

Investment Committee
Friday, June 16, 2023, 9:00 a.m.

Virtual Only

[Click here to join the meeting](#)

AGENDA

- I. CALL TO ORDER AND ACCEPTANCE OF AGENDA**
- II. ACCEPTANCE OF MINUTES (MAY 2023)**
- III. PUBLIC MARKETS FUNDS ALPHA STRATEGY – MR. CHIN**
- IV. WELLINGTON INTERNATIONAL SMALL CAP- MR. POSCH**
- V. PRIVATE EQUITY¹ - MR. MOSS**
- VI. INVESTMENT GUIDELINES – MR. CHIN, MR. VAIDYA**
- VII. DISCUSSION**
- VIII. ADJOURNMENT**

¹ Executive session pursuant to NDCC 44-04-18.4(1), 44-04-19.1(9), and 44-04-19.2 to discuss confidential commercial information and contract negotiating strategy.

**STATE INVESTMENT BOARD
INVESTMENT COMMITTEE MEETING
MINUTES OF THE
May 12, 2023, MEETING**

MEMBERS PRESENT: Thomas Beadle, State Treasurer, Chair
Joseph Heringer, Trust Lands Commissioner, Vice Chair
Scott Anderson, CIO
Eric Chin, Deputy CIO
Dr. Prodosh Simlai, External Representative
Dr. Ruilin Tian, External Representative

STAFF PRESENT: Derek Dukart, Investment Officer
Rachel Kmetz, Accounting Manager
Missy Kopp, Exec. Assistant
George Moss, Sr. Investment Officer
Matt Posch, Sr. Investment Officer
Chad Roberts, DED/CRO
Ryan Skor, CFO/COO
Nitin Vaidya, Chief Risk Officer
Jason Yu, Risk Officer
Lance Zietlow, Sr. Investment Officer

GUESTS: Alex Browning, Callan
Craig Chaikin, Callan
Members of the Public

CALL TO ORDER:

Treasurer Beadle called the State Investment Board (SIB) Investment Committee (IC) meeting to order at 9:01 a.m. on Friday, May 12, 2023, at the Retirement and Investment Office (virtual host), 1600 E Century Ave., Bismarck, ND.

The following Investment Committee members were present representing a quorum, Mr. Anderson, Treasurer Beadle, Mr. Chin, Commissioner Heringer, Dr. Simlai, and Dr. Tian.

AGENDA:

The agenda was considered for the May 12, 2023, meeting.

IT WAS MOVED BY MR. CHIN AND SECONDED BY DR. TIAN AND CARRIED BY A VOICE VOTE TO APPROVE THE AGENDA FOR THE MAY 12, 2023, MEETING AS DISTRIBUTED.

AYES: COMMISSIONER HERINGER, MR. ANDERSON, DR. SIMLAI, DR. TIAN, MR. CHIN, AND TREASURER BEADLE

NAYS: NONE

MOTION CARRIED

MINUTES:

The minutes were considered for the April 21, 2023, meeting.

IT WAS MOVED BY MR. ANDERSON AND SECONDED BY DR. SIMLAI AND CARRIED BY A VOICE VOTE TO APPROVE THE MINUTES FOR THE APRIL 21, 2023, MEETING AS DISTRIBUTED.

**AYES: DR. SIMLAI, COMMISSIONER HERINGER, MR. CHIN, DR. TIAN, MR. ANDERSON,
AND TREASURER BEADLE
NAYS: NONE
MOTION CARRIED**

RISK STRATEGY:

Mr. Vaidya presented the risk allocation and management strategy. Investors must decide where they should be on the risk spectrum what is the desired level of risk. Mr. Vaidya described investment risk, its effect on returns, and the measures of risk and return. A model for evaluating outcomes was provided. Mr. Vaidya outlined RIO's risk allocation and management beliefs, objective, and strategy. Information was provided on risk allocation and management and their effect on investment outcomes. Staff shared plans for communication with the SIB, IC, and client funds on risk allocation and management including an example of a structural risk dashboard. A timeline of near-term activities was reviewed. Committee discussion followed.

TIMBER PORTFOLIO UPDATE:

**IT WAS MOVED BY COMMISSIONER HERINGER AND SECONDED BY MR. ANDERSON
AND CARRIED BY A ROLL CALL VOTE TO ENTER INTO EXECUTIVE SESSION
PURSUANT TO NDCC 44-04-18.4(1), 44-04-19.1(9), AND 44-04-19.2 TO DISCUSS
CONFIDENTIAL COMMERCIAL INFORMATION AND CONTRACT NEGOTIATING
STRATEGY.**

**AYES: COMMISSIONER HERINGER, MR. ANDERSON, DR. SIMLAI, MR. CHIN, DR. TIAN,
AND TREASURER BEADLE
NAYS: NONE
MOTION CARRIED**

The executive session began at 9:54 a.m. and ended at 10:23 a.m. The session was attended by Committee members and staff.

COUNTRY RISK MANAGEMENT:

**IT WAS MOVED BY COMMISSIONER HERINGER AND SECONDED BY DR. SIMLAI AND
CARRIED BY A ROLL CALL VOTE TO ENTER INTO EXECUTIVE SESSION PURSUANT TO
NDCC 44-04-18.4(1), 44-04-19.1(9), AND 44-04-19.2 TO DISCUSS CONFIDENTIAL
COMMERCIAL INFORMATION AND CONTRACT NEGOTIATING STRATEGY.**

**AYES: DR. SIMLAI, MR. CHIN, COMMISSIONER HERINGER, DR. TIAN, MR. ANDERSON,
AND TREASURER BEADLE
NAYS: NONE
MOTION CARRIED**

The executive session began at 10:28 a.m. and ended at 11:13 a.m. The session was attended by Committee members and staff.

DELEGATION MATRIX

Mr. Anderson reviewed a proposed delegation matrix that would support the changes resulting from recent legislation. Staff are seeking Committee feedback which they will incorporate into governance manual changes that will be presented to the SIB. The updated delegation matrix outlines activities, who will make recommendations, and the role of the IC to either approve for recommendation to the SIB or approve at the IC level. Committee discussion followed.

IT WAS MOVED BY COMMISSIONER HERINGER AND SECONDED BY MR. CHIN AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE DELEGATION MATRIX AND GUIDLINE CHANGES WITH AMENDMENTS.

AYES: MR. ANDERSON, DR. TIAN, MR. CHIN, COMMISSIONER HERINGER, DR. SIMLAI, AND TREASURER BEADLE

NAYS: NONE

MOTION CARRIED

COUNTRY RISK:

IT WAS MOVED BY DR. SIMLAI AND SECONDED BY DR. TIAN AND CARRIED BY A ROLL CALL VOTE TO APPROVE STAFF RECOMMENDATIONS.

AYES: DR. TIAN, MR. CHIN, MR. ANDERSON, DR. SIMLAI, COMMISSIONER HERINGER, AND TREASURER BEADLE

NAYS: NONE

MOTION CARRIED

With no further business to come before the Investment Committee, Treasurer Beadle adjourned the meeting at 11:48 a.m.

Prepared by:

Missy Kopp, Assistant to the Board



ALPHA AND FUNDS MANAGEMENT STRATEGY

ALPHA & FUNDS MANAGEMENT TEAM
June 16th, 2023

NORTH
Dakota
Be Legendary.

Retirement & Investment

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Overview

RIO AT A GLANCE

As of April 30, 2023

\$19.2 Billion

AUM across all Client Funds

\$8.3 Billion

In Public Equity Managers

\$6.8 Billion

In Fixed Income Managers

INVESTMENT FOCUS

Global multi-asset public and private market fund of funds organization

OBJECTIVE

To maximize after cost return for risk at a prudent level of risk for the funds in our care

Global, Multi-asset



Advanced Funds
Management

OUR COMMITMENT

Client Focused

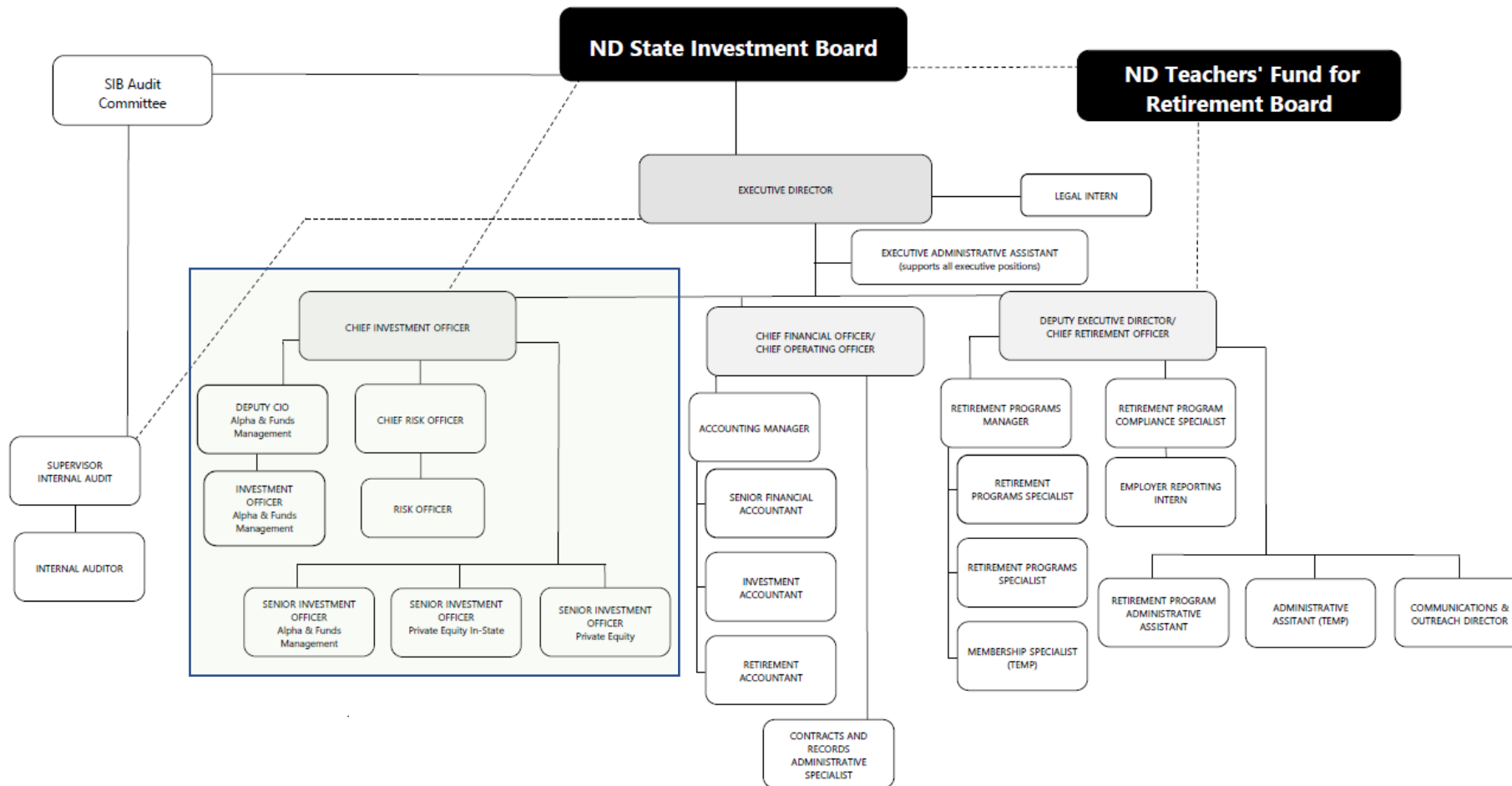
Value Added Results

Efficient Delivery

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Retirement and Investment Office Overview

RETIREMENT AND INVESTMENT OFFICE



INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

AFM Team Overview

Scott M Anderson
Chief Investment Officer (CIO)



Eric Chin
Deputy CIO/Public Funds Mgt



Matt Posch
Senior IO/Public Funds Mgt



Derek Dukart
IO/Public Funds Mgt



Nitin Vaidya
Chief Risk Officer



Jason Yu
Risk Officer



Public Markets
Funds Management

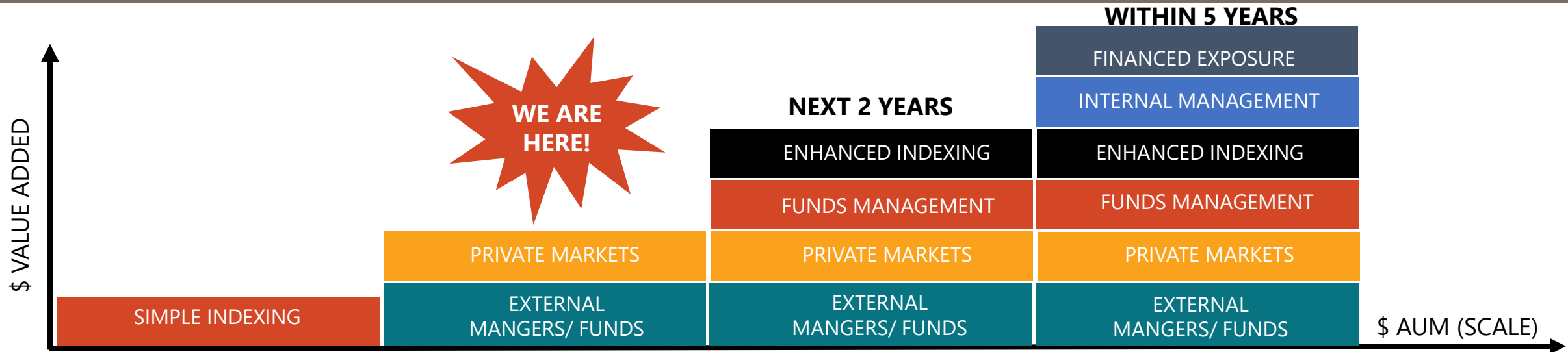
Risk Allocation
And Management

Experience: > 17 Years Average Investment Experience

- Asset and Risk Allocation
- Direct Public and Private Investment
- Fund and Portfolio Management
- Manager Selection
- Fund of Funds Management
- Quantitative Analysis
- Risk Management
- Liquidity Management
- Pension, Endowment and Insurance
- Performance Management
- Overlays and Exposure Management
- Multi-asset Portfolio Management

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Roadmap for Success



WHAT WE HAVE

- In-house Manager Research
- General Consultant Research
- Returns Based Analytics
- Value, Core, Growth Framework
- Holdings Based Analysis
- Portfolio Analytics

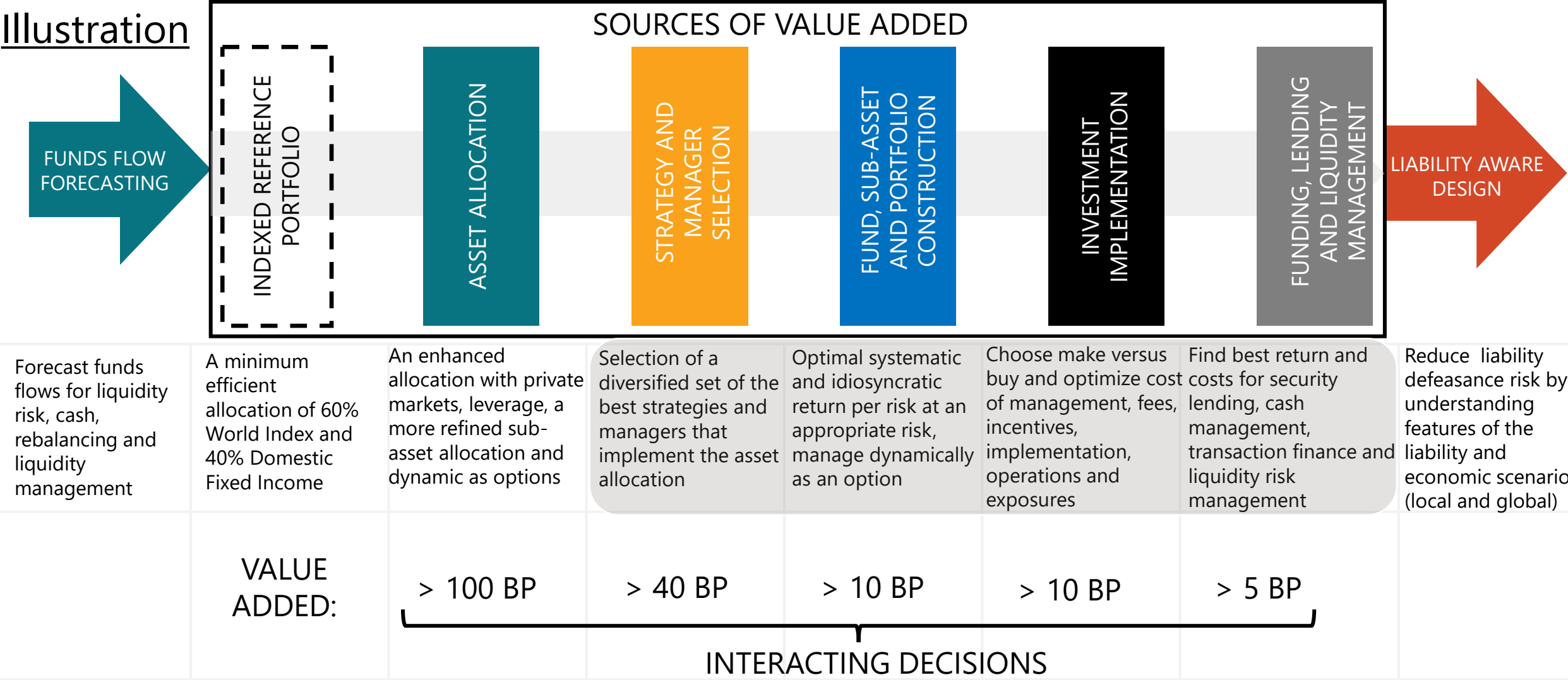
WHAT WE NEED

- Enhanced Manager Analysis Framework
- Sophisticated Returns Based Analytics
- Enhanced Holdings Based Analytics
- Enhanced Fixed Income Framework
- Enhanced Equity Framework
- Universe Analyses
- In-house Exposure Management Research
- Comprehensive Portfolio Management Analytics
- Enhanced Knowledge Management System & Investment Data Warehouse
- Exposure Management Processes/Framework
- Advanced Operations
- Specialized Consultant?

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Sources of Value Added

Illustration

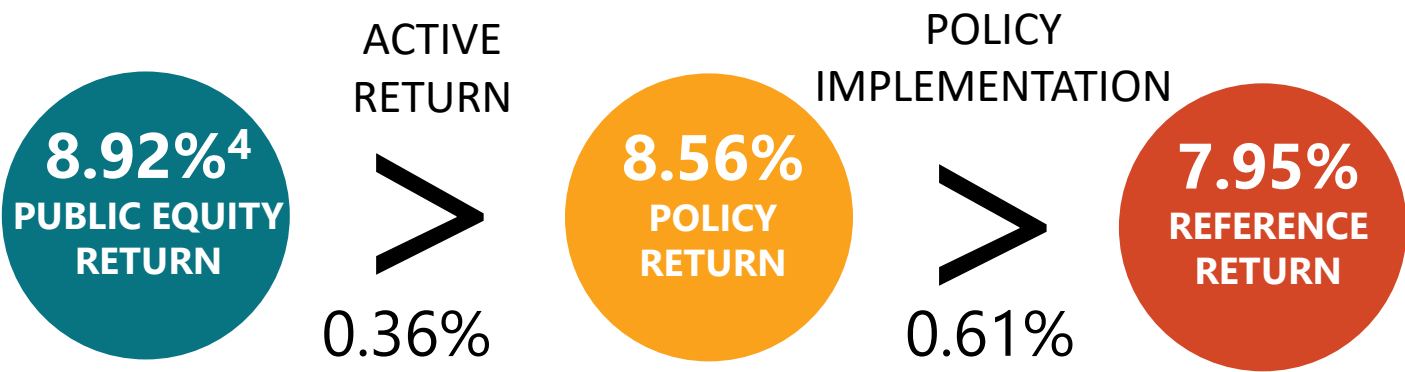


INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Public Equities Value Proposition



Illustration



Risk	14.7%	1.22%	14.7%	0.88%	14.7%
Cost		0.30% ³	0.02%		0.03% ²
Efficiency ¹	0.55	0.30	0.52	0.70	0.48

0.97% NET VALUE ADDED FOR A 0.02% COST
(\$80.5 MILLION/YEAR FOR \$1.7 MILLION)

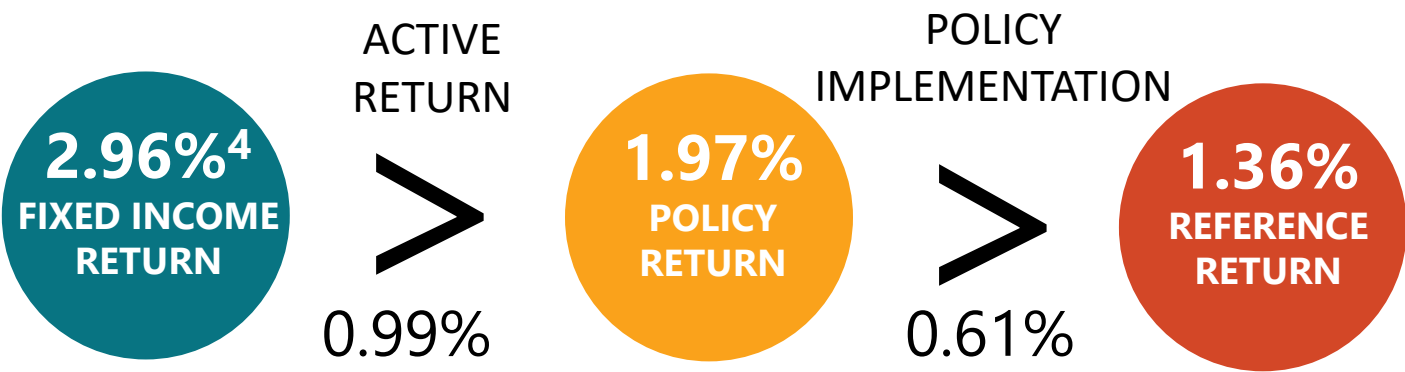
1. Sharpe or IR (return per risk) assumes a 0.87% return for the risk-free rate (10 yr. 3 Mos T bill return)
2. Assume .01% RIO cost and .02% index cost
3. Based on 2022 fees; lower fees than 2021 -> fewer incentive fees
4. 10 yr. estimated performance of TFFR Public Equity Portfolio as of 3/31/23

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Fixed Income Value Proposition



Illustration



Risk	4.1%	1.38%	4.7%	2.3%	4.4%
Cost		0.38% ³	0.02%		0.03% ²
Efficiency ¹	0.51	0.72	0.23	0.27	0.11

1.6% NET VALUE ADDED FOR A 0.02% COST
(\$109 MILLION/YEAR FOR \$1.4 MILLION)

1. Sharpe or IR (return per risk) assumes a 0.87% return for the risk-free rate (10 yr. 3 Mos T bill return)
2. Assume .01% RIO cost and .02% index cost
3. Based on 2022 fees; lower fees than 2021 -> fewer incentive fees
4. 10 yr. estimated performance of TFFR Fixed Income Portfolio as of 3/31/23

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

We Believe



- Our mission is to deliver a high return per unit of risk; at a prudent level of risk for our client fund mandates; at an efficient cost
- Long term markets are efficient but there are short term inefficiencies that create opportunity for active return
- Active investment strategies can capitalize on these market inefficiencies and can generate excess returns with prudent levels of risk
- Successful alpha generating strategies can be identified through a rigorous due diligence and evaluation process
- Investors should only pay for alpha—beta is inexpensive
- Risk and return are two sides of the same coin—integrating risk management throughout the investment process is essential
- Our processes must evolve with the ever-changing market. What got us here won't get us there.

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Objective and Strategy



OBJECTIVE

- Develop a world class fund-of-funds platform comprised of public equity and public fixed income managers

STRATEGY

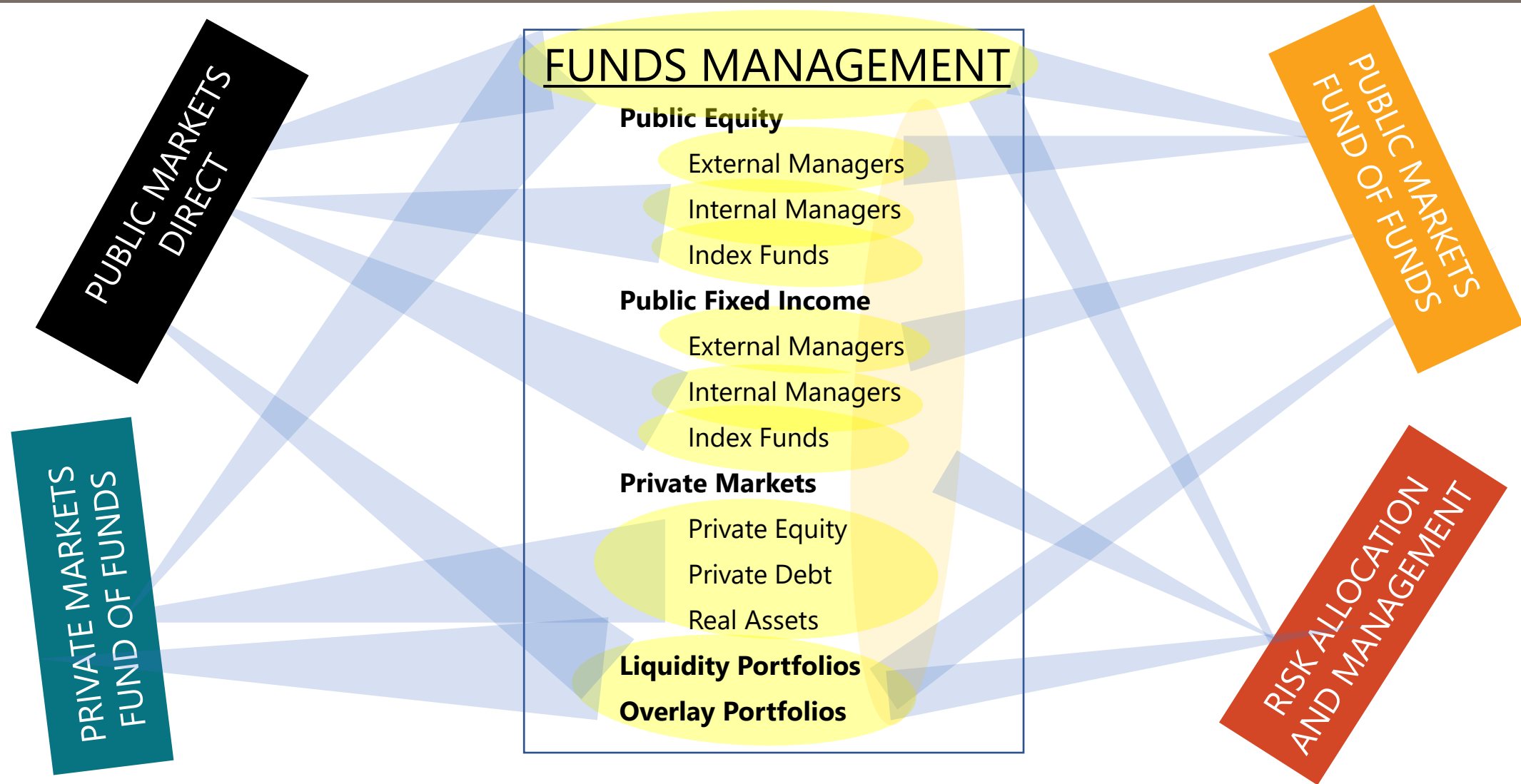
- Identify best-of-breed investment managers & strategies through a rigorous research driven due diligence process
- Amalgamate managers into an optimized portfolio that meets risk/return objectives of the asset allocation
- Enhance returns through dynamic allocations and exposure management
- Continual improvements in implementations and operations engenders better outcomes

WHY?

- The AFM Team combines its internal research capabilities with an informational edge from access to research, investment views, and strategies from best-of-breed managers. Additionally, leveraging insights from the Risk, Private Markets, and Internal Trading verticals creates a truly differentiated fund-of-funds platform

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Integrated Investment Focus



INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Investment Focus

INTEGRATED INVESTMENT FOCUS

PRIVATE MARKETS FUND OF FUNDS

PUBLIC MARKETS FUND OF FUNDS

RISK ALLOCATION AND MANAGEMENT

PUBLIC MARKETS DIRECT

- Asset class strategies transacted in private markets
 - Diversified industry, geography and asset classes such as private debt/loans, real estate, infrastructure, equity, and commodities
 - Use of best-in-class data sources and tools to identify opportunities, construct portfolios and manage risks such as valuation, diversification, currency, liquidity and cash flow
 - Manages investments over a life cycle, by pacing investments appropriately based on stage of economic cycle
- Asset class strategies transacted in public markets over the counter or on exchanges
 - Diversified strategies, geography and asset classes such as global equities, investment grade fixed, high yield, multi-asset class, and commodities
 - Use of best-in-class data sources and tools to identify opportunities, construct portfolios and manage risks such as idiosyncratic, market, credit, currency, liquidity, interest rate, and derivative
 - Manages investments with manager selection, advanced portfolio construction, exposure management, dynamic allocation and rebalance
- Mitigates uncompensated risks in advance, identifies fund risk hot spots, manages risks as they occur, and ensures an optimal return for risk at a prudent level of risk in all investment strategies
 - Provides risk communication to policy makers and investment teams, participates in all investment decisions, develops quantitative analysis for optimal return for risk, participates in allocation of risk capital
 - Use and development of best-in-class data sources, analytics and tools to identify risks, measure return per risk, manage risks with exposure management and contribute to investment decisions
- Asset class strategies directly transacted in the public markets over the counter or on exchanges
 - Diversified low risk strategies that enhance portfolio return but at a lower cost and risk for the same return as available with external managers
 - Facilitate portfolio operations like proxy voting, overlays, security lending, exposure management, alpha beta separation, cash and liquidity management
 - Use and development of best-in-class data sources, analytics and tools to identify opportunities, construct portfolios, transact and manage portfolio risks

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Sources of Excess Return

FOUR KEY PILLARS TO GENERATE EXCESS RETURNS

MANAGER SELECTION

Identify best-of-breed managers that:

- Can generate risk-adjusted excess returns over a market cycle
- Have differentiated sources of alpha

PORTFOLIO CONSTRUCTION

- Create a portfolio of managers that have uncorrelated alpha sources
- Select strategies to optimize risk and return
- Size manager positions based on conviction

DYNAMIC ALLOCATION

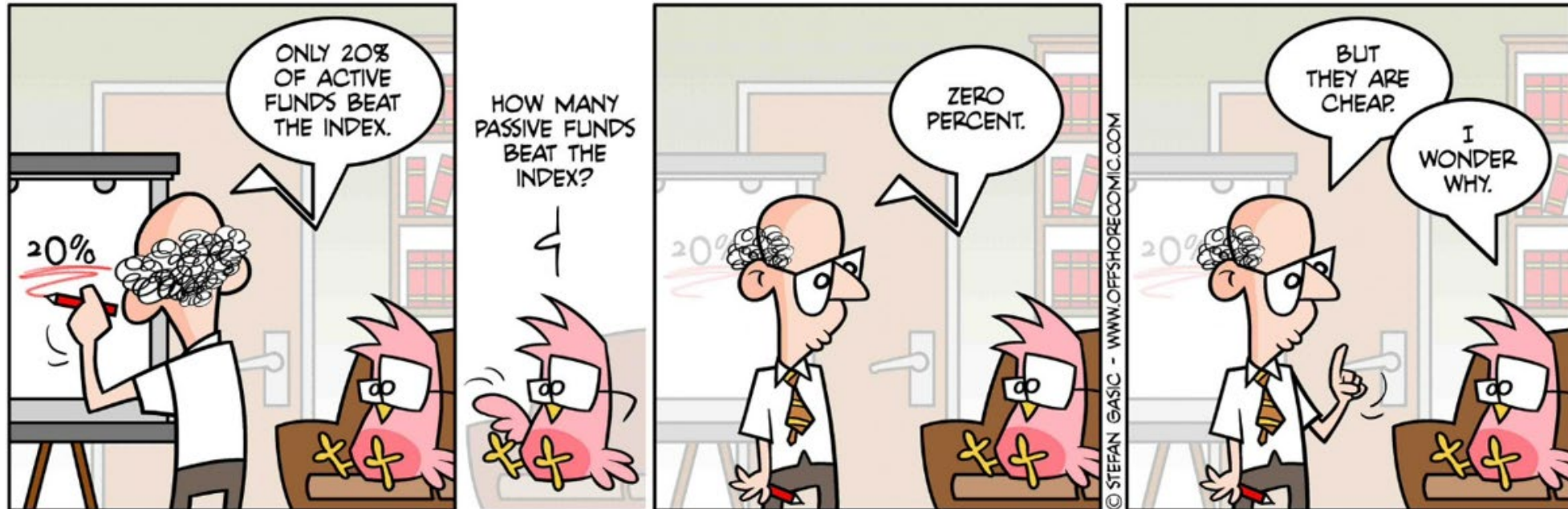
- Dynamically adjust portfolio & exposures to capture inefficiencies in the market
- Portfolio tilts must be based on sound research
- Risk assessment is essential

IMPLEMENTATION & OPERATIONAL

- Improvements in implementation and processes can lead to alpha
- Examples include optimizing rebalancing, identifying cheaper products, fee reductions etc.

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

We Believe in Active Management



We believe active strategies can lead to long term excess returns but:

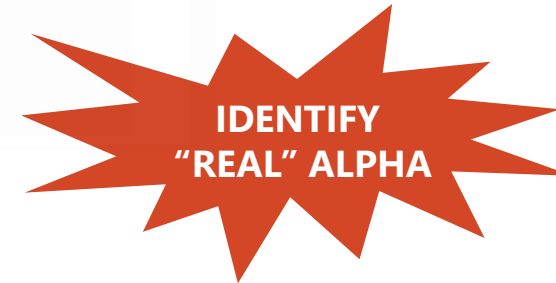
1. Active managers must be selected through a rigorous due diligence process
2. Fees are key. Fees must be evaluated and structured appropriately.

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Seek "Real" Alpha

Total Return = Risk Free Rate + Market Beta + Alpha

$$R_p = R_f + \beta_m + \alpha_p$$



MARKET BETA:

- Beta is the covariance of the portfolio in relation to the market
- A concept that measures the expected move in a stock relative to movements in the overall market
- Beta is readily available and cheap to access or replicate internally
- Toggle appropriate beta to the policy benchmarks

ALPHA:

- Alpha is the excess return due to non-market factors and typically represents a manager's skill
- However, there are "hidden betas" i.e. factor betas (value, growth, momentum) which are easily replicable/cheap to access
- Identify a manager's sources of "real" alpha
- Managers should be compensated for "real" alpha, not "hidden betas"

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Key Manager Selection Criteria

SELECT MANAGERS BASED ON PROCESS, PHILOSOPHY, TEAM, TECHNOLOGY
WE ARE NOT CHASING HISTORICAL RETURNS

HIRING RATIONALE		TERMINATION CRITERIA	
Experienced Team	✓	Staff Turnover	✗
Necessary Technology	✓	Inconsistent Process	✗
Disciplined Process	✓	Uncharacteristic Performance/Style Drift	✗
Performance In-Line With Expectations	✓	Change in Investment Thesis	✗
Identifiable Competitive Edge	✓	Deterioration of Alpha Source(s)	✗
Sustainable Alpha Source(s)	✓	Long-term Headwinds for Strategy	✗

Qualitative Evaluation:

- Assess a manager's competitive edge, process, strategy, alpha sources, team capabilities etc.
- Develop investment thesis



Quantitative Analysis:

- Verify the investment thesis by the numbers
- Analyze portfolio holdings and return streams
- Differentiate between alpha vs beta

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Manager Selection Process

16,000+
Investment
Products

Initial Screen of Investment Products:

- Qualitative Characteristics
 - Firm AUM
 - Strategy AUM
 - Team size
 - Institutional AUM
 - Retail AUM
- Quantitative Characteristics
 - Performance
 - Information ratio
 - Tracking error
 - Standard deviation
 - Excess returns

Identify 10-20 Candidates

Preliminary Investment Review

- Initial calls with manager
- Firm & process evaluation
- Peer comparison
- Consultant review
- Correlation to existing managers

Identify 3-5 Candidates

In-depth Review

- Onsite meetings with senior investment team
- Request for Information (RFI)
- Comprehensive analytics: performance, attribution, holdings & risk
- Fit within portfolio
- Operational DD

Identify Top Candidate

Top Candidate Managers Not Selected

Approval:

- Formal investment memo
- Internal approval by AFM Team, CIO, CRO
- IC approval

Manager Approved

Onboard:

- Legal review
- Final fee negotiations
- Reporting and transparency

Manager Onboarded

Top Prospects

AFM team monitors and maintains relationships with top prospects. Allows the team to quickly find suitable replacements if/when necessary

Manager Selection Process

- Disciplined, consistent & rigorous
- Backed by extensive research and due diligence
- Multiple layers of review and approval
- Risk is integral in the selection process

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Manager Lifecycle

Termination

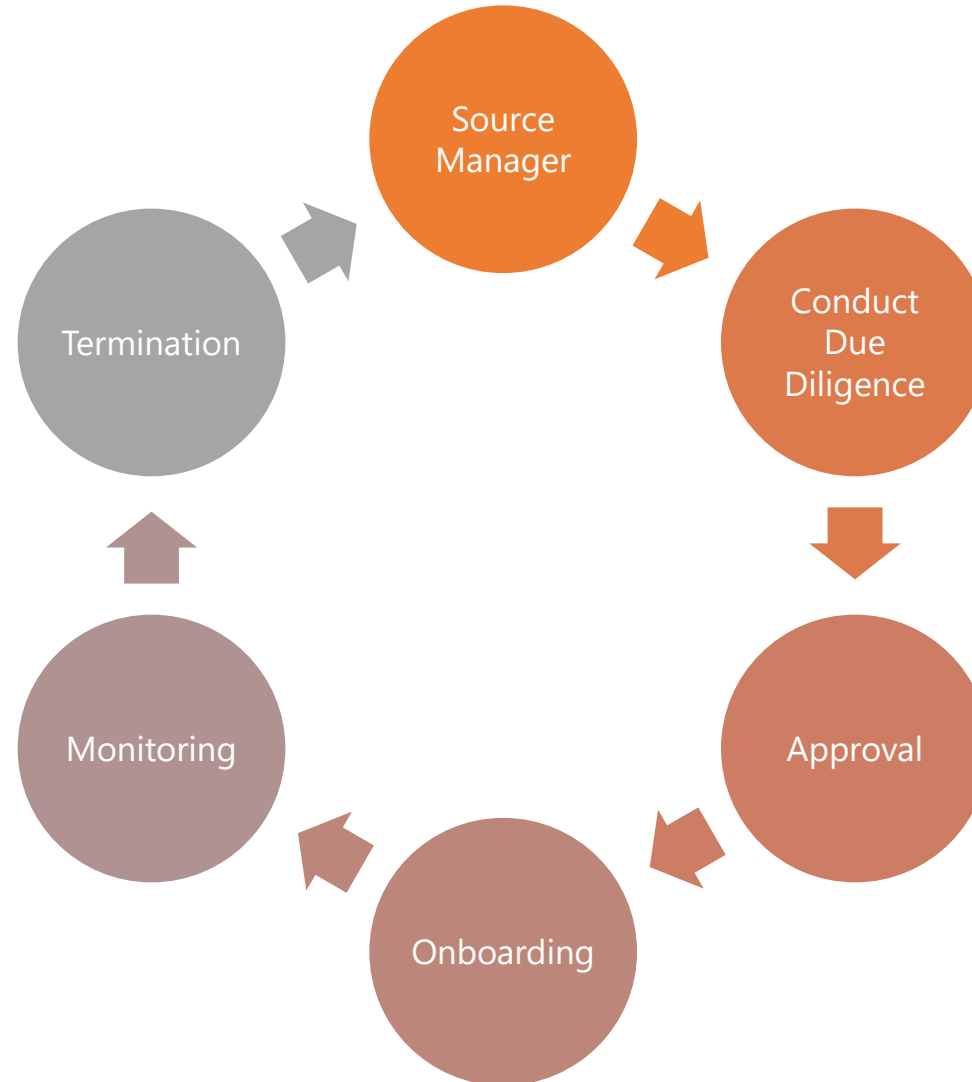
- Watch List
- Breach/Event
- Deterioration of Strategy/Alpha
- Legal/Operation Review
- Termination Memo to IC
- Implement Termination

Monitoring

- Routine Manager Calls
- On-site Diligence
- Monthly Web Questionnaire
- Performance & Holdings Analysis
- Peer Comparison
- Compliance Monitoring

Onboarding

- Contract/IMA Review
- Incentive Alignment/Fees
- Reporting & Transparency
- Transition



Source Manager

- Universe & Peer Analyses
- Industry Contacts
- Consultant

Due Diligence

- Calls & Onsite Meetings with Managers
- RFIs & DDQs
- Quantitative Analysis
- Qualitative Analysis
- Consultant Research
- Formal Manager Recommendation

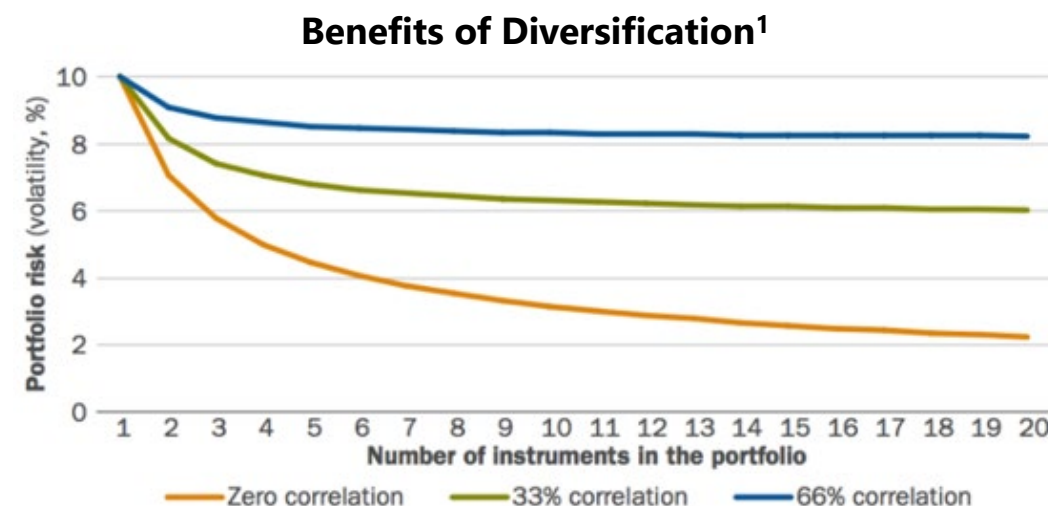
Approval

- AFM Team
- Risk Review
- Investment Committee

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Portfolio Construction: Diversification

1. Diversification reduces risk but can also reduce active return
 - Identify optimal number of managers—more managers/assets does not necessarily lead to the best outcome
 - Seek uncorrelated alphas
2. Evaluate the entire portfolio by position, factor, and correlated risks
 - Identify exposures in the portfolio not recognized by common factor models
 - Be aware of liquidity, leverage, concentration
3. Size positions starting with equal risk and then adjust for conviction, shared risk factors, probability of excess returns, and market cycle/market state



¹ From Seeking Alpha "Diversification Strategy: Correlation Mistakes And Inflation Exposure"

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Portfolio Construction: Optimization

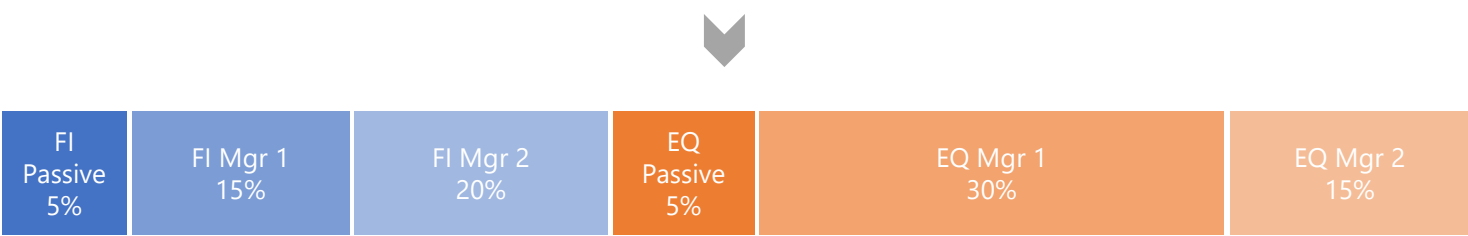
Policy Benchmark (Illustrative)



Align Managers with Policy Benchmark



Weight Managers for Optimal Risk and Return



Portfolio Goals (Illustrative)

Tracking Error (TE) Goal	2.0%
Return Efficiency (IR) Goal	X 0.50
Active Return Goal	1.0%

Fees Are Important!

Weight Fees and Active Return

SIB receives 2/3 rd of active return	0.67%
Manager receives 1/3 rd of active return in fees	0.33%

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Portfolio Construction Process

IDENTIFY BEST-OF-BREED MANAGERS

AFM Team identifies best-of-breed managers through a rigorous manager selection process

CREATE PORTFOLIO OF MANAGERS

- Create a portfolio of managers that have uncorrelated sources of alpha
- Quantify portfolio exposures by factors, positions, correlated risks etc.
 - Identify portfolio that benefits from strategy diversification but that is not overdiversified

Determine optimal exposure implementation

SIZE POSITIONS

- Size managers appropriately considering:
- Conviction in strategy
 - Market cycle and state
 - Probability and magnitude of excess return generation
 - Risk: including risk contribution and shared risk factors
 - Optimize portfolio considering IR, TE, excess returns

MANAGE RISKS

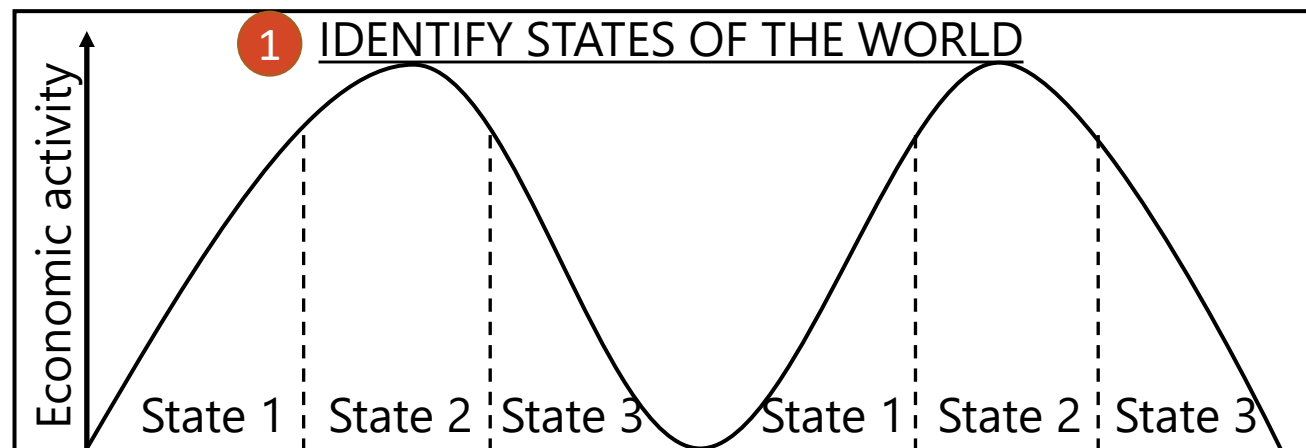
- Quantify risks and adjust portfolio accordingly:
- Liquidity
 - Concentration
 - Tail risks
 - Systematic
 - Inflation
 - Factor
 - Event
 - Currency
 - Others

DYNAMIC ALLOCATION

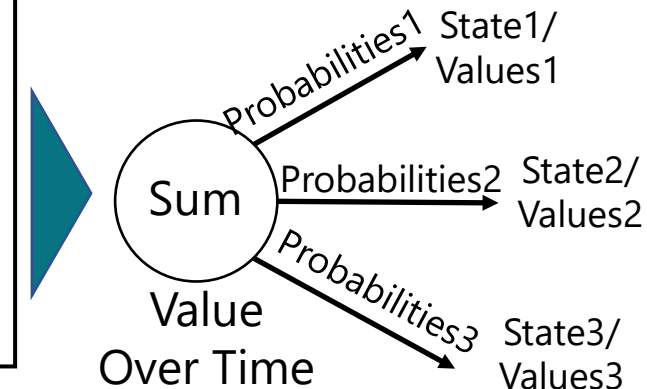
- Incrementally shift portfolio to opportunistically capitalize on market opportunities
- Requires research backed theses
 - Size allocation by probability of outcomes
 - Evaluate risks

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Future Dynamic Investment Framework



2 ASSESS PROBABILITIES AND VALUES OF STRATEGIES AND STATES



Illustration

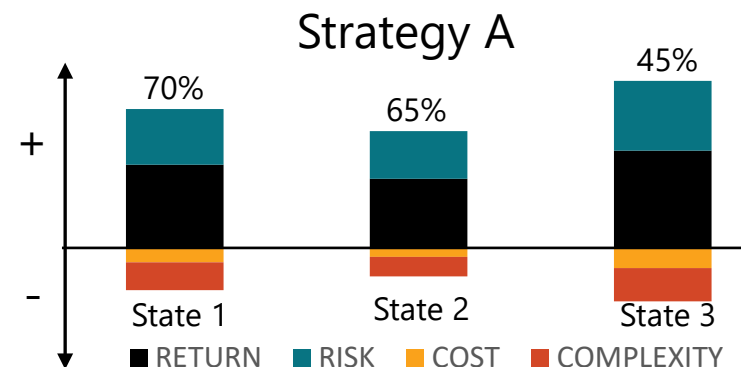
EXAMPLES:

- ASSET ALLOCATION
- CREDIT CYCLE
- VOLATILITY REGIMES
- INFLATION/GROWTH
- HIGH YIELD/EQUITY
- PRIVATE EQUITY
- GROWTH/VALUE
- SMALL CAP/LARGE CAP
- DOMESTIC
- INTERNATIONAL
- CURRENCY
- RATES
- EQUITY/FIXED INCOME
- SECTORS
- LIQUIDITY
- INDIVIDUAL EQUITY AND FIXED INCOME INVESTMENTS

4 ADJUST EXPOSURE AND MANAGER WEIGHTS TO INCORPORATE INFORMATION

BY STATE LIKELIHOOD	CURRENT AVERAGE METHOD	LIKELY TO STATE 1	LIKELY TO STATE 2	LIKELY TO STATE 3
Strategy A	60%	70%	65%	45%
Strategy B	25%	20%	30%	25%
Strategy C	15%	10%	5%	30%

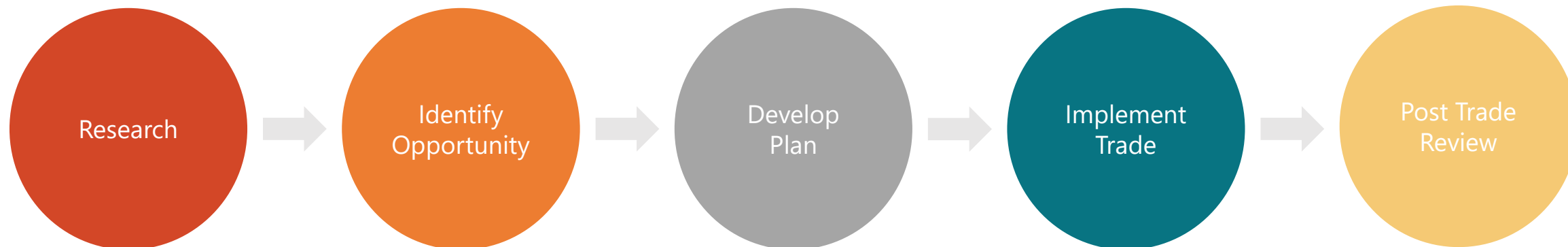
3 WEIGHT STRATEGIES BY STATE



INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Dynamic Allocation Process

TACTICALLY SHIFTING PORTFOLIO EXPOSURES CAN LEAD TO EXCESS RETURNS



DYNAMIC ALLOCATIONS ARE DRIVEN BY SOUND RESEARCH AND AN ESTABLISHED PROCESS

- | | | | | |
|---|--|---|--|--|
| <ul style="list-style-type: none"> • Develop models, heuristics and frameworks to analyze markets • Examples include: SPX valuation, growth/value cycle, high yield spread analysis | <ul style="list-style-type: none"> • Identify market inefficiencies through ongoing monitoring of markets • Quantify upside/downside, probabilities and expected value | <ul style="list-style-type: none"> • Develop plan to capture inefficiency • Evaluate opportunity in context of overall portfolio (e.g. risk) • Size position appropriately • Identify entry and exits and contingencies | <ul style="list-style-type: none"> • Implement trade • Continual monitoring of trade/markets • Follow plan, reevaluate as new data comes in | <ul style="list-style-type: none"> • Post trade review • Develop new heuristics frameworks and models from the trade |
|---|--|---|--|--|

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

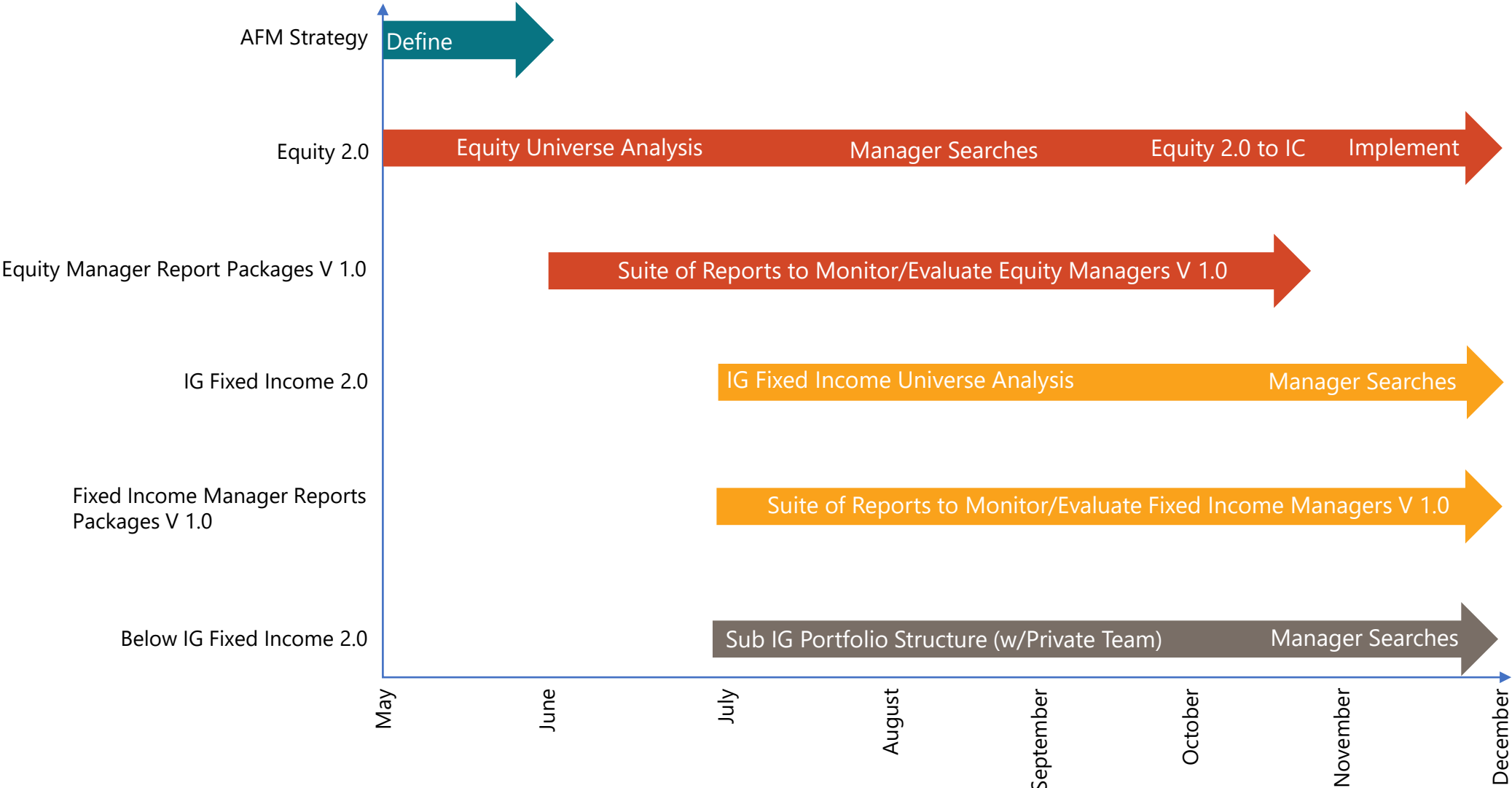
Implementation & Operational Alpha

CONTINUAL IMPROVEMENTS IN IMPLEMENTATION AND OPERATIONAL PROCESSES CAN LEAD TO COST REDUCTIONS AND ALPHA

SOURCES OF IMPLEMENTATION ALPHA	OUTCOMES
Continual evaluation of fees and ongoing negotiation with managers	Fee negotiations can lead to fee reductions
Implement efficient transitions	Choosing to transition internally or via a transition manager can lead to lower transaction costs
Enhanced rebalancing	Sophisticated rebalancing models can take advantage of pockets of liquidity and reduce transaction costs
Appropriate implementation of exposures	Selecting the proper instrument (i.e. physical, ETF, or derivative) can lead to reduced costs and/or enhanced liquidity
Internal vs. external implementation	Replicating strategies internally can reduce third party manager fees

INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

Near Term Timeline of Activities



INVESTMENTS: ALPHA AND FUNDS MANAGEMENT

How to determine success thru December 2023



KEY PROJECTS TO COMPLETE BY YEAR-END

1. Equity 2.0
2. Equity Report Package V 1.0
3. IG Fixed Income Universe Analysis
4. IG Fixed Income Report Package V 1.0
5. Sub IG Portfolio Structure 1.0



WELLINGTON INTERNATIONAL SMALL CAP

AFM TEAM

June 16th, 2023

NORTH
Dakota
Be Legendary.

Retirement & Investment

WELLINGTON INTERNATIONAL SMALL CAP WINDDOWN

Wellington International Small Cap (WISC) is closing in August and returning capital to investors

	1 Year Returns	3 Years Returns	5 Years Returns	10 Years Returns	Since Inception (01/2002)
Wellington Int'l Small	2.35	8.65	-0.88	5.61	8.20
MSCI:World xUS Small	-1.72	9.96	1.58	5.43	8.23
Excess Returns	4.07	-1.31	-2.46	0.18	-0.03

Net of fee returns as of April 30, 2023

The strategy has struggled with intermediate term performance and experienced significant staff turnover

- The strategy has high fees and has generated inconsistent performance
- One Senior PM and two investment analysts have recently departed the team
- WISC has experienced significant withdrawals from investors

SIB Assets Invested in Wellington International Small Cap

Pool		AUM	% of Total Fund
Legacy	\$	46,089,125	0.5%
Pension	\$	34,911,539	0.5%
Insurance	\$	4,584,134	0.2%

AUM as of April 30, 2023

Recommendation: Staff recommends redeeming out of WISC prior to the winddown on August 31, 2023, and investing in a passive index strategy (the State Street MSCI World ex-US Small Cap Index Fund).

Next Steps: In the upcoming equity portfolio 2.0 analysis, Staff will develop a new portfolio structure and look to underwrite a new international small cap strategy if necessary

Confidential materials will be sent directly to Committee members via secure link.



INVESTMENT GUIDELINES

INVESTMENT STAFF
JUNE 16, 2023

NORTH
Dakota
Be Legendary.

Retirement & Investment

INVESTMENTS GUIDELINES: Overview

1. Intended to mitigate the risk of undesired outcomes.
2. These guidelines are followed by the manager when implementing their strategy
3. These act as guardrails which are based on past performance, portfolio construction process metrics and other qualitative criteria
4. Guideline creation is a collaborative process between the manager, the Investment Team, Risk Team and Legal Team to allow the manager to effectively implement their strategy in a risk-controlled fashion
5. Team implements two sets of guidelines:
 - a) *Soft guidelines*—upper and lower bands around a manager's strategy in normal conditions. Breaches are reviewed by Staff
 - b) *Hard guidelines*—significant deviation from the expected implementation. Breaches result in review by IC for further action, if needed

INVESTMENTS GUIDELINES: Process

MANAGER SELECTION PROCESS

The Team develops a nuanced understanding of the Manager's investment process and portfolio characteristics

- Alpha sources
- Number of positions
- Portfolio concentration
- Sector & country exposures
- Market cap
- Active share/TE

DEVELOP IMA & GUIDELINES

Investment Team, Risk Team and Legal Team collaborate to develop appropriate guidelines for the strategy. Team develops soft thresholds and hard thresholds. Criteria could include:

- TE
- Value at risk
- Exposures, i.e. sector, country
- Number of positions
- Portfolio concentration
- Leverage

IC approves guidelines

COMPLIANCE MONITORING

- Risk Team uses Northern Trust Compliance tool to monitor holdings-based guidelines.
- Develops performance monitoring reports to monitor performance-based guidelines
- Investment Team reviews qualitative guidelines such as number of counterparties as part of the ongoing monitoring process

GUIDELINE BREACHES

- Soft guideline breaches are flagged by the manager and/or internal tools. Risk Team reviews and determines if a course of action is necessary.
- Hard guideline breaches triggers formal review. Risk Team evaluates and produces memo of breach to IC
- **IC approves waiver or resolution**

ANNUAL REVIEW

- Investment and Risk Team conducts a formal review of all breaches that occurred over the year.
- Risk Team produces and presents the *Compliance Exceptions Report* to IC annually
- **IC approves Compliance Exception Report**

INVESTMENTS GUIDELINES

SMA vs Commingled

GUIDELINE PROCESS IS DIFFERENT FOR SMAS VS. COMMINGLED FUNDS

SMA GUIDELINES:

- Highly customizable, can set specific parameters for the SMA
- Guidelines are agreed upon by the manager and the Team—a key part of the IMA process
- Both the manager and Risk Team are responsible for flagging breaches
- Staff may implement additional internal monitoring guidelines when appropriate

COMMINGLED:

- Difficult to implement customized guidelines for commingled products-may have to invest as is
- Team evaluates the products existing guidelines and determines if they are acceptable given the strategy of the product
- Team also develops an internal set of soft and hard guidelines (not part of IMA) for monitoring by Staff
- Staff will engage with the manager when breaches of internal guidelines occur

Investment Committee approves and reviews actions in the event of a hard guideline breach

INVESTMENTS GUIDELINES:

Guideline Criteria

GUIDELINE CRITERIA (Examples)	Explanation
<u>PERFORMANCE BASED GUIDELINES</u>	
Value at Risk	Performance based guidelines pertain to realized risk metrics. These are determined using a manager's historical performance track record and determine upper and lower bounds in normal market conditions. These are adjusted qualitatively considering the manager's strategy and process. For example, Value at Risk pertains to the magnitude of capital loss at a risk level while Tracking Error indicates the magnitude of capital loss at a risk level relative to the index. Beta pertains to sensitivity of the manager's performance relative to the index.
Tracking Error	
Beta vs. Index	
<u>PORTFOLIO CONSTRUCTION GUIDELINES</u>	
Exposure Outside Benchmark	These metrics indicate characteristics of a manager's portfolio. We evaluate a manager's historical exposures and determine upper and lower bounds in normal market conditions. Further, we adjust qualitatively considering the manager's strategy and investment process. Collectively, these portfolio construction metrics, such as those shown on the left, help achieve the results desired in the performance behavior of the portfolio.
Top Ten Weight	
Country Exposure	
Market Cap Breakdown	
<u>OTHER/QUALITATIVE GUIDELINES</u>	
Number of Counterparties	These metrics qualitatively assess best practices for the strategy under normal market conditions. Counterparty concentration is an example of such risk

INVESTMENTS GUIDELINES

DFA Emerging Markets All Cap Core

DFA Emerging Markets All Cap Core (Commingled Fund)	Soft Threshold (Staff Review)	Hard Threshold (IC Review)
Risk Metrics (1 Year, Monthly Returns)		
Volatility		
High	25%	35%
Tracking Error		
Low	2%	1.5%
High	5%	6%
Beta vs. Index		
Low	0.9	0.8
High	1.1	1.2
Portfolio Construction		
Exposure Outside Benchmark		
High	<35%	<40%
Concentration		
Top Ten Weight	<20%	<30%
Largest Position Size	<5%	<6%
Sector Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Country Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Currency Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Emerging Markets Threshold	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Market Cap Breakdown	+/-30% or +/-0.4x whichever is larger	+/-40% or +/-0.6x whichever is larger
Leverage	<1.5%	<2.5%
Cash	<2%	<3%
Composite equity instruments	<2%	<5%

Benchmark: MSCI Emerging Markets Index

THIS FUND IS A COMMINGLED FUND. THESE GUIDELINES ARE INTERNAL AND ARE MONITORED BY STAFF

INVESTMENTS GUIDELINES

DFA Emerging Markets All Cap Core Ex-China

DFA Emerging Markets All Cap Core Ex-China (Commingled Fund)	Soft Threshold (Staff Review)	Hard Threshold (IC Review)
Risk Metrics (1 Year, Monthly Returns)		
Volatility		
High	25%	35%
Tracking Error		
Low	2%	1.5%
High	5%	6%
Beta vs. Index		
Low	0.9	0.8
High	1.1	1.2
Portfolio Construction		
Exposure Outside Benchmark		
High	<35%	<40%
Concentration		
Top Ten Weight	<20%	<30%
Largest Position Size	<5%	<6%
Sector Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Country Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Currency Thresholds	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Emerging Markets Threshold	+/-10% or +/-0.3x whichever is larger	+/-15% or +/-0.5x whichever is larger
Market Cap Breakdown	+/-30% or +/-0.4x whichever is larger	+/-40% or +/-0.6x whichever is larger
China Exposure	<0.5%	<1%
Leverage	<1.5%	<2.5%
Cash	<2%	<3%
Composite equity instruments	<2%	<5%

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Benchmark: MSCI Emerging Markets Ex-China Index

Note: Unlike the fund, the benchmark is primarily large cap stocks

INVESTMENTS GUIDELINES

State Street MSCI Emerging Markets Ex-China

State Street MSCI Emerging Markets Ex-China (Commingled, Passive)	Soft Threshold (Staff Review)	Hard Threshold (IC Review)
Performance/Risk Metrics		
One Month Performance Deviation		
High	0.1%	0.2%
Tracking Error		
High	0.3%	0.5%

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INVESTMENTS GUIDELINES

State Street MSCI China

State Street MSCI China (Commingled, Passive)	Soft Threshold (Staff Review)	Hard Threshold (IC Review)
Performance/Risk Metrics		
One Month Performance Deviation		
High	0.1%	0.2%
Tracking Error		
High	0.3%	0.5%

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Agenda item VI. to follow