

INVESTMENT SEMINAR

THE VALUE OF INVESTMENT MANAGEMENT

Presented by:
Scott M Anderson, CFA
Eric Chin
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NORTH
Dakota
Be Legendary.

Retirement & Investment

INVESTMENT TEAM

TEAM MEMBER EXPERIENCE: > 15 YEARS AVERAGE

- 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

Scott M Anderson – Chief Investment Officer

Eric Chin – Deputy Chief Investment Officer

Derek Dukart – Senior Analyst Internal Equity

Chirag Gandhi – Portfolio Manager Internal Fixed Income

George Moss – Portfolio Manager Internal Equities

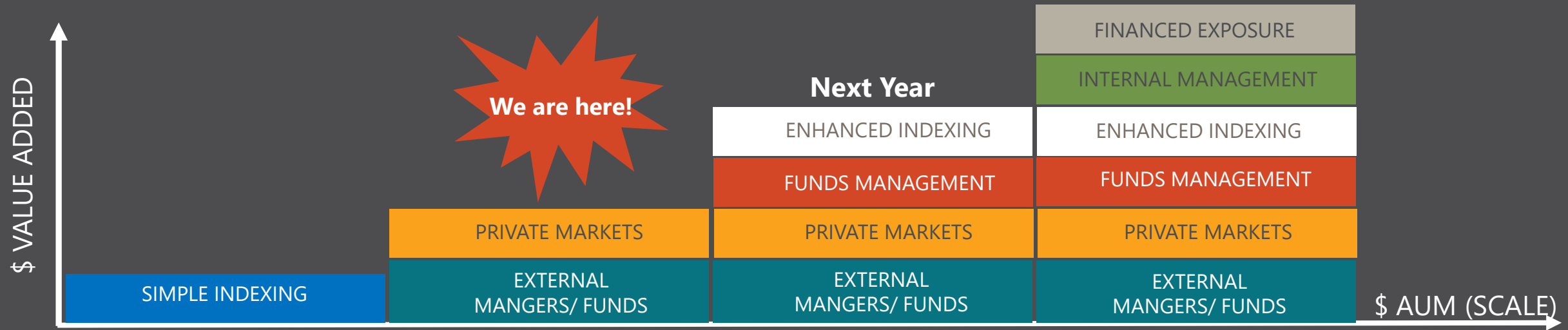
Matt Posch – Portfolio Manager Public Funds Management

Nitin Vaidya – Chief Risk Officer

Jason Yu – Risk Analyst

Lance Zietlow – Portfolio Manager Private Markets

ROADMAP FOR SUCCESS



CAPABILITIES FOR SUCCESS

- Delegated authority
- Incentive comp system
- Direct investment team
- Independent benchmark consultant
- Private markets benchmark corridor
- Fund pooling
- Daily fund values and returns
- Advanced operations
- Audit processes and compliance
- New investment processes
- Fund and liquidity management
- Derivatives overlays
- Valuation and exposure management
- Investment data warehouse
- Order management system
- Portfolio management analytics
- Integrated data and messages
- Knowledge management system

GOAL

- Maximize return for a level of uncertainty
- At a prudent level of uncertainty
- After cost

**Maximizes
a plan's
value!**

WHY INVESTMENT MANAGEMENT?

1. INCREASES RETURN FROM BETTER ALLOCATION

- An investment platform enables investment in a greater range of strategies and asset classes
- Higher return allocations require a staff led implementation
- Most higher return allocations cannot be implemented with indexes



*PERS 10-Year Performance Compared to Indexing

2. INCREASES RETURN FROM BETTER SELECTION

- An investment platform enables capabilities for selection of better individual investments
- Better selection of investments enables out-performing a benchmark
- The best higher return investments are not available as indexes



*PERS 10 Year Performance Compared to Benchmark

3. ENABLES DIVERSIFICATION BENEFITS

- Diversification reduces uncertainty for a given return
- The best diversification opportunities require a staff led implementation
- The best diversification opportunities are not available as indexes



-10.5%*
Less uncertainty!

*Based on PERS risk and index risk

4. REDUCES COSTS

- An investment platform reduces the cost of plan operations and increases the return from operational enhancements
- An internal investment capability reduces costs
- Investment staff is needed to enable these benefits

**> \$16 MM*
Per Year!**

*Internal investment business case

ALPHA AND FUNDS MANAGEMENT (AFM)

Eric Chin

AFM: THE TEAM



- Manages externally managed strategies that transact in public markets
- Oversees ~\$10.5B of public equities, and ~\$6.9B of public fixed income

AFM: GOALS

- Find investment managers / strategies that can beat the market (i.e., Russell 1000, S&P 500)
- At prudent levels of uncertainty
- Net of fees



AFM: MANAGER SELECTION

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:

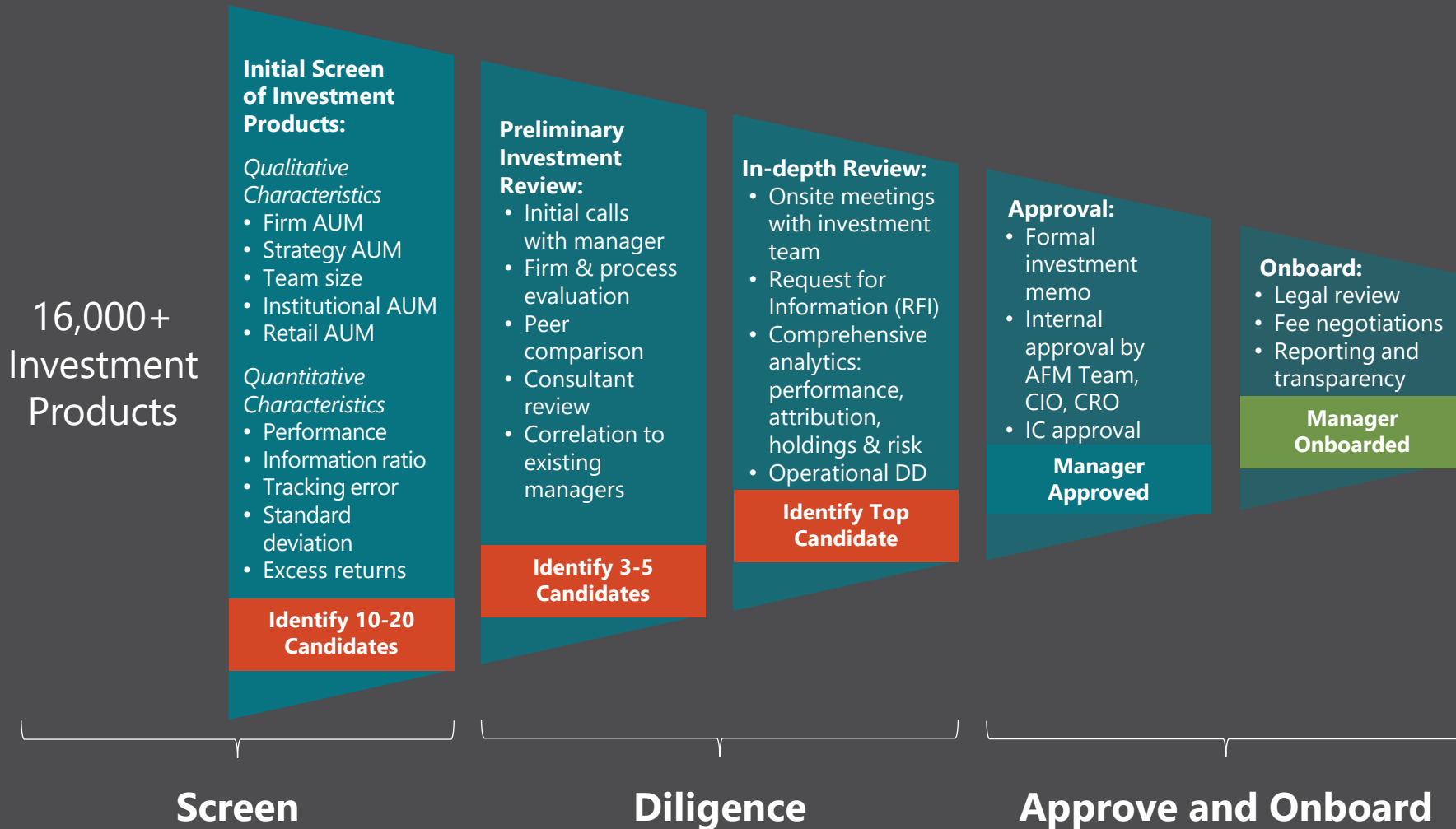
- Assess a manager's competitive edge, process, strategy, alpha sources, team capabilities etc.
- Develop investment thesis



Quantitative Analysis:

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

AFM: MANAGER SELECTION PROCESS



Manager Selection Process

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

AFM: PUTTING IT ALL TOGETHER

IDENTIFY BEST-OF-BREED MANAGERS

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

CREATE PORTFOLIO OF MANAGERS

Identify the right mix of managers to create a portfolio:

- Find managers that have uncorrelated sources of alpha.
- Identify a portfolio that benefits from strategy diversification but that is not overdiversified.

ASSESS RISK

Quantify risks at the overall portfolio level:

- Liquidity
- Concentration
- Tail risks
- Systematic
- Inflation
- Factor
- Event
- Currency
- Others

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, and excess returns

PRIVATE MARKETS

George Moss

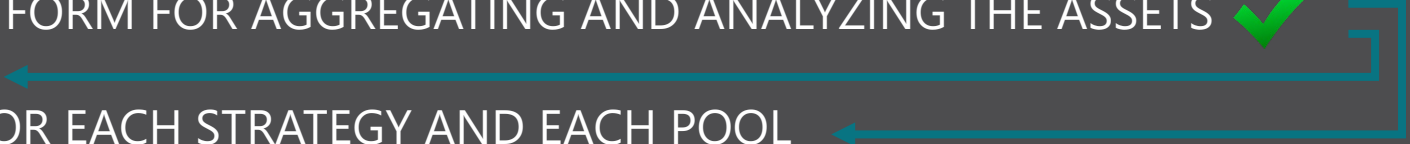
STRUCTURE FOR SUCCESS

PHASE

ACTIVITIES

1.0

DATA GATHERING & ANALYSIS

- STAFFING: GEORGE MOSS (NOV '22), LANCE ZIETLOW (MAR '23) ✓
 - TECHNOLOGY PLATFORM FOR AGGREGATING AND ANALYZING THE ASSETS ✓
 - BENCHMARKING
 - PACING MODELS FOR EACH STRATEGY AND EACH POOL
- 

2.0

OPTIMIZATION

- MOVE AWAY FROM EXTERNAL FUND-OF-FUNDS, AND TO THE EXTENT POSSIBLE BE CONSISTENT ACROSS POOLS ★
- ADDRESS CONCERNS IN SUB-ASSET CLASSES ★
- CONSIDER DEDICATED PRIVATE MARKET CONSULTANT

3.0

ADVANCED FUNDS MANAGEMENT

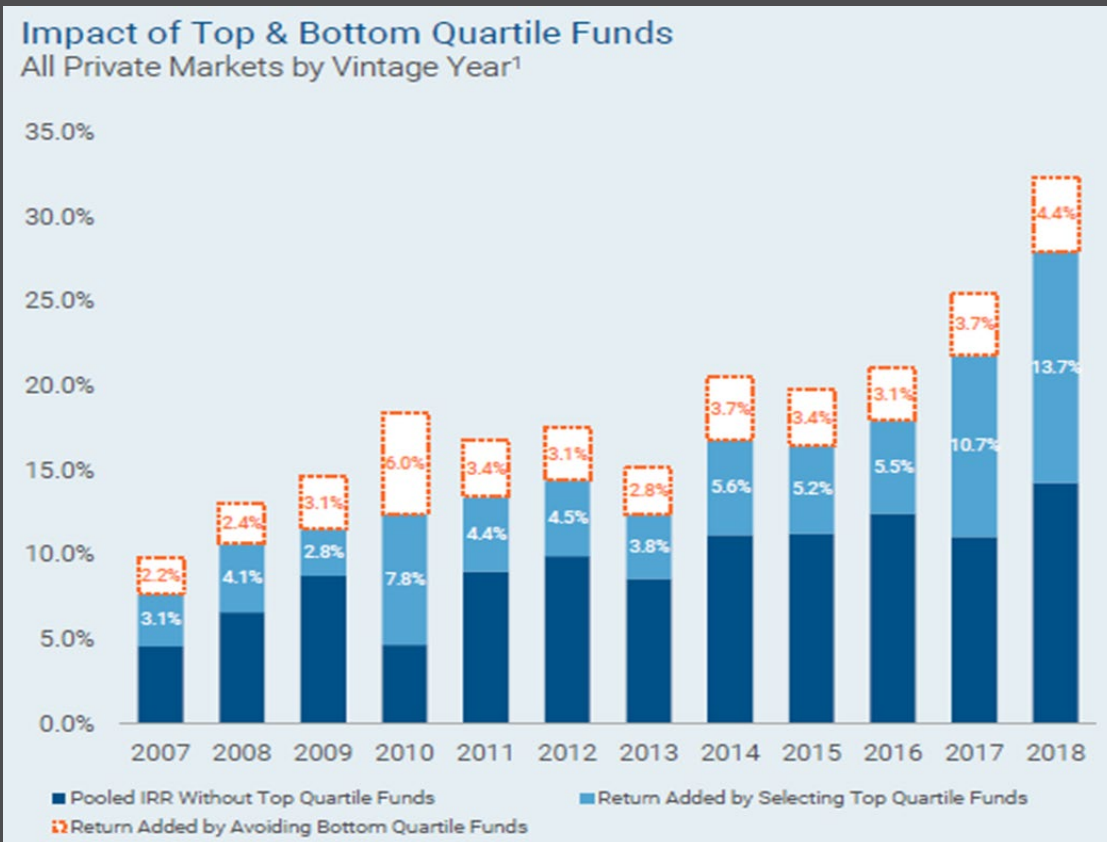
- FULLY OPERATIONAL INTERNAL FUND-OF-FUNDS STRUCTURE
- BUILD OUT A COINVESTMENT PLATFORM
- MANAGE LIQUIDITY AND EXPOSURES WITH PUBLIC PROXIES

WE BELIEVE

- Private markets are a strategy, not asset classes.
- Higher cost and less liquidity must be compensated for.
- Private markets are less efficient than public markets.
- Accessing top-performing managers is crucial to success.

STRATEGY

Due to the wide dispersion of manager returns, accessing top-tier managers is crucial, but avoiding the bottom-tier can be equally impactful.



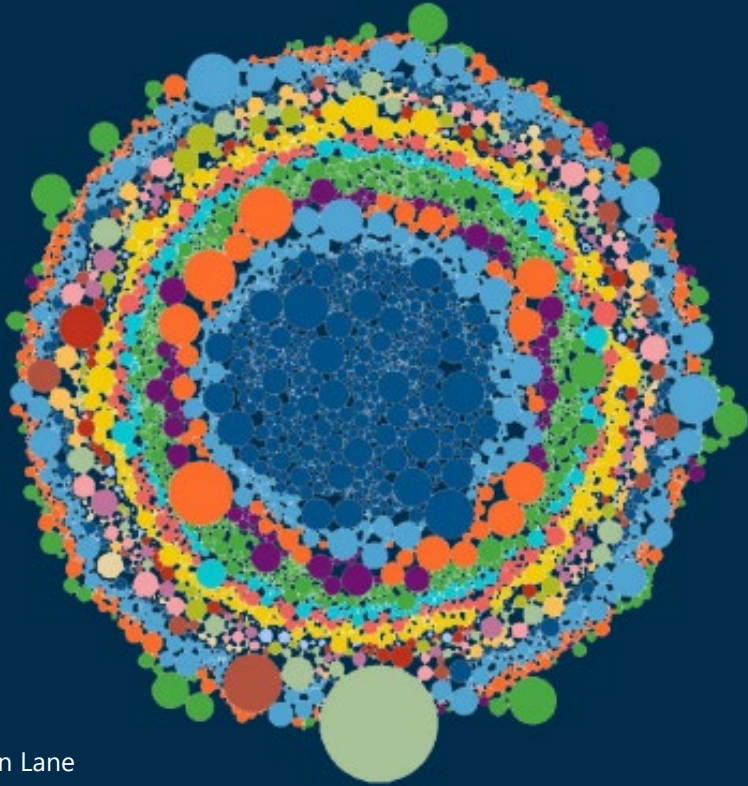
Source: Hamilton Lane

- Through the team's experience and by leveraging existing relationships and technology, we seek to partner with the best managers that we can access.
- Seek consistency while also being cognizant of prevailing conditions.
- Global in scope with geographic exposure that roughly equates to the opportunity set.

PROCESS

Private Markets Industry – Today

Managers with Funds Raised in the Trailing 10 Vintage Years



Source: Hamilton Lane



INTERNAL INVESTMENT TEAM

George Moss

STRUCTURE FOR SUCCESS

PHASE

ACTIVITIES

1.0

STAFFING, TECHNOLOGY, & INITIATION

- STAFFING
 - EQUITIES: GEORGE MOSS (AUG '24), DEREK DUKART (AUG '24) ✓
 - FIXED INCOME: CHIRAG GANDHI (SEP '24), SENIOR ANALYST TO BE HIRED ✓
- TECHNOLOGY PLATFORM FOR TRADING AND ANALYTICS ✓
- CASH OVERLAY FOR ASSET ALLOCATION COMPLETION AND REBALANCING EFFICIENCY
- INDEX REPLICATION TO REDUCE COST AND LAY FRAMEWORK FOR FUTURE

2.0

ADD ASSETS & COMPLEXITY

- ENHANCED INDEXING
- ACTIVE PORTFOLIO TILTS

3.0

ADVANCED FUNDS MANAGEMENT

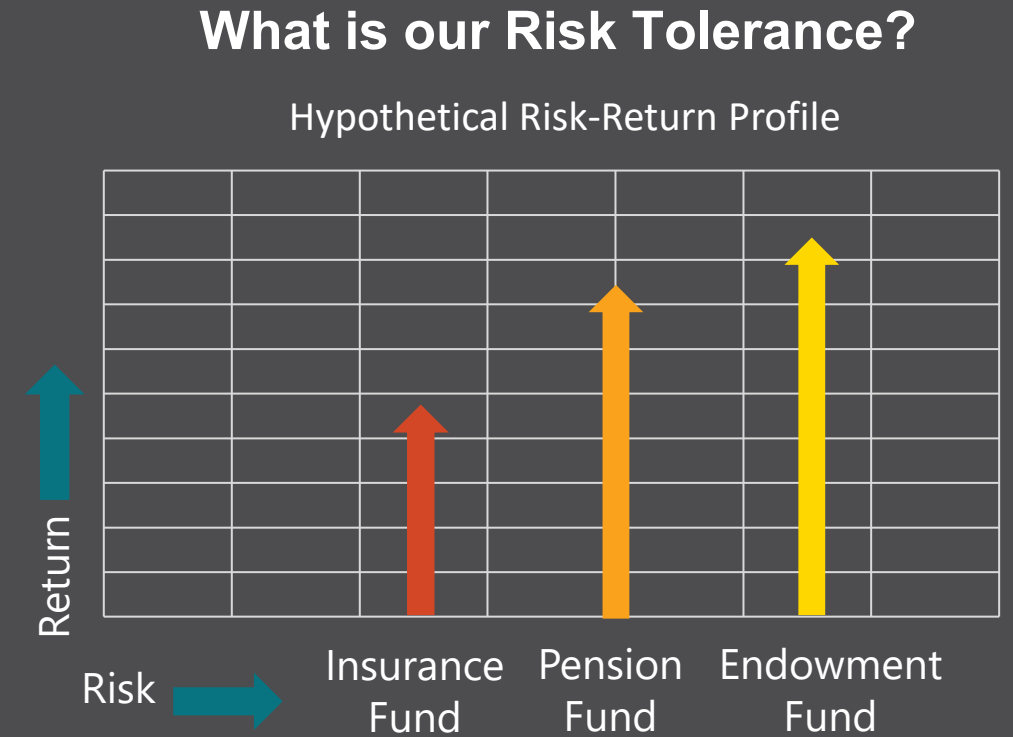
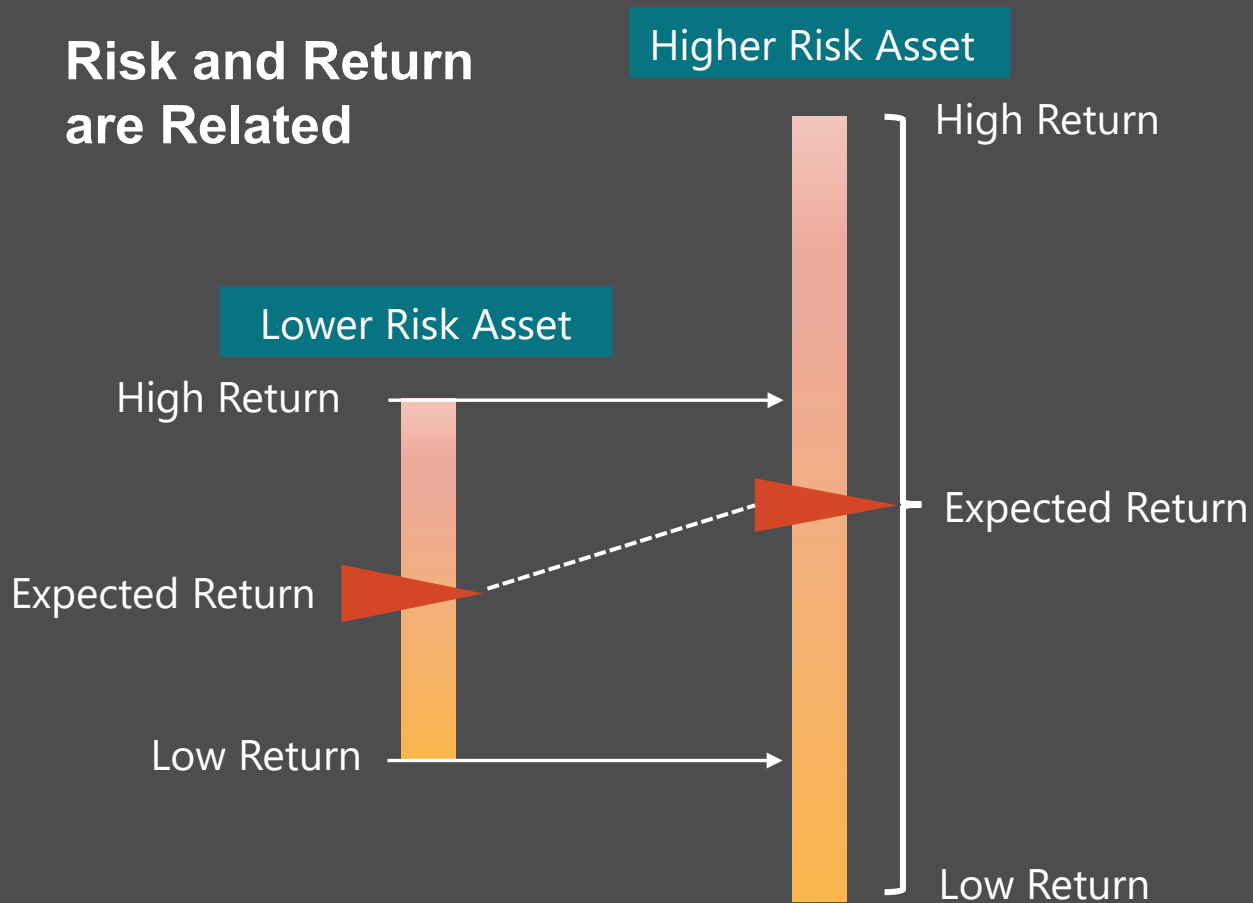
- ADVANCED ACTIVE STRATEGIES: HIGH YIELD, SMALL CAP, LONG/SHORT, FACTOR BASED, TREND FOLLOWING, BEST IDEAS, AND OTHERS

RISK ALLOCATION AND MANAGEMENT

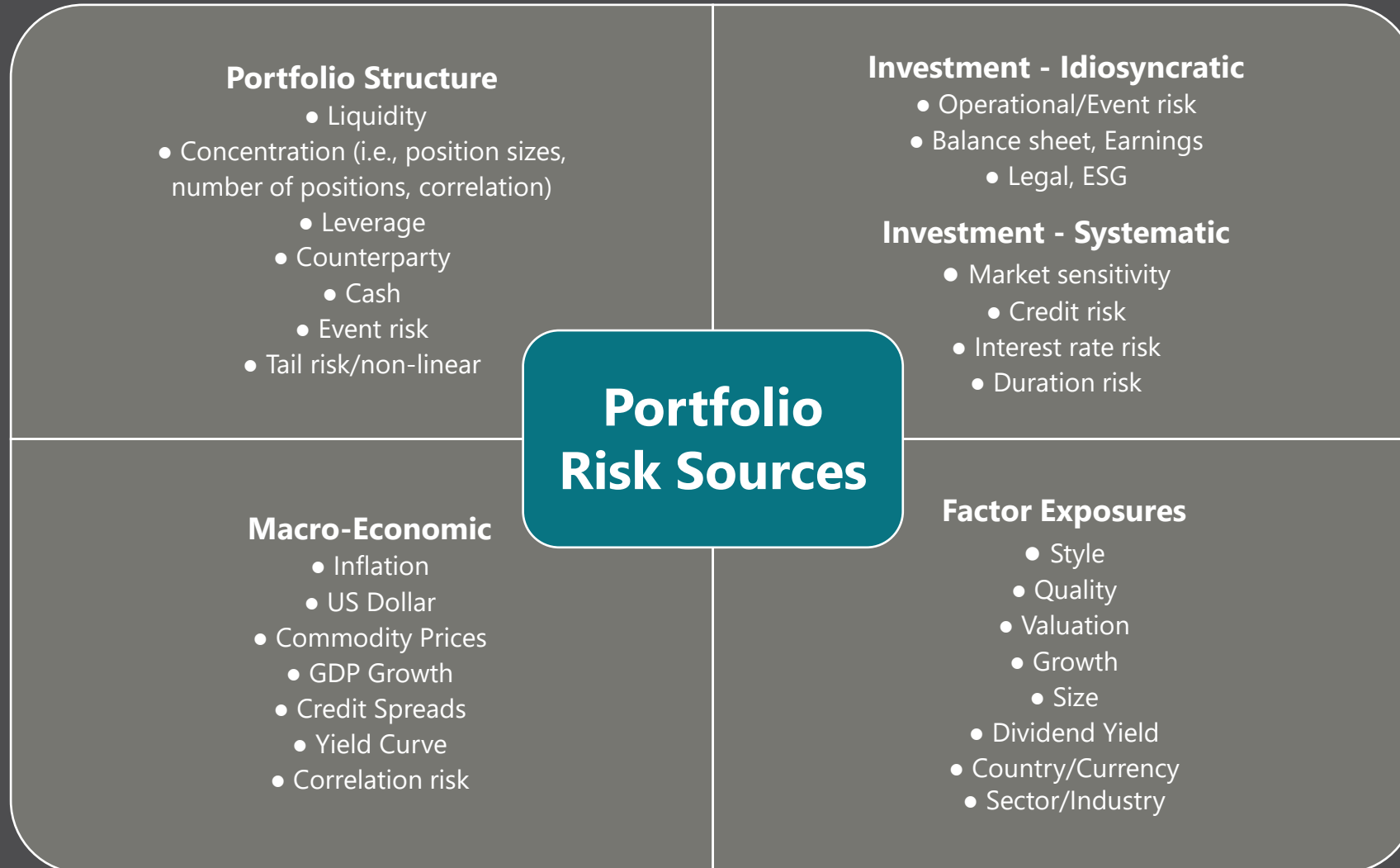
Nitin Vaidya, CFA

RISK AND INVESTMENT OUTCOMES

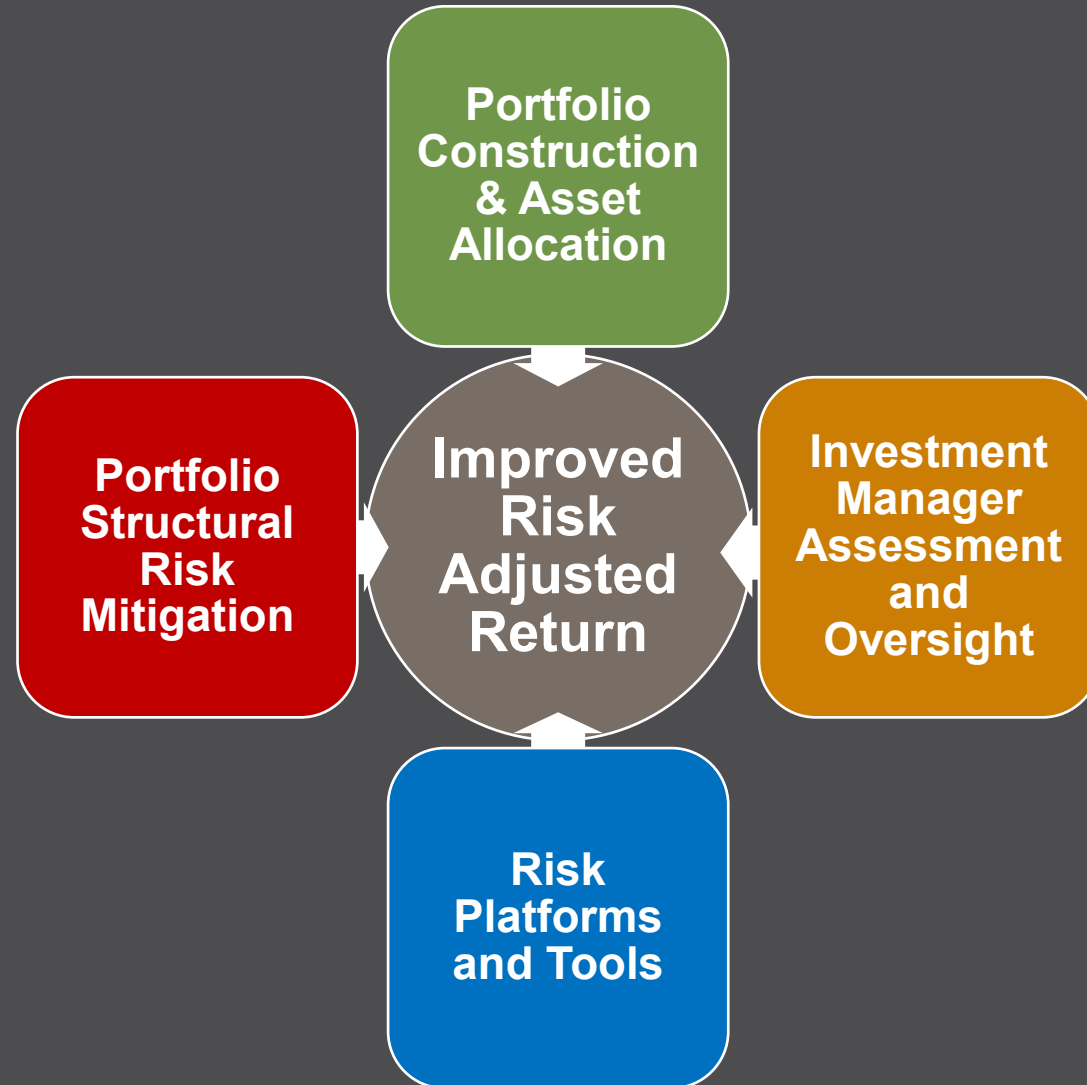
“Investment Management is about managing risk not avoiding it” – Benjamin Graham



SOURCES OF PORTFOLIO RISK



RESPONSIBILITIES OVERVIEW



MENTAL MODEL FOR EVALUATING OUTCOMES

What is good performance?

	Bad Outcome	Good Outcome
Good Decision	Good decision Bad outcome due to adverse market environment	Good outcomes due to sound process and execution
Bad Decision	Poor results due to poor execution or unsound process	Poor decisions Good outcome due to favorable market environment

Key Question: *Was the level of risk consistent with expectations and was the process and its execution sound?*

QUESTIONS

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