

The S&P data are provided by Standard & Poor's Index Services Group. Fama/French data provided by Fama/French. International Small Cap data compiled by Dimensional from Bloomberg, StyleResearch, London Business School, and Nomura Securities data. MSCI data © MSCI 2015, all rights reserved. The Merrill Lynch indices are used with permission; © 2015 Merrill Lynch, Pierce, Fenner & Smith Incorporated; all rights reserved. Barclays Capital data, formerly Lehman Brothers, provided by Barclays Bank PLC.

The returns and other characteristics of the allocation mixes contained in this presentation are based on model/back-tested simulations to demonstrate broad economic principles. They were achieved with the benefit of hindsight and do not represent actual investment performance. There are limitations inherent in model performance; it does not reflect trading in actual accounts and may not reflect the impact that economic and market factors may have had on an advisor's decision making if the advisor had managed actual client money. Model performance is hypothetical and is for illustrative purposes only. Model performance shown includes reinvestment of dividends and other earnings but does not reflect the deduction of investment advisory fees or other expenses. Clients' investment returns would be reduced by the advisory fees and other expenses they would incur in

the management of their accounts. Indexes are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Not to be construed as investment advice.