BOARD OF UNIVERSITY AND SCHOOL LANDS OCTOBER 26, 2023 9:00 AM



Governor's Conference Room and Via Microsoft Teams

Join on your computer, mobile app or room device

Click here to join the meeting

Or call in (audio only)

+1 701-328-0950,,701106825#

Phone Conference ID: 701 106 825#

Meeting Coordinators: Catelin Newell – Dir. Admin Services & IT, Kate Schirado – Exec. Assistant **Board Action Requested**

1. Approval of Meeting Minutes – Joseph Heringer

Consideration of Approval of Land Board Meeting Minutes by voice vote.

A. <u>September 29, 2023</u> – minutes available via link

2. **Operations – Joseph Heringer**

A. Commissioner's Report - pg. 2

3. **Division Reports – Joseph Heringer**

- A. Surface pg. 3
- B. Minerals pg. 4
- C. Unclaimed Property pg. 6
- D. Executive Summary of Assets pg. 8

4. Investments – Frank Mihail, CIO

- A. Investment Updates pg. 10
- > B. Hedge Fund Recommendation Verition presented by Josh Goldstein, Victoria Distasio, Karl Ngok pg. 13
- > C. International Equity Recommendation Arrowstreet and Acadian presented by Matt Sturdivan of RVK– pg. 40

5. Litigation – Joseph Heringer – pg. 56

- Executive session under the authority of NDCC §§ 44-04-19.1 and 44-04-19.2 for attorney consultation with the Board's attorneys to discuss: pg. 58
 - Continental Resources, Inc. v. North Dakota Board of University and School Lands and the United States of America – Case No. 1:17-cv-014 (Continental Interpleader)

Next Meeting Date – November 30, 2023 via Microsoft Teams ONLY



RE: Commissioner's Report (No Action Requested)

- Commissioner Performance & Compensation Committee first meeting scheduled for Nov. 3rd
- Our team continues to be very involved helping to provide coordinated statewide agency responses to numerous new proposed federal rules (DAPL, oil & gas, environmental, land management plans, etc.)
- Eide Bailly will present annual financial audit report at November 30th meeting
- October 23 attended State Investment Board Investment Committee meeting as a voting member
- October 26 attending full State Investment Board meeting as a voting member

HR Update

• Introduction of new Minerals Officer

Board of University and School Lands Meeting Dates For 2024

North Dakota Century Code 15-01-03 states that the Board shall meet on the last Thursday of each month, unless it appears a quorum will not be present, at which time it may be rescheduled. Special meetings of the Board may be held at any time at the written call of the chairman, the commissioner, or any two members of the Board.

The statutory meeting dates serve as the starting point in efforts to schedule meetings of the Board. The meetings are set at 9:00 AM in the Governor's Conference Room, unless otherwise noted. Board meetings are scheduled for three hours each month in anticipation of executive session needs.

The Board may choose not to convene if there are insufficient agenda items to discuss.

The following dates will be shared with Board members' offices for scheduling purposes.

- January 25, 2024
 9:00 AM 12:00 PM
- February 29, 2024 9:00 AM 12:00 PM
- March 28, 2024 9:00 AM 12:00 PM
- April 25, 2024 9:00 AM 12:00 PM
- May 30, 2024 9:00 AM 12:00 PM
- June 27, 2024 9:00 AM 12:00 PM
- July 25, 2024 9:00 AM 12:00 PM
- August 29, 2024 9:00 AM 12:00 PM
- September 26, 2024 9:00 AM 12:00 PM
- October 31, 2024 9:00 AM 12:00 PM
- December 12, 2024 9:00 AM 12:00 PM (Combined Nov/Dec meeting)

SURFACE DIVISION



Encumbrances issued by Commissioner during September 2023: 14 Right of Way Agreements generating \$43,274 in income for the Trusts.

Trust Lands in Billings County 142-102-34 (May 2023) Photos Credit: Jacob Lardy



MINERALS DIVISION FISCAL YTD O/G ROYALTIES



As of September 30, 2023*, for fiscal year 2023-24 the Department has received **\$107,050,222** in royalties as compared to **\$156,883,293** last fiscal year at this time.



*September royalty revenue is from July gas production and August oil production.

PRICE MAIN DRIVER OF O/G ROYALTIES

In the early years production growth was the driver of the Department's royalty increases. Now that our net monthly production has been more consistent, averaging around 400,000 barrels per month, the price of oil & gas is the main driver of monthly royalty variations.

Dakota Trust Lands

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Page 005
Oil Royalties ----- Volume ----- Price

UNCLAIMED PROPERTY DIVISION

https://unclaimedproperty.nd.gov/



For the month of September 2023, the Division paid 511 claims with \$535,606 returned to rightful owners/heirs. It also received 227 holder reports with a dollar value of \$791,985.



UPDATE ON SURCH – 45 States have signed on with 2 more pending very soon. A group of nonpartisan state treasurers are scheduled to meet with the U.S. Department of Labor on November 2, 2023, to begin working on rules need to implement the program.

UNCLAIMED PROPERTY DIVISION

https://unclaimedproperty.nd.gov/



National Spotlight Shows Bumps in Claims for 2023





EXECUTIVE ESTIMATE OF ASSETS								
NORTH DAKOTA DEPARTMENT OF TRUST LANDS								
	As of September 30, 2023							
		MOM\$	MOM%	YOY\$	YOY%			
	9/30/2023 Value	8/31/2023 Value	Change	9/30/2022 Value	Change			
Cash	315,029,685	446,460,070		525,976,572				
Investments ^[1]	7,469,299,644	7,407,662,187		6,297,334,096				
Tax Receivables ^[2]	-	-		25,868,603				
Loans ^[3]	37,852,402	37,852,402		40,326,553				
Receivables ^[4]	12,737,419	9,396,582		8,818,509				
Sub-Total Net Assets	\$7,834,919,151	7,901,371,241	-0.84%	\$6,898,324,333	13.58%			
Mineral Rights ^[5]	2,568,614,367	2,568,614,367		2,813,480,347				
Surface Rights ^[6]	518,077,274	518,077,274		511,088,869				
Building Value _[7]	1,015,196	1,015,196						
Total Net Assets	\$10,922,625,988	\$10,989,078,078	-0.60%	\$10,222,893,549	6.84%			

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Approximately 60% of the portfolio is publicly traded for which values are current to the as of date. The remaining 40% is private assets, the values of which are updated as the mangers provide them, typically 30-60 days after the end of each quarter.
 Estimated value of production, extraction, and severance tax payments not yet received by the Department because they are not distributed until two months after production date.

[3]Various loan programs funded with trust assets.

[4] Loans and investments interest accrued, but not yet paid.

[5] Valued annually via contract with Mineral Tracker. Valuation as of June 30, 2023.

[6] Valued annually via Department fair market value policy. Valuation as of March 2023, based off agricultural values.

[7] Updated every other year via broker price opinion. Listed valuation is as of Sept. 15,2022.

BOARD OF UNIVERSITY AND SCHOOL LANDS OCTOBER 26, 2023





- FY End 2020 included initial Mineral valuations as of 12/31/19 amounting to \$1,449,002,408 and surface fair market value as of 12/31/19 amounting to \$538,179,773.
- [2] FY End 2021 included new Mineral valuations as of 12/31/20 amounting to \$2,391,439,503.
 and surface fair market value as of 12/31/20 amounting to \$523,938,730.
- [3] FY End 2022 included most recent Mineral valuations as of 12/31/21 amounting to \$2,813,480,347 and surface fair market value as of 12/31/21 amounting to \$511,088,869.



[1] Jun 2023 includes mineral rights value of \$2,568,614,367

- [2] Sep 2022 includes appraised building value of \$1,015,196
- [3] Mar 2023 includes surface rights value of \$518,077,274



RE: Investment Updates (No Action Requested)

Q4-Q1 Pipeline

<u>Absolute Return</u>: multi-strategy hedge fund recommendation <u>Private Equity</u>: private equity / venture capital recommendation

Portfolio Rebalancing Updates

Capital Calls Funded and Pending: 9/21 GCM Grosvenor Private Equity \$4.2M 9/22 GCM Grosvenor Secondary Opportunities Fund III \$8.5M 9/28 Hamilton Lane Infrastructure Opportunities Fund \$2.2M 10/02 Khosla Ventures \$0.8M 10/16 Ares Pathfinder Fund \$4.5M 10/28 Khosla Ventures \$1.0M

Total Unfunded Commitments Remaining \$467.5M (as of September 30, 2023):

- 1. Private Credit, \$77M
 - i. Ares Pathfinder Fund, \$32M
 - *ii.* Owl Rock Diversified Lending, \$45M
- 2. Private Equity, \$234.5M
 - i. GCM Grosvenor Private Equity, \$90M
 - ii. GCM Grosvenor Secondary Opportunities Fund III, \$98M
 - iii. Morgan Stanley Ashbridge TS Fund II, \$11.5M
 - iv. Khosla Ventures \$35M
- 3. Private Infrastructure, \$6M
 - *i.* Hamilton Lane Infrastructure Opportunities Fund, \$6M
- 4. Absolute Return, \$150M
 - i. Millennium USA LP (Hedge Fund), \$150M



Current Asset Allocation (unaudited)

As of	Market Value	Actual	Target	Lower	Upper	
September 30, 2023	\$			Range	Range	
Equity	2,401,231,801	37.7%	38.0%	28.0%	48.0%	
Broad US Equity	1,116,868,072	17.5%	15.0%	12.0%	18.0%	
Broad Int'l Equity	1,161,056,714	18.2%	15.0%	12.0%	18.0%	
Private Equity	123,307,015	1.9%	8.0%	0.0%	12.0%	
Fixed Income	2,051,760,923	32.2%	30.0%	20.0%	40.0%	
Public Credit	1,117,309,381	17.5%	15.0%	10.0%	20.0%	
Private Credit	934,451,542	14.7%	20.0%	10.0%	25.0%	
Cash / (Implied Leverage)	-	0.0%	-5.0%	-10.0%	5.0%	
Absolute Return	719,908,743	11.3%	15.0%	10.0%	20.0%	
Global Tactical Asset Allocation	143,588,745	2.3%	0.0%	0.0%	0.0%	
Multi-Strategy Hedge Fund	576,319,998	9.0%	15.0%	10.0%	20.0%	
Real Assets	1,200,950,230	18.8%	17.0%	8.0%	26.0%	
Real Estate	865,785,811	13.6%	10.0%	5.0%	15.0%	
Private Infrastructure	335,164,419	5.3%	7.0%	0.0%	11.0%	
Opportunistic Investments	-	0.0%	0.0%	0.0%	5.0%	
Portfolio Total	6,373,851,697	100.0%				-10.0% 0.0% 10.0% 20.0% 30.0% 40.0% 50.0%
						• Actual

Hypothetical Asset Allocation (after funding all commitments)

As of September 30, 2023	Market Value \$	Actual	Target	Lower Range	Upper Range	
		•		F	-	
Equity	2,401,231,801	37.7%	38.0%	28.0%	48.0%	
Broad US Equity	1,018,868,072	16.0%	15.0%	12.0%	18.0%	
Broad Int'l Equity	1,024,556,714	16.1%	15.0%	12.0%	18.0%	
Private Equity	357,807,015	5.6%	8.0%	0.0%	12.0%	
Fixed Income	2,045,349,668	32.1%	30.0%	20.0%	40.0%	
Public Credit	1,033,898,126	16.2%	15.0%	10.0%	20.0%	
Private Credit	1,011,451,542	15.9%	20.0%	10.0%	25.0%	
Cash / (Implied Leverage)	-	0.0%	-5.0%	-10.0%	5.0%	
Absolute Return	726,319,998	11.4%	15.0%	10.0%	20.0%	
Global Tactical Asset Allocation	-	0.0%	0.0%	0.0%	0.0%	
Multi-Strategy Hedge Fund	726,319,998	11.4%	15.0%	10.0%	20.0%	
Real Assets	1,200,950,230	18.8%	17.0%	8.0%	26.0%	
Real Estate	859,785,811	13.5%	10.0%	5.0%	15.0%	
Private Infrastructure	341,164,419	5.4%	7.0%	0.0%	11.0%	
Opportunistic Investments	-	0.0%	0.0%	0.0%	5.0%	
Portfolio Total	6,373,851,697	100.0%				-10.0% 0.0% 10.0% 20.0% 30.0% 40.0% 50.0%
						• Actual 🗖 Target

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Assumptions: No other new cash is expected to fund calls. No redemption proceeds or distributions were received. All capital calls came in at the same time.



MEMORANDUM TO THE BOARD OF UNIVERSITY AND SCHOOL LANDS

October 26, 2023

RE: Absolute Return – Multi-Strat Hedge Fund

The current 9% multi-strat hedge fund allocation represents a \$400M underweight to the 15% strategic asset allocation target. The goal of this proposal is to increase the mult-strat hedge fund allocation and close the global tactical asset allocation portfolio, consistent with strategic asset allocation targets.

Heading into 2024, it is reasonable to expect an increase in market volatility from uncertainty around global inflation and rising geopolitical tensions. This makes it an opportune time to increase the multi-strat hedge fund portfolio with managers who have a proven track record of delivering positive returns across all market environments. Staff and RVK reviewed a dozen hedge fund managers, focusing on rolling correlations, maximum drawdown and Sortino (a ratio of excess return to downside volatility). Staff and RVK recommend:

• Hire Verition Fund Management (~\$150M).

Verition was founded in 2008 and currently manages \$7B in assets across six strategies – (1) credit, (2) fixed income and macro, (3) convertible and volatility arbitrage, (4) event-driven, (5) equity long/short and capital markets and (6) quantitative strategies. The strategies exhibit low correlation to one another, and the total portfolio exhibits low beta to the broad equity and bond market indices.

• Full Redemption PIMCO All Asset All Authority (~\$71M).

The target allocation to global tactical asset allocation strategies has been reduced to 0%. Proceeds will be used to increase the multi-strat hedge fund allocation.

• Full Redemption PineBridge Global Dynamic Asset Allocation (~\$71M).

The target allocation to global tactical asset allocation strategies has been reduced to 0%. Proceeds will be used to increase the multi-strat hedge fund allocation.

Recommendation: The Board approve (1) a full redemption from PIMCO All Asset All Authority (2) a full redemption from PineBridge Global Dynamic Asset Allocation and (3) a \$150M commitment to Verition Fund Management, subject to standard legal review/documentation.

Attachment 1: RVK Executive Summary Attachment 2: Verition Presentation

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Howe					
Superintendent Baesler					
Treasurer Beadle					
Attorney General Wrigley					
Governor Burgum					



Memorandum

То	North Dakota Board of University and School Lands
From	RVK, Inc.
Subject	Multi-strategy Hedge Fund Recommendation – Verition
Date	October 26, 2023

Executive Summary

The Land Board approved an updated strategic asset allocation during its June 29, 2023 meeting that included increasing its multi-strategy hedge fund exposure to 15% target weight. Staff and RVK initiated a search for multi-strategy managers that would bolster the Land Board's existing hedge fund exposure to build on the diversification benefits associated with the portfolio and bring it to target weight. RVK, with staff, determined that the most attractive hedge fund investment would be an additional multi-manager platform. This type of hedge fund investment carries limited market sensitivities and complements the rest of the Land Board's broader portfolio traditional assets.

In conjunction with Staff, RVK identified Verition as an attractive multi-manager platform to complement the current portfolio.

Recommendation

RVK, Inc. recommends that North Dakota Board of University and School Lands invest \$150 million in Verition International Multi-Strategy Fund. Since 2008 the manager has proven its ability to produce consistently positive, low volatility returns with limited drawdowns.

Investment Rationale:

Verition has numerous advantages that together create a competitive edge relative to peers. The firm's ability to source and recruit niche talent gives it a compelling value proposition. The fund currently utilizes underlying sub-strategies that would be challenging to replicate by allocating to other hedge funds or a group of single strategy managers.

RVK and Staff acknowledge the higher fee terms associated with an investment in Verition International Multi-Strategy Fund can be viewed as substantial. The firm charges partial passthrough fees to investors beyond its standard management and incentive fees. However, this is not an uncommon feature for multi-manager platforms, and the expenses that Verition passes through to investors are lower than its larger peers.

RVK views the Verition International Multi-Strategy Fund as a potential core allocation in a client's portfolio of hedge funds. The fund can act as a replacement for Fund of Hedge Fund exposure, potentially alongside one or two other managers, or as a high return generator with low market

RVKInc.com



sensitivity in a more diversified portfolio of hedge funds.

Manager Overview: Verition

Verition Fund Management ("Verition" or "the Firm") was launched in March 2008 by Nicholas Maounis and Josh Goldstein. The Firm converted to a fund structure in October 2008 and launched its first external investor share class in November 2013. As of July 31st, 2023, the firm managed \$7.6 billion in investor capital and maintains a diverse investor base which includes pensions, sovereign wealth, endowments, foundations, insurance companies, high net worth individuals and families, fund of funds, Verition insiders and other institutional investors. The firm is headquartered out of Greenwich, CT with additional offices located in New York, London, Hong Kong, and Singapore. Today, Verition employs approximately 400 individuals with around 280 being investment / risk professionals and the remainder non-investment professionals.

Investment Overview

Verition operates as a multi-manager platform. Unlike traditional multi-strategy hedge funds, Verition delegates investment decision making authority to approximately 110, independent portfolio management teams each managing an allocation of the broader fund. This results in a highly diversified portfolio of strategies and investment decision makers. Verition's investment results are highly dependent on its ability to acquire and retain top trading talent, manage risk on a continuous basis at the Fund, portfolio and position level, and its ability to properly allocate capital to its most profitable portfolio management teams. Verition approaches this from two directions:

- **Top-Down Approach:** The Capital Allocation Committee meets formally no less than monthly to review PM and strategy allocations. The committee consists of Verition's Principals and other senior members across the firm's Risk, Treasury, and Finance/Operations departments. Capital is dynamically allocated based on the available opportunity set and potential risk/reward among strategies. Allocations are appropriately sized and optimized based on several factors volatility, liquidity, team experience, quality of returns and their correlation to one another. Verition avoids allocating capital based on macro calls. Each portfolio manager is typically allocated 2-3% of the funds aggregate risk capital.
- **Bottom-Up Approach:** The primary talent acquisition tool is compensation. Portfolio manager compensation is generally high but is also structured to align with performance and return quality to promote capital efficiency and reward risk-adjusted returns. Verition does not force portfolio managers to utilize their full capital allocation and encourages



them to de-lever at times. This helps to ensure capital is not deployed into poor opportunities or overly concentrated.

Unlike some multi-manager peers, Verition does encourage collaboration between teams. Verition believes that an "integrated approach fosters the cross pollination of ideas, which allows for the discovery of alpha that exists at the intersection of strategies."

Amaranth

The impetus for launching Verition was to manage the vast majority of Co-Founder Nicholas Maounis' own personal wealth in a risk-adjusted fashion following the wind down of his predecessor firm, Amaranth Advisors, in 2006. This fact may be difficult for some investors; however, we believe there are numerous mitigating factors and lessons learned that support our confidence in Verition. Since 2008, the firm has proven its ability to produce strong returns and protect investor capital through adverse market environments repeatedly. RVK believes Verition will continue to be a leader in the hedge fund industry. We emphasize that though the fees are high, all returns presented in this report are net of fees.

Track Record

Verition's track record has been strong since the inception of the fund, and comparable to the largest and most successful multi-manager funds currently in the market. Since inception, the fund's highest fee share class (2% & 20% plus pass-through fees) has generated net returns of 12.5% with a standard deviation of 5.75%, resulting in a Sharpe of 2.05. The Fund has exhibited low correlation to the S&P500 and MSCI ACWI since inception at .27 and .30 respectively. Verition's beta has also remained low to both the S&P500 and MSCI ACWI with betas of .10 and .11. The Fund has performed well across a variety of market conditions and has outperformed the HFRI RV: Multi-Strategy Index by 8.6% on an annualized return basis. Verition has produced 10.9% of alpha since inception above the MSCI ACWI, which compares favorably to the 2.4% of alpha over the same index generated by the HFRI RV: Multi-Strategy Index.



QTD	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	15 YR
		5.6	11.0	11.3	10.8	11.8	12.4
-0.2	1.5	0.1	5.6	3.6	4.0	3.6	4.0
0.4	7.7	0.9	10.1	6.8	9.0	7.8	5.6
-1.5	1.4	-4.5	-4.7	-1.2	-0.5	0.1	1.4
-0.4	5.2	-1.1	4.1	3.8	5.3	4.9	4.1
	-0.2 0.4 -1.5	1.2 2.1 -0.2 1.5 0.4 7.7 -1.5 1.4	1.2 2.1 5.6 -0.2 1.5 0.1 0.4 7.7 0.9 -1.5 1.4 -4.5	1.2 2.1 5.6 11.0 -0.2 1.5 0.1 5.6 0.4 7.7 0.9 10.1 -1.5 1.4 -4.5 -4.7	1.2 2.1 5.6 11.0 11.3 -0.2 1.5 0.1 5.6 3.6 0.4 7.7 0.9 10.1 6.8 -1.5 1.4 -4.5 -4.7 -1.2	1.2 2.1 5.6 11.0 11.3 10.8 -0.2 1.5 0.1 5.6 3.6 4.0 0.4 7.7 0.9 10.1 6.8 9.0 -1.5 1.4 -4.5 -4.7 -1.2 -0.5	1.2 2.1 5.6 11.0 11.3 10.8 11.8 -0.2 1.5 0.1 5.6 3.6 4.0 3.6 0.4 7.7 0.9 10.1 6.8 9.0 7.8 -1.5 1.4 -4.5 -4.7 -1.2 -0.5 0.1

Exhibit 1: Annualized Returns

*Verition Multi-Strategy Fund YTD returns as of 9/30 +6.6%

Exhibit 2: 10-Year MPT Statistics

10-Year MPT Stats	Return	StDev%	Sharpe Ratio	Max DD	Time to Recover (Mos)	CVAaR(95%)
Verition Multi-Strategy Fund	11.8	4.8	2.3	-4.7	7.0	2.9
HFRI RV: Multi-Strategy Index	3.6	3.5	0.8	-6.6	4.0	2.5
MSCI ACWI	7.8	14.5	0.5	-25.6	7.0	9.9
Barclays Global Agg	0.1	5.8	-0.2	-24.2	6.0	4.2
60% ACWI/40% BGbl AGG	4.9	10.0	0.4	-23.3	7.0	7.1



Exhibit 3: 3-Year Rolling Alpha vs. MSCI ACWI

RVK · 4 Page 017



Key Terms

Management Fee	Class A interests, C/D shares: 2% management fee
	Class C interests, G/H Shares: 1.75% management fee
Incentive Fee/Allocation	Class A interests, C/D shares: 20% incentive fee subject to higher water mark
	Class C interests, G/H shares: 18% incentive fee subject to high water mark
Passthrough Fees	Partial passthrough: all classes pay their pro-rata share of applicable specialty strategy costs and trading, operating, and administrative expenses.
Side Pockets	If the investor elects to opt in, Verition can allocate up to 10% of their current capital to side pocketed investments with longer liquidity horizons.
Minimum Initial Investment	\$5,000,000
Subscription Frequency	Monthly
Withdrawal Frequency	Class A interests, C/D shares: quarterly liquidity with 45 days' notice, subject to 25% investor level gate
	Class C interests, G/H shares: quarterly liquidity with 45 days' notice, subject to 8.33% investor level gate
Lock-Up	No lock-up applies to new investments in Verition International Multi-Strategy Fund, though full exit takes 1 year for investors in Class A interests and 3 years for investors in Class C interests.

FOR PROFESSIONAL CLIENTS ONLY

VERITION

FUND MANAGEMENT

SEPTEMBER 2023

Prepared for: North Dakota Board of University and School Lands

INVESTOR PRESENTATION

This document is confidential for the addressee only and not for distribution without the prior written consent of Verition Fund Management LLC. It should be read for informational purposes only and shall not constitute an offer to make an investment in Verition Multi-Strategy Fund LLC (the "Onshore Fund") or Verition International Multi-Strategy Fund Ltd. (the "Offshore Fund") (collectively, the "Verition Multi-Strategy Funds" or the "Funds"). Such an offer may only be made at the time a qualified offeree receives the Offshore Fund's Confidential Offering Memorandum and/or the Onshore Fund's Confidential Private Placement Memorandum (collectively, the "Memoranda"). The information contained herein is a summary of the terms and conditions of the Funds and does not purport to be complete. It is qualified in its entirety by the information in the Funds' Memoranda. Capitalized terms used herein but not defined shall have the same meaning as in the Memoranda. See Performance and General Disclosures on the last pages of this document for important information relating to the Funds. All information herein calculated using the Class C Modified Interests/Class G/H Shares – USD (1.75%/18%) returns unless otherwise specified.

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INTRODUCTION TO VERITION FUND MANAGEMENT

Verition Fund Management LLC

Verition is a multi-strategy,	Founded in 2008 by Nicholas Maounis (Principal & CEO) and Josh Goldstein (Principal, President & COO).	INCEPTION	2008
multi-manager hedge fund focused on global investment strategies. Capital Allocation, Risk Management & Talent are the three cornerstones of our business.	Verition Parties have committed significant capital to Verition, keeping interests aligned with our investors.	STRATEGY AUM	\$8.1 BN
	Verition has a diversified investor base with over 175 unique relationships.	ITD ANN RETURN	13.11%
Core/Hedge, 0.8%	Credit, 13.3%	ITD BETA (TO S&P 500)	0.09
Quantitative Strategies, 9.9% RISK CAPITAL Equity L/S &	Fixed Income & Macro, 30.7%	ITD SHARPE RATIO	2.12
Capital Markets, 23.0% % Event-Driven, 11.6%	Convertible & Volatility Arbitrage, 10.7%	ITD SORTINO RATIO	5.40
Past performance is not a guide to future performance and an investme possibility of total loss. Performance may vary depending on share class. I fluctuations. Verition cannot assure any investor that the Funds' investment Investment results may vary substantially on a monthly, quarterly, and a sophisticated persons for which an investment does not represent a complete of assuming the risks involved. Please note that exposure to Specialty Strates	Returns could be reduced, or losses incurred, due to currency objectives will be met or that there will be any return of capital. annual basis. The Funds are suitable for investment only by a investment program and who fully understand and are capable	% OF UP MONTHS SINCE INCEPTION	79%

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of assuming the risks involved. Please note that exposure to Specialty Strategies will likely bear materially higher costs and expenses. Please see last slides for Performance and General Disclosures.

VERITION

NET HISTORICAL PERFORMANCE

Verition Multi-Strategy Composite, Participating Modified Interests Class C Modified Interests/Class G/H Shares – USD (1.75%/18%)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	S E P	ОСТ	NOV	DEC	YEAR
2008	-	-	2.76%	-0.06%	2.00%	-0.11%	6.34%	-0.60%	2.44%	2.95%	0.96%	1.68%	19.75%
2009	1.30%	-4.32%	-2.35%	4.06%	4.40%	0.64%	4.21%	3.70%	6.64%	-0.69%	1.84%	3.56%	24.90%
2010	2.25%	-0.55%	1.12%	3.76%	-2.28%	0.15%	0.29%	0.43%	1.60%	2.37%	-0.83%	3.26%	12.01%
2011	2.27%	0.71%	1.70%	1.26%	0.34%	-1.01%	-0.90%	-4.83%	-1.87%	2.78%	0.38%	-0.12%	0.49%
2012	4.10%	1.19%	0.92%	1.13%	-0.94%	-1.42%	1.07%	0.30%	1.69%	0.37%	2.09%	1.62%	12.70%
2013	2.22%	1.02%	1.43%	0.30%	2.67%	0.84%	2.43%	-0.13%	3.11%	0.50%	1.86%	5.80%	24.24%
2014	2.48%	3.98%	-0.94%	-1.28%	1.63%	3.55%	2.16%	2.81%	-2.35%	-2.49%	1.07%	0.20%	11.07%
2015	0.41%	0.41%	1.42%	1.35%	1.39%	-0.04%	0.66%	0.55%	-0.99%	2.08%	0.65%	6.26%	14.90%
2016	-0.99%	0.59%	1.19%	0.76%	0.77%	-0.20%	1.80%	1.19%	0.63%	-0.14%	0.16%	0.15%	6.03%
2017	0.30%	1.33%	1.55%	0.10%	-0.43%	1.55%	2.04%	-0.32%	1.91%	1.74%	1.56%	1.25%	13.26%
2018	-0.51%	-0.06%	1.36%	0.80%	1.81%	-1.11%	0.34%	1.20%	0.33%	-0.48%	-3.16%	0.76%	1.20%
2019	2.17%	0.73%	0.34%	2.65%	0.22%	1.24%	1.61%	0.68%	0.37%	1.68%	1.13%	1.52%	15.29%
2020	0.80%	-0.11%	3.95%	3.79%	2.78%	4.39%	1.84%	1.33%	0.84%	1.51%	3.31%	3.37%	31.47%
2021	1.26%	2.14%	-0.01%	0.16%	0.48%	0.50%	-0.25%	0.67%	1.20%	0.46%	0.65%	1.42%	9.01%
2022	0.25%	1.33%	0.40%	0.69%	-0.76%	0.25%	0.73%	1.57%	-0.24%	0.14%	0.34%	0.85%	5.69%
2023	0.57%	0.62%	-0.20%	0.99%	0.21%	0.64%	1.13%	1.29%	1.43%				6.87%
Inceptio	n-to-Date												582.35%

Current month and YTD returns are estimated. Actual figures will be available in next month's report.

Performance Statistics

	VERITION MULTI-STRATEGY FUNDS	S&P 500 TOTAL RETURN	HFRI FUND WEIGHTED COMPOSITE INDEX
Return Since Inception	582.35%	340.85%	80.13%
Annualized Return Since Inception	13.11%	9.99%	3.85%
Annualized Return (1Y)	8.29%	21.62%	6.69%
Annualized Return (3Y)	10.10%	10.15%	6.89%
Annualized Return (5Y)	12.63%	9.92%	5.03%
Annualized Return (10Y)	12.10%	11.91%	4.57%

Past performance is not a guide to future performance and an investment in the Funds involves a high degree of risk including the possibility of total loss. Performance may vary depending on share class. Returns could be reduced, or losses incurred, due to currency fluctuations. Verition cannot assure any investor that the Funds' investment objectives will be met or that there will be any return of capital. Investment results may vary substantially on a monthly, quarterly, and annual basis. The Funds are suitable for investment only by sophisticated persons for which an investment does not represent a complete investment program and who fully understand and are capable of assuming the risks involved. Please note that exposure to Specialty Strategies will likely bear materially higher costs and expenses. Please see last slides for Page 021



Comparison to S&P 500 Down Days



Comparison to S&P 500 Down Months

Data as of 9/30/2023.

The Comparison to S&P 500 Down Months graph charts the pro forma blended net performance of NM Capital LLC/Verition Multi-Strategy Funds against the S&P 500 in those months since March 2008 where the S&P 500 posted a negative return, is provided for illustrative purposes and should not be interpreted as an actual return. The Comparison to S&P 500 Down Days charts all days since January 2014 where the S&P 500 posted a return inferior to -2%). Please note that prior to 2022, the Down Days chart is calculated using the Class A Modified Interests/Class C/D Shares - USD daily returns. Starting January 2022, the Down Days chart is calculated using the Class C Modified Interests/Class G/H Shares - USD daily returns.

Past performance is not a guide to future performance and an investment in the Funds involves a high degree of risk including the possibility of total loss. Performance may vary depending on share class. Returns could be reduced, or losses incurred, due to currency fluctuations. Verition cannot assure any investor that the Funds' investment objectives will be met or that there will be any return of capital. Investment results may vary substantially on a monthly, guarterly, and annual basis. The Funds are suitable for investment only by sophisticated persons for which an investment does not represent a complete investment program and who fully understand and are capable of assuming the risks involved. Please note that exposure to Specialty Strategies will likely bear materially higher costs and expenses. Please see last slides for Performance and General Disclosures.

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VERITION: OUR PILLARS TO SUCCESS

TALENT

Verition has a dedicated Business Development team focused on sourcing and recruiting talent with a physical presence globally.

- Verition has assembled a team of experienced, hard-to-access portfolio managers who have undergone an extensive interview process requiring input from risk management professionals, investment professionals and the Senior Management team.
- Our multi-faceted infrastructure affords us the latitude to pursue strategies not typically available through stand-alone vehicles.

CAPITAL ALLOCATION

Allocation decisions combine our topdown and bottom up approaches.

- Top Down: Senior management and capital allocation committee level.
 - Capital Allocation Committee meets formally on a monthly basis.
 - Capital is dynamically allocated based on market opportunity and potential risk/reward at a strategy and sector level.
- Strategy Level:
 - PMs, Risk Management, and Senior Management are encouraged to share relevant market intelligence and proprietary analytics.
- Bottom Up: Portfolio Manager level
 - PM compensation is based on metrics to encourage efficient capital use and to maximize risk/reward.



RISK MANAGEMENT

Verition maintains a multi-tiered, iterative and integrated risk management framework to monitor and help mitigate risk.

- Tier 1: Portfolio Manager Risk Controls
- Tier 2: Internal Risk
- Tier 3: External Risk
- Tier 4: Risk Committee

Verition uses a combination of proprietary and third-party systems to monitor risk on a continuous basis at the Fund, portfolio and position level.

Risk management begins pre-hire and is continuously evaluated on an intra-day, daily, weekly and monthly basis.

Verition prescribes risk parameters for the Fund and individual portfolios that are tailored based on salient risks.

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INVESTMENT LEADERSHIP



VERITION

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APPENDIX

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INVESTMENT STRATEGY OVERVIEW

Our integrated approach fosters the cross pollination of ideas, which allows for the discovery of alpha that exists at the intersection of strategies.

CREDIT

Employs a relative value approach to capitalize on pricing inefficiencies in liquid credit markets; primarily trading investment-grade, high yield and municipal bonds, as well as fixed income related index and ETF products.

FIXED INCOME & MACRO

Seeks to capitalize on global macroeconomic shifts by trading a combination of rates, currencies and structured products. This strategy employs a directional and relative value approach, focusing on both fundamental and quantitative analysis to identify market dislocations globally.

EVENT-DRIVEN

Seeks to opportunistically exploit market inefficiencies that may be present before or after a merger or acquisition; also focuses on other catalyst-driven investments in more niche market segments.

EQUITY LONG/SHORT & CAPITAL MARKETS

Focuses on hedged, sector or regional specific portfolios with defined drawdown parameters and varied market capitalizations; Capital Markets strategy invests in IPOs, secondaries and follow-on offerings globally.

CONVERTIBLE & VOLATILITY ARBITRAGE

Relative value and fundamental trading as well as capital structure arbitrage in an attempt to profit from the relative mispricing of the securities between two or more issuers or within a company's capital structure. The portfolio has the flexibility to trade across asset classes.

QUANTITATIVE STRATEGIES

Uses proprietary models designed to identify and exploit market inefficiencies within medium frequency, fundamental, and momentum-based frameworks across asset classes.



HISTORICALLY CONSISTENT RISK-ADJUSTED PERFORMANCE WITH LOW CORRELATION

Performance Since Inception



Annualized Volatility

PERIOD	VERITION MULTI- STRATEGY FUNDS	S&P 500 TOTAL RETURN	HFRI FUND WEIGHTED COMPOSITE INDEX
3Y	2.97%	17.60%	6.28%
5Y	4.18%	18.81%	7.74%
Since Inception	5.78%	16.09%	6.51%

Ratios (Since Inception)

	VERITION MULTI- STRATEGY FUNDS	S&P 500 TOTAL RETURN	HFRI FUND WEIGHTED COMPOSITE INDEX			
Sharpe Ratio	2.12	0.57	0.46			
Sortino Ratio	5.40	0.92	0.85			

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LOW CORRELATION ACROSS STRATEGIES

Average pairwise correlation across Portfolio Managers is 0.04*.

	CONVERTIBLE & VOLATILITY ARBITRAGE	CORE/HEDGE	CREDIT	EQUITY L/S & CAPITAL MARKETS	QUANTITATIVE STRATEGIES	FIXED INCOME & MACRO	EVENT- DRIVEN
CONVERTIBLE & VOLATILITY ARBITRAGE							
CORE/ HEDGE	-0.08						
CREDIT	0.18	0.00					
EQUITY L/S & CAPITAL MARKETS	0.02	0.10	-0.12				
QUANTITATIVE STRATEGIES	-0.05	0.03	-0.07	0.43			
FIXED INCOME & MACRO	0.02	-0.20	0.07	-0.03	0.18		
EVENT-DRIVEN	0.06	-0.02	-0.01	0.09	0.19	0.14	

*Average pairwise correlation is calculated using 12 month rolling daily gross returns. As of 9/30/2023. Please see last slides for Performance and General Disclosures.

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CAPITAL ALLOCATION: TOP DOWN, BOTTOM UP APPROACH

Allocation decisions combine our top down views on the opportunity set for our strategies and teams and bottom up views on our conviction in the PM teams.



Top Down: senior management and capital allocation committee level

Capital Allocation Committee meets formally on a monthly basis to review PM and strategy allocations.

Capital is dynamically allocated based on market opportunity and potential risk/reward at a strategy and sector level.

Avoids allocating capital based on macro calls.

Optimizes correlation of portfolios to one another and the broader market.

Appropriately sizes portfolios using a combination of quantitative and qualitative factors: volatility, liquidity, team experience, performance, quality of returns, coverage universe, correlation, Sharpe Ratio, Sortino Ratio, and opportunity set.

Strategy Level

PMs are encouraged to share relevant market intelligence with other teams, Risk Management team, and Senior Management teams.

Risk Management team shares proprietary analytics with PMs to enhance their investment process.

Bottom Up: portfolio manager level

Portfolio Compensation structure is designed to promote capital efficiency and reward risk adjusted returns.

For certain strategies, PM compensation is based on metrics designed to encourage efficient capital use and maximize risk/reward (i.e. Sharpe Ratio, Sortino Ratio, etc.).

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VERITION: RISK MANAGEMENT CULTURE AND FRAMEWORK

Verition maintains a multi-tiered, iterative and integrated risk management framework to monitor and help mitigate risk.

TIER 1: PORTFOLIO MANAGER RISK CONTROLS

Pre-hire, Verition ensures PMs share the firm's risk management philosophy

PM risk controls act as Verition's first line of defense

Team-specific investment guidelines to provide clearly defined risk parameters, exposure tolerances and portfolio management standards

TIER 3: EXTERNAL RISK

Verition utilizes the services of an independent, external risk evaluator (MSCI RiskMetrics). This firm:

- Evaluates Verition's risk on a continuous basis using their proprietary risk analytics
- Produces daily and monthly risk reports to evaluate Fund-level and portfolio level risk

Verition also engages other specialized vendors to support analytics provided by MSCI RiskMetrics as well as external risk consultants for certain specialized strategies



TIER 2: INTERNAL RISK

Internal Risk focuses on two distinct areas of risk:

- Analytical Risk, focused on quantification, assessment and monitoring of portfolio risk
- Trading Risk, in particular those risks that pertain to liquidity or tail risk

Proprietary systems and risk management tools monitor positions on an intra-day basis

Daily distribution of risk reports tracking compliance with pre-defined parameters to PMs and Senior Management team

TIER 4: RISK COMMITTEE

Investment Risk Committee is a team of 5 consisting of members of Senior Management, Senior Members of our internal Risk team and an independent director; group meets formally on a monthly basis and oversees risk broadly at the firm level

Board of Directors with representation from internal /external members including a thirdparty, seasoned risk management professional

• Empowered to take action if uncomfortable with the Master Fund's risk level

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TALENT ACQUISITION

Dedicated Business Development team focused on sourcing and recruiting talent.

Verition has assembled a team of experienced, hard-toaccess portfolio managers.

Our multi-faceted infrastructure affords us the latitude to pursue strategies not typically available through stand-alone vehicles.

Verition utilizes an extensive interview process requiring input from risk management professionals, investment professionals and the Senior Management team. ► Initial sourcing and screening by Business Development team.



Select Portfolio Managers issued due diligence package including performance history, sample portfolios, portfolio construction and Risk Management metrics.

Interviews with Risk Management team – review of overall investment strategy, historical track
 record, and investment process.

- On-site interview with members of Investment team.
- Interviews and meetings with senior management.
- Pre-defined risk parameters are discussed and determined.
- Direct and indirect industry reference and channel checks.

Final due diligence, background checks and on-boarding (including a formal meeting with Legal
& Compliance prior to trading).

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UNCORRELATED RETURNS

The Verition Multi-Strategy Funds have a track record of historically consistent risk-adjusted performance when compared to relevant market indices.



Risk/Return Comparison



Source: Bloomberg Data as of 9/30/2023.

Verition Multi-Strategy Funds: Low Beta to the Market

BETA TO S&P 500 (SINCE INCEPTION)	BETA TO S&P 500 (3 YEARS)	BETA TO S&P 500 (5 YEARS)			
0.09	0.02	0.04			

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SUMMARY OF INVESTMENT TERMS

FUNDS/ CURRENCY DENOMINATIONS	Verition Multi-Strategy Fund LLC (USD) Verition International Multi-Strategy Fund Ltd. (USD, EUR and GBP)
MINIMUM INITIAL INVESTMENT	\$5,000,000
FEES/COSTS	Class A Interests and Class C/D Shares: 2.00% Management Fee, 20% Performance Fee (subject to High-Water Mark) Class C Interests and Class G/H Shares: 1.75% Management Fee, 18% Performance Fee (subject to High-Water Mark) All classes pay their pro-rata share of applicable Specialty Strategy Costs and Trading, Operating and Administrative Expenses.
LIQUIDITY	Class A Interests and Class C/D Shares: Quarterly with 45 days notice subject to an 25% investor-level gate. Class C Interests and Class G/H Shares: Quarterly with 45 days notice subject to an 8.33% investor-level gate.
AUDITOR	Ernst & Young
LEGAL COUNSEL	Sidley Austin Maples and Calder
PRIME BROKERS	Bank of America Merrill Lynch, BMO Nesbitt Burns, TD Securities, Scotiabank, Wells Fargo, Morgan Stanley, Cantor, Barclays, Fidelity, State Street, Goldman Sachs
ADMINISTRATOR	Northern Trust
EXTERNAL RISK AGGREGATOR	MSCI RiskMetrics
COMPLIANCE CONSULTANT	ACA Compliance Group

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NET HISTORICAL PERFORMANCE & SUMMARY OF TERMS

Verition Multi-Strategy Composite, Participating Modified Interests Class A Modified Interests/Class C/D Shares – USD (2%/20%)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	YEAR
2008	-	-	2.68%	-0.08%	1.94%	-0.12%	6.17%	-0.60%	2.36%	2.86%	0.92%	1.62%	19.04%
2009	1.26%	-4.32%	-2.37%	4.04%	4.33%	0.60%	4.09%	3.60%	6.46%	-0.69%	1.78%	3.46%	23.99%
2010	2.18%	-0.55%	1.08%	3.66%	-2.24%	0.13%	0.27%	0.40%	1.54%	2.29%	-0.82%	3.16%	11.49%
2011	2.20%	0.68%	1.64%	1.22%	0.31%	-1.00%	-0.89%	-4.77%	-1.89%	2.79%	0.36%	-0.14%	0.29%
2012	3.98%	1.15%	0.88%	1.09%	-0.94%	-1.41%	1.03%	0.28%	1.63%	0.35%	2.03%	1.56%	12.15%
2013	2.15%	0.98%	1.38%	0.28%	2.59%	0.80%	2.35%	-0.15%	3.01%	0.47%	1.80%	5.64%	23.35%
2014	2.40%	3.87%	-0.94%	-1.43%	1.74%	3.45%	2.09%	2.72%	-2.30%	-2.45%	1.02%	0.18%	10.57%
2015	0.38%	0.38%	1.37%	1.30%	1.33%	-0.05%	0.63%	0.52%	-0.99%	2.02%	0.62%	6.09%	14.29%
2016	-1.01%	0.56%	1.17%	0.72%	0.74%	-0.21%	1.74%	1.14%	0.60%	-0.16%	0.14%	0.13%	5.67%
2017	0.27%	1.28%	1.49%	0.08%	-0.46%	1.51%	1.97%	-0.32%	1.85%	1.68%	1.50%	1.20%	12.70%
2018	-0.53%	-0.08%	1.33%	0.77%	1.75%	-1.10%	0.32%	1.15%	0.30%	-0.49%	-3.18%	0.79%	0.94%
2019	2.12%	0.70%	0.31%	2.57%	0.20%	1.19%	1.56%	0.65%	0.35%	1.62%	1.09%	1.47%	14.71%
2020	0.76%	-0.13%	3.84%	3.69%	2.70%	4.27%	1.78%	1.28%	0.80%	1.47%	3.22%	3.28%	30.42%
2021	1.22%	2.08%	-0.02%	0.15%	0.45%	0.48%	-0.25%	0.63%	1.14%	0.43%	0.61%	1.38%	8.60%
2022	0.23%	1.28%	0.39%	0.66%	-0.75%	0.23%	0.69%	1.53%	-0.25%	0.11%	0.31%	0.81%	5.35%
2023	0.55%	0.59%	-0.20%	0.95%	0.19%	0.62%	1.09%	1.24%	1.39%				6.59%

Annualized Since Inception

VERITION

12.57%

Current month and YTD returns are estimated. Actual figures will be available in next month's report.

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Summary of Investment Terms

ONSHORE FUND

Verition Multi-Strategy Fund LLC (USD)

OFFSHORE FUND

Verition International Multi-Strategy Fund Ltd. (USD, EUR and GBP)

MINIMUM INITIAL INVESTMENT

\$5,000,000

FEES/COSTS

Class A Interests and Class C/D Shares: 2% Management Fee, 20% Performance Fee (subject to High-Water Mark). All classes pay their pro-rata share of applicable Specialty Strategy Costs and Trading, Operating and Administrative Expenses.

LIQUIDITY

Class A Interests and Class C/D Shares: Quarterly with 45 days notice subject to a 25% investor-level gate.

MANAGEMENT BIOGRAPHIES

Nicholas Maounis

PRINCIPAL AND CHIEF EXECUTIVE OFFICER

Nicholas Maounis is the Chief Executive Officer of Verition Fund Management. Mr. Maounis oversees Verition's investment process and has an active role in capital allocation decisions, risk management, and talent recruitment. Prior to co-founding Verition, he was the President and Chief Investment Officer of Amaranth Advisors LLC and related advisory entities ("Amaranth"). Previously, Mr. Maounis spent over a decade as a Portfolio Manager for Paloma Partners Management Company and affiliated entities. Mr. Maounis began his trading career at Angelo Gordon & Co. and LF Rothschild, Unterberg, Towbin, where he was a Senior Vice President in charge of all convertible-arbitrage trading. Mr. Maounis graduated from the University of Connecticut in 1985 with a Bachelor of Science degree in Finance.

PRINCIPAL, PRESIDENT AND CHIEF OPERATING OFFICER

Goldstein

Josh

Josh Goldstein is the President and Chief Operating Officer of Verition Fund Management. He works closely with Mr. Maounis to oversee the Firm's investment process, capital allocation decisions, risk management, and talent recruitment. Prior to co-founding Verition, Mr. Goldstein was Chief Operating Officer of NM Holdings, LLC where he oversaw Mr. Maounis' family office investments. Previously, he held positions at Lehman Brothers, the Yankees Entertainment & Sports Network, LLC (YES Network) and First Manhattan Consulting Group. Prior to that, he practiced corporate and securities law at Blank Rome LLP and served as an Assistant District Attorney in New York. Mr. Goldstein holds a J.D. from Brooklyn Law School, where he was a Senior Editor of the Law Review, and a Bachelor of Arts degree from the Pennsylvania State University.

Marc Talbot

GLOBAL HEAD OF INSTITUTIONAL STRATEGY AND HEAD OF EQUITY CAPITAL MARKETS

Marc Talbot serves as the Global Head of Institutional Strategy and Head of Equity Capital Markets at Verition. In this role he is responsible for managing the research, trading and institutional resources platform across the equity strategies and is active in assisting with investment management processes for these strategies. Previously, he was the Global Head of Trading and Capital Markets at Soros Fund Management, where he also served as a member of the firm's Investment, Risk and Brokerage committees. He also acted as a high level senior resource for Mr. Soros' macro portfolio. Prior to his work at Soros, Marc was a Senior Managing Director in Equity trading at J.P. Morgan and Bear Stearns for over 15 years. Marc is a graduate of The Pennsylvania State University with a B.S. in Accounting, and holds an MBA from NYU's Stern School of Business.

Jonathan Raiff

GLOBAL HEAD OF FIXED INCOME STRATEGIES

Jonathan Raiff serves as the Global Head of Fixed Income Strategies at Verition. Prior to joining Verition, he was most recently the Head of Global Markets Americas and Deputy Head of Global Markets at Nomura. He held responsibility for all Global Markets activities in the Americas across all Equities and Fixed Income products including Securitized Products, Credit, Rates, Equity Derivatives, Financing and Foreign Exchange. During his tenure at Nomura, Jonathan held positions including the Head of Trading for Macro Products Americas and Structured Credit Americas, Global Head of Securitized Products, and Head of CMO Trading. Jonathan joined Nomura in 2009 from Mizuho Securities, where he was the Head of Mortgage Trading. Prior to Mizuho, Jonathan was Head of CMO Trading at UBS Securities, where he worked for 12 years, was Principal and Co-Founder of The Mortgage Research Group Inc., and worked at Bear Stearns in Mortgage Research. He majored in Applied Physics at Cornell University.

Fergus Taylor

GLOBAL HEAD OF VOLATILITY TRADING

Fergus Taylor serves as the Global Head of Volatility Trading for Verition. In this role, he oversees volatility trading globally encompassing equity, commodity and FX derivatives. Prior to joining Verition, Mr. Taylor worked as a Portfolio Manager and Head of European Equities at Capula Investment Management. Previously, he was Partner and Head of Portfolio Management at Arrowgrass Capital Partners, Head of Equities Principal Strategies in London at JP Morgan, a Senior Trader at Nomura International, and a Financial Analyst at UBS Investment Bank. Mr. Taylor holds a Master's Degree in Operations Research/Management from University College Dublin and a Bachelor's of Commerce from University College Dublin.

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MANAGEMENT BIOGRAPHIES

Marc Vesecky

SENIOR MANAGING DIRECTOR OF GLOBAL QUANTITATIVE STRATEGIES

Mr. Vesecky serves as Senior Managing Director of Global Quantitative Strategies. Prior to joining Verition, he was the Head of Markets for Menai Financial Group. Prior to that, he was the Chief Investment Officer and Chief Risk Officer at Tower Research Capital for over a decade, where he helped to build and manage a leading global quantitative electronic trading business. Marc previously served as a Risk Manager at Citadel in the Portfolio Construction Group and he began his career at Societe Generale, where he was an Options Trader. He holds a Bachelor's degree in Economics and an MBA from the University of Illinois.

Abhishek HEAD OF RISK MANAGEMENT

Jain

Abhishek (Abi) Jain serves as Verition's Head of Risk Management. Before joining Verition, he worked as a Director of Risk Management at Capstone Investment Advisors, a USD\$ 6B multi-strategy hedge fund. Mr. Jain worked at Capstone for over 10 years and was one of the key members responsible for building out the firm's risk-infrastructure and culture. Mr. Jain started his career in Technology at Microsoft Corporation, and had worked as a Senior Risk Analyst for Parker Global Strategies, a FoF based out of Stamford CT, before joining Capstone. He has a CQF, is a CFA charterholder and has a MS in Computer Science from Rochester Institute of Technology.

William Anderson

CHIEF FINANCIAL OFFICER

Mr. Anderson serves as the Chief Financial Officer at Verition. Prior to joining Verition, Mr. Anderson was the Controller for JAT Capital Partners, responsible for the infrastructure build out of a new advisor launch. Prior to that, Mr. Anderson was Chief Financial Officer for Deimos Asset Management (f.k.a. Guggenheim Global Trading), a multi-strategy investment advisor, where he oversaw all financial matters. From 2009 to 2011, Mr. Anderson was Assistant Controller for Harbinger Capital Partners. Mr. Anderson began his career in 2002 at DKR Capital Partners, where he was employed until 2009. He holds a Bachelor of Science degree in Accounting from Lehigh University.

Robert GENERAL COUNSEL

Mr. Ellis serves as General Counsel at Verition. Prior to joining Verition, Mr. Ellis was the General Counsel and Chief Compliance Officer of Manikay Partners. From 2008 to 2012, he was the General Counsel and Chief Compliance Officer of Plural Investments, LLC. Prior to that he served as the General Counsel of Integrated Finance Limited, an advisory and asset management boutique, and as a Senior Vice President in the legal department of Swiss Re Group. Mr. Ellis has practiced law at Debevoise & Plimpton, Mayer, Brown & Platt and Sidley & Austin LLP. He was a full-time Associate Professor of Law at Hofstra University School of Law from 1995 to 1999. Mr. Ellis holds a Bachelor of Arts degree in Philosophy from Yale College and a Juris Doctor from Harvard Law School. He is a member of the New York State Bar.

Wayne Lennon

Fllis

CHIEF COMPLIANCE OFFICER

Mr. Lennon serves as Chief Compliance Officer at Verition. Prior to joining Verition he spent 11 years at Davidson Kempner Capital Management as the Global Head of Core Compliance. From 2004-2011, Mr. Lennon spent 4 years as a consultant with ACA Compliance Group and 3 years in CCO and other senior compliance roles with the hedge fund managers Shumway Capital, Amber Capital and D.B. Zwirn & Co. Mr. Lennon began his compliance career in 1997 as a Securities Compliance Examiner/Staff Accountant with the U.S. Securities and Exchange Commission, where he spent 7 years conducting regulatory examinations of registered investment advisers. Mr. Lennon holds a Bachelors of Business Administration in Finance from Pace University.
PERFORMANCE DISCLOSURES

General Description. Verition Multi-Strategy Fund LLC and Verition International Multi-Strategy Fund, Ltd. (collectively, the "Fund") have offered various classes of securities over the years. The net performance returns presented herein were calculated, for certain periods, by adjusting the combined gross profit and loss of the Fund to provide a more direct comparison of the net performance that could have been achieved by the interests currently offered by the Fund (the "Modified Class").

In each period, these adjustments reflect: (i) a management fee payable monthly (the "Management Fee"); (ii) an annual incentive allocation/performance fee (subject to a high-water mark) (the "Incentive Allocation"); and (iii) the trading, administrative, operating and Specialty Strategy costs allocated to the Modified Class ("Operating Expenses"). The Management Fee, Incentive Allocation and Operating Expenses are referred to as the "Modified Class Expenses". The rate at which the Management Fee and Incentive Allocation which are to present the pro forma returns for each relevant class, utilizing the current rates for each such class. The Modified Class Expenses do not include Pass-Through Costs allocated to the Fund's Initial Class, which are not borne by the Modified Class. (For a description of "Pass-Through Costs" and the "initial Class" please refer to the Fund's offering memorada.)

March 2008-September 2008. This period presents gross returns of NM Capital LLC (Mr. Maounis' proprietary account and predecessor to the Fund) (the "Predecessor Account") adjusted to reflect Modified Class Expenses. The Predecessor Account was established in January 2008 and only engaged in testing trades prior to March 2008. Operating Expenses were not borne by the Predecessor Account and Verition does not have specific records showing the actual expenses borne by the Predecessor Account. The returns reflect an assumed Operating Expenses adjustment based on an assumed expense ratio of 1.43%. This assumed expense ratio is equal to the actual Operating Expense ratio of the Fund during the period from October 2008-December 2009 and has been included because Verition has determined it represents a reasonable approximation of the Operating Expense ratio that would have been borne by the Predecessor Account during this period given the net asset value of the Predecessor Account and the size of Verition's operations during this period.

October 2008-December 2013. This period presents gross returns of the Fund, adjusted on a pro forma basis to reflect Modified Class Expenses. The Operating Expenses actually borne by the Fund during this period, including all categories of Operating Expenses currently borne by the Fund. The Modified Class did not exist during this period, so the Operating Expenses incorporated have been adjusted to remove the impact of Pass-Through Costs allocated to the Initial Class.

<u>January 2014-April 2020</u>. This period presents gross returns of the Fund, adjusted to reflect Modified Class Expenses. The Operating Expense adjustment reflects Operating Expenses actually borne by the Funds during this period, which did not include all categories of Operating Expenses currently borne by the Fund. Had such additional categories of Operating Expenses been borne by the Fund during this period the annualized returns since inception would have been reduced by approximately 0.24% for The Class A Modified Interests/Class C/D Shares, and approximately 0.24% for the Class G/H Shares.

May 2020-Current. This period presents gross returns of the Fund, adjusted to reflect actual expenses borne by the Modified Interests, including Operating Expenses that are the same as those Operating Expenses currently borne by the Fund.

Specialty Strategies. Returns prior to November 2014 include the performance of two strategies that were subsequently designated as Specialty Strategies. Such returns have been reduced to reflect the Operating Expenses associated for these two strategies. Returns after November 2014 reflect the addition and removal of Specialty Strategies on an ongoing basis and, therefore, represent the historical composite returns of the Modified Classes. Exposure to Specialty Strategies will incur additional costs and expenses, which are likely to be material. The classification of Specialty Strategies is reassessed periodically.

The information contained in this presentation is pro forma and reflects assumptions and calculations that may be incorrect and may be revised at any time without notice. Actual returns to an investor will vary depending on whether they are invested in the Offshore Fund or Onshore Fund, their share class, the timing of their investment and/or any redemption/withdrawal, "new issues" status and other factors. The performance records of each of the Offshore Fund and the Onshore Fund are available upon request. The most recent month's return is estimated.

The Funds have implemented various strategies at different times. The performance attribution by strategy is based upon an internally calculated allocation of risk capital and estimated net returns by strategy at the master fund level to reflect the estimated effect of fees, expenses and cash utilization on each listed strategy. Performance attribution and contribution to returns are provided for illustrative purposes and should not be interpreted as actual returns. Contribution to returns are based on the estimated pro-rata contribution of each strategy's net performance to the monthly, YTD and ITD returns. Return contribution involves substantial judgment and assumptions, which are periodically reasessed and affect the classifications and percentages in the strategy allocation and return contribution columns. Historical performance of strategies and historical allocation and contribution figures may be revised periodically to reflect the separation or combination, as applicable, of strategies over time.

Market index information shown herein, including but not limited to the S&P 500 Index ("S&P 500") and the HFRI Indices ("HFRI"), are presented for illustrative purposes to show relative market performance for the periods indicated and not as standards of comparison. The S&P 500 is a float-adjusted market capitalization-weighted index. The HFRI Fund Weighted Composite Index is an equal-weighted index of single-manager funds that report to HFR Database, that have a minimum of \$50 Million under management or \$10 Million under management and a twelve month track record of active performance. No representation is made as to the accuracy or completeness of such data. These indexes are unmanaged, broadly based indexes, which differ in numerous respects from the portfolio composition of the Funds. For example the S&P 500 does not reflect reduction of fees, costs and expenses or the active management of the relevant portfolio. In addition, the HFRI does not necessarily reflect the performance of a portfolio that was constructed with the same investment objectives as the Fund.



DISCLOSURES (CONTINUED)

PERFORMANCE DISCLOSURES (CONTINUED)

The Comparison to S&P 500 Down Months graph charts the pro forma blended net performance of NM Capital LLC/Verition Multi-Strategy Funds against the S&P 500 in those months since March 2008 where the S&P 500 posted a negative return, is provided for illustrative purposes and should not be interpreted as an actual return. The Comparison to S&P 500 Down Days charts all days since January 2014 where the S&P 500 posted a return inferior to -2%). Please note that prior to 2022, the Down Days chart is calculated using the Class A Modified Interests/Class C/D Shares – USD daily returns. Starting January 2022, the Down Days chart is calculated using the Class A Modified Interests/Class C/D Shares – USD daily returns.

Values are calculated using monthly rates of return from commencement of trading on March 1, 2008. Sharpe and Sortino Ratio calculations are available upon request. Volatility values are calculated using monthly rates of return.

AUM as of October 1, 2023.

GENERAL DISCLOSURES

This is a marketing communication. This document does not constitute an offer to sell or a solicitation of an offer to buy any security or investment product, nor an offer of services or of any securities in any jurisdiction in which such offer is restricted or prohibited. Any such offer or solicitation may only be made at the time a qualified offeree receives the Memoranda, which must be received and reviewed prior to any investment decision. This document is confidential for the addressee only and its contents are proprietary information and may not be reproduced, used, or disseminated, in whole, or in part, without the prior written consent of Verition Fund Management LLC.

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Investments in alternative investments and hedge funds entail substantial risks, are not intended as a complete investment program and generally comprise only a portion of a client portfolio. Opportunities for redemption and transferability of interests in the Funds are restricted so investors will only have access to capital quarterly as described in the Memoranda. There is generally no secondary market for interests in the Funds and none is expected to develop.

An investment in the Funds is speculative and involves a substantial degree of risk. The Funds are designed only for sophisticated investors who are able to bear the economic risk of losing all of their investment. Hedge funds: (1) often engage in leverage and other speculative investment practices that may increase the risk of investment loss; (2) can be highly illiquid; (3) are not required to provide periodic pricing or valuation information to investors; (4) may involve complex tax structures and delays in distributing important tax information; (5) are not subject to the same regulatory requirements as mutual funds; and (6) often charge high fees.

Past performance is not a guide to future performance.

NOTICE TO UK INVESTORS

For the purposes of the United Kingdom Financial Services and Markets Act 2000 (FSMA), the Fund is an unregulated collective investment scheme which has not been authorised or recognised by the Financial Conduct Authority (FCA) of the United Kingdom. The issue or distribution of this document in the United Kingdom: (a) if being made by a person who is not an authorised person under FSMA, is being made only to, or directed only at persons falling within one or more of the following exemptions from the financial promotion regime in section 21 FSMA: (i) authorised firms under FSMA and certain other investment professionals falling within article 19 of the FSMA (Financial Promotion) Order 2005 (FPO) and directors, officers and employees acting for such entities in relation to investment; (ii) high value entities falling within article 49 FPO and directors, officers and employees acting for such entities in relation to investment; and (iii) persons who receive this document outside the United Kingdom; (b) if being made by a person who is an authorised person under FSMA, is being made only to, or directed only at persons falling within one or more of the following exemptions from the promotion of unregulated collective investment schemes regime in section 238 FSMA; (i) authorised firms under FSMA and certain other investment professionals falling within Article 14 of the FSMA (Promotion of Collective Investment Schemes) (Exemptions) Order 2001, as amended (CIS Order) and their directors, officers and employees acting for such entities in relation to investment; (ii) high value entities falling within Article 22 of the CIS Order and their directors, officers and employees acting for such entities in relation to investment; (ii) high value entities falling within Article 22 of the CIS Order and their directors, officers and employees acting for such entities in relation to investment; (ii) persons to whom it may otherwise lawfully be distributed under the CIS Order or Section 4.12 of the FCA's conduct of business sourc

NOTICE TO SWISS INVESTORS

Swiss Representative of the Fund is Mont-Fort Funds AG, 63 Chemin Plan-Pra, 1936 Verbier, Switzerland.

Paying Agent of the Fund is Banque Cantonale De Geneve, 17, Quai De L'ile, 1204 Geneva, Switzerland.

In respect of the shares distributed in Switzerland, the place of performance and jurisdiction is the registered office of the Swiss representative.



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VERITION



MEMORANDUM TO THE BOARD OF UNIVERSITY AND SCHOOL LANDS

October 26, 2023

RE: International Equity – Extended Equities

The International Equity portfolio is currently at \$1.1 billion with a 15% long term target and is comprised of three building blocks – developed market large cap, developed market small cap and emerging markets. The goal of this proposal is to drive excess returns in the International Equity portfolio throughout market cycles.

Staff recommends introducing long-short active management in the International Equity portfolio. By relaxing the short constraint, extended equity strategies give our investment managers the tools to profit when the market moves in either direction. Staff and RVK began a manager search by reaching out to well-known extended equity managers. After interviewing and conducting due diligence on potential extended equity managers, Staff and RVK recommend:

• Transfer Arrowstreet Emerging Markets from long-only to 150-50 (~\$200M).

Arrowstreet was founded in 1999 and is headquartered in Boston. They have over \$160 billion in assets under management across 296 client relationships and a team of over 100 investment professionals. Staff and RVK know Arrowstreet's firm and investment process well as they are a current manager in good standing. Emerging Markets is a sub asset class with less efficient markets, creating the opportunity to deliver excess returns and Arrowstreet has a 4-year track record of delivering excess returns in this strategy.

• Transfer Acadian Non-US Small Cap from long-only to 130-30 (~\$165M).

Acadian Asset Management was founded in 1986 and is headquartered in Boston. Acadian is wellknown for its systematic/quantitative approach to investing. They have over \$100 billion in assets under management and a 100+ person investment team. Acadian has been investing in international equities for 35 years and the Non-US Small Cap 130-30 strategy has a 20-year track record of delivering excess returns.

• Full Redemption State Street Emerging Markets Index (~\$20M).

Passive exposure to emerging markets will no longer be needed. Proceeds will be added to the emerging markets extended equity strategy.

• Full Redemption State Street World ex-US Small Cap Index (~\$20M).

Passive exposure to ex-US small cap will no longer be needed. Proceeds will be added to the non-US small cap extended equity strategy.

Recommendation: The Board approve (1) full redemption of State Street Emerging Markets Index (2) full redemption of State Street World ex-US Small Cap Index (3) transfer of Arrowstreet Emerging Markets long-only to 150-50 and (4) transfer of Acadian Non-US Small Cap long-only to 130-30, subject to standard legal review/documentation.

Attachments: RVK International Equity Structure & Manager Recommendations

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Howe					
Superintendent Baesler					
Treasurer Beadle					
Attorney General Wrigley					
Governor Burgum					



International Equity Structure & Manager Recommendations October 26, 2023

Summary of Recommendations

The following changes are recommended for the Broad International Equity composite:

- Transition Acadian International Small Cap and Arrowstreet Emerging Markets strategies to extended equity versions of the strategies.
- Eliminate the current passive investments within the Emerging Markets and International Small Cap spaces. Retain the passive International Large/Mid Cap exposure.

The recommended structure is expected to generate higher tracking error after the transition to the extended equity (long/short) strategies from the existing investment managers. The intent is to aim for higher expected excess return per unit of active risk. The recommended structure is detailed in the following table and the improved historical risk/return is displayed in the below chart.



	ND IE Current	ND IE Propsed
Int'l Developed Large/Mid		
SSgA Passive IE Large/Mid	66	60
Int'l Developed Small		
Acadian IESC	14	0
SSgA Passive IESC	2	0
Acadiean IESC 130/30	0	20
Emerging Markets		
Arrowstreet Emerging Markets	16	0
Northen Trust Passive EM	2	0
Arrowstreet EM 150/50/60	0	20
Small Cap, %	16	20
Emerging Markets, %	18	20
Excess Return, %	1.55	3.13
Tracking Error	1.29	1.36
Information Ratio	1.21	2.30

Optimization includes excess return, tracking error and correlation information measured from August 2005 to June 2023. The Arrowstreet extended equity product was incepted more recently, in 2019, leading to the use of a proxy that matches its longer-term risk and return targets. The MSCI ACWI ex US IMI was used as the reference benchmark for the above analysis.
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Active Returns in International Equity

Within the emerging markets and international equity small cap spaces, active management has historically added excess returns at an attractive level of consistency.

- Information efficiency (the speed that information is reflected in stock prices) is lower and volatility is higher, providing a better opportunity for active managers to add value within emerging markets and international small cap.
- Reasons for the lower information efficiency with emerging markets and international small cap include: fewer analysts covering each stock, language barriers, and reduced availability of company information.
- While still positive, the excess returns within developed non-US large cap equity (benchmark: MSCI World ex-US) have been lower compared to emerging markets and international small cap asset classes.

Long-Term 3-Year Rolling Average (Net of Fees) January 2001 – December 2022

International & Global Equity Excess Returns, %									
25 th Percentile Median 75 th Percentile									
Developed Non-US Large Cap	2.35	0.43	-1.23						
Developed Non-US Small Cap	3.37	1.22	-1.00						
Emerging Markets All Cap	3.12	0.75	-1.36						

Excess return is calculated versus universe-specific benchmark. January 2001 represents the start of the first 3-year period. Performance shown represents rolling 3-year performance at each quartile and does not correspond to the long-term experience of any specific manager. Peer group constituents and managers' rankings change over time.



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Strategy Comparison

The recommended transition from the current strategies with Acadian (international small cap) and Arrowstreet (emerging markets) represent increases in the target risk and return level due to the use of an extended equity framework (long/short positions).

- Portfolio characteristics across the current and recommended strategies are similar and appropriate for their given geographic focuses.
- The current and recommended strategies offer diversified exposure, but the extended equity portfolios provide more differentiation compared to the market benchmarks (represented by active share).

Firm Name	Acadian Asset Management LLC	Acadian Asset Management LLC	Arrowstreet Capital, Limited Partnership	Arrowstreet Capital, Limited Partnership
	Non-U.S. Small-Cap	Non-U.S. Small-Cap 130/30		Emerging Markets Equity -
Strategy	Developed Equity	Equity	Emerging Markets Equity	Alpha Extension 150/50/60
Active Share	72%	130%	73%	124%
Current # of Holding	1747	1343	585	734
Current Dividend Yield	3.80%	3.95%	5.35%	6.41%
Current P/E (12 mo Trailing)	9.51	9.29	6.61	5.70
Current P/B - Q2 2023	1.25	1.33	1.03	0.97
Product: Wgtd. Avg. Mkt. Cap	\$2,549	\$2,336	\$87,479	\$118,663
Median Mkt. Cap	\$477	\$642	\$6,131	\$4,657
Geographic Exposure	Developed International	Developed International	Emerging Markets	Emerging Markets
# of Sectors Included	11	11	11	11
Outperformance Target	3%	5%	4%	10%
Risk Target	6%	7%	6%	10%



Persistence of Excess Returns

We examined the historical risk and returns of various potential portfolio mixes with an emphasis on portfolio combinations that have provided a high degree of persistence in outperforming the index. The table below shows historical rolling 3-year excess returns for the current and recommended structures relative to the policy index, set against a backdrop of active manager peer universe results.



Excess Returns: 3 Year Rolling

eA ACWI ex-US Median

ND Int'l Equity - Current ND Int'l Equity - Recommended MSCI ACWI ex USA IMI

Excess Return Consistency	Consistency of Positive 3 Year Rolling Excess Returns	Current 3 Year Excess Return, %	Polling Excess	Maximum 3 Year Rolling Excess Return, %		Total Periods of 3 Year Excess Returns, %
ND Int'l Equity - Current	60.0%	2.81	1.34	3.08	0.10	120
ND Int'l Equity - Recommended	81.7%	6.29	2.36	7.00	0.27	120
eA ACWI ex-US Median	83.3%	0.98	1.73	3.29	-0.02	120

Performance is gross of fees. The peer group median is not indicative of an expected investor experience. It is a hypothetical return stream calculated using the returns for the median manager in each time period and does not represent an actual management strategy.



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Information Ratio Analysis

Information Ratio (excess returns / tracking error) helps measure the efficiency of active management (the degree of reward for each unit of active risk). The recommended portfolio ranks above median at a higher percentage compared to the current portfolio. Despite the higher risk level of the recommended portfolio, the efficiency of alpha transfer would have been higher historically compared to the current portfolio.



Information Ratio Rank Consistency	How often has the Information Ratio ranked above median over past 3 year time periods?	Average 3 Year Rolling Information Ratio Rank	Total Periods of 3 Year Performance
ND Int'l Equity - Current	93.3%	15	120
ND Int'l Equity - Recommended	98.3%	11	120



Excess Returns in Value/Growth Led Markets

The recommended portfolio has performed better in value led up markets, and moderately better in growth led markets. The one area of reduced excess return generation, while still positive, occurs in value led down markets.



ND Int'l Equity - Current IND Int'l Equity - Recommended

	Annualized Excess Returns				# of Months of Style Leadership			
	Growth	Growth	Value	Value	Growth	Growth	Value	Value
	Outperforms	Outperforms	Outperforms	Outperforms	Outperforms	Outperforms	Outperforms	Outperforms
	In	In	In Down	In	In	In	In Down	In
	Down Market	Up Market	Market	Up Market	Down Market	Up Market	Market	Up Market
ND Int'l Equity - Current	0.75	2.23	0.83	3.60	69	73	39	85
ND Int'l Equity - Recommended	1.38	2.91	0.28	5.85	63	67	31	75

Excess Returns of the managers in both value-led and growth-led months are grouped together and then separated by whether the general market had positive or negative returns for a given month. The monthly returns within the four groups are annualized to illustrate the performance of each strategy in past style regimes.



Excess Returns in Past Periods of Market Stress

The recommended portfolio has performed better than the current portfolio in many past periods of market stress. However, there were periods where the recommended portfolio would have underperformed the current portfolio, specifically in sharp market reversals, as showcased with the performance during key points of the great financial crisis, shown below.



Annualized Excess Returns in Past Periods of Market Stress

ND Int'l Equity - Current ND Int'l Equity - Recommended



Style Analysis

The recommended portfolio provides a larger allocation to the international small cap space leading to a slight increase in the bias toward small/mid cap stocks within the overall composite. However, the current and recommended portfolios remains diversified across style and size dimensions.



Style Analysis - Common Period

Nov 03 - Jun 23

Regressions-based style analysis is displayed above. IE LCV = Int'I Large Cap Value, IE LCG = Int'I Large Cap Growth, IE MCV = Int'I Mid Cap Value, IE MCG = Int'l Mid Cap Growth, IE SCV = Int'l Small Cap Value, IE SCG = Int'l Small Cap Growth Page 049 Page 9



PORTLAND

BOISE

CHICAGO

NEW YORK

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Memorandum

То	North Dakota Board of University and School Lands (NDBUSL)
From	RVK, Inc. (RVK)
Subject	International Equity Alpha Extension Recommendation
Date	October 26, 2023

Summary

Staff and RVK conducted due diligence on the Alpha Extension versions of the international strategies in which NDBUSL is invested. The Acadian Non-US Small Cap 130/30 strategy provides 130% long exposure to their positively rated stocks. The additional exposure (above 100%) is funded through selling short negatively rated stocks. Similarly, the Arrowstreet Emerging Markets 150/50/60 strategy provides approximately 150% long exposure. In addition, the Arrowstreet strategy will go long or short up to 60% in equity index futures to manage their beta. Overall, the intent is to gain greater exposure to the managers' stock picking ability without significantly increasing volatility or market sensitivity.

In our review, the two incumbent managers are top-tier options within the space based on performance, history of managing these types of strategies, depth of investment team, and risk management practices. Both firms are focused on the institutional client marketplace. Interviews with firm leadership, review of operational practices, and past onsite visits informed the manager selection process.

As a result of this process, the following two firms are recommended for continued inclusion in the International Equity portfolio but switching to the equity extension versions offered by each firm. Acadian is the incumbent manager used for international small cap equity while Arrowstreet is being used for emerging markets exposure.

Acadian Non-US Small Cap 130/30 (Acadian)

Arrowstreet Capital Emerging Markets 150/50/60 (Arrowstreet)

The addition of these managers would lead to a new structure within the International Equity asset class. The existing passive exposure to the World ex US Index (Developed International Large/Mid) will drop to a 60% allocation. The existing passive allocations to the international small cap and emerging markets spaces would be eliminated as well. This resulting funds from this reduction and eliminations would then be redeployed to the Acadian and Arrowstreet strategies.

We further recommend that Acadian and Arrowstreet each be allocated 20% within the International Equity composite. This structure would result in a market cap and style neutral portfolio structure relative to the policy benchmark – similar to the current structure. The recommended hiring decisions and structure are intended to result in higher alpha potential, higher active share, and active fees being aligned with client results through performance-based

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fee arrangements. These objectives are expected to be met without taking excessive absolute or uncompensated relative risks.

Performance and Peer Comparison

The following tables display performance statistics showing 10-year results for Acadian; while the Arrowstreet strategy, which was incepted in February 2019, shows 3-year results. However, Arrowstreet has managed emerging markets equity assets within their Global Equity strategies since the founding of the firm.

The results show that each strategy has been able to generate attractive excess returns with better risk/reward ratios (Information Ratio and Sharpe Ratio) than many peers. The excess returns were only generated in down markets for Acadian, which is not surprising given the value orientation of their portfolios and the growth dominated market over the last decade. Notably, the active share of each portfolio (% of differentiation versus each benchmark) is higher than peer group levels. Thus far, Acadian and Arrowstreet have outpaced the excess return targets expected by RVK, given the tracking error levels of each portfolio. While some moderation in results can be anticipated, performance is expected to rank well versus peers over the long run.

10-Year Statistics versus EAFE Small Cap Index	Excess Returns, %	Tracking Error, %	Information Ratio	Sharpe Ratio	Upside Market Capture, %	Downside Market Capture, %	Beta	Active Share, %
Acadian Asset Management	4.17	6.86	0.61	0.66	89.75	71.55	0.80	130.28
eVestment EAFE SC Median	0.73	3.62	0.24	0.36	101.69	99.26	1.00	92.97

3-Year Statistics versus MSCI Emerging Markets Index	Excess Returns, %	Tracking Error, %	Information Ratio	Sharpe Ratio	Upside Market Capture, %	Downside Market Capture, %	Beta	Active Share, %
Arrowstreet Capital	26.65	14.67	1.82	1.34	126.91	19.15	0.82	124.15
eVestment Emerging Markets Median	1.64	5.81	0.34	0.16	105.28	95.35	0.99	76.86

Management Fees

Acadian and Arrowstreet have both proposed performance-based fees. These arrangements would result in fees below the 5th percentile of their respective peer groups – unless excess returns are generated by their strategies. RVK views the proposed arrangements favorably given the further alignment it provides with client performance.



Recommendation

RVK recommends that NDBUSL approve moving to the Alpha Extension versions of the Acadian Non-US Small Cap and Arrowstreet Emerging Markets strategies. The recommended structure would include a 60% allocation to the existing passive MSCI World ex US Index strategy and 20% each to Acadian and Arrowstreet.



Manager Summary – Acadian

Firm and Team

Acadian was founded in Boston in 1986. In 1992, Acadian became an affiliate of Boston-based United Asset Management which was acquired in October 2000 by Old Mutual plc, a publicly traded international financial services group, which was rebranded to Brightsphere. Each of the Brightsphere affiliates operates autonomously with the parent firm providing seed capital, legal services, mutual fund support, and distribution capabilities. Brightsphere has been shedding its investment management affiliates; Acadian is the last remaining affiliate under their ownership.

Acadian has a sizable investment team consisting of 36 portfolio managers with an average of 19 years of industry experience as well as 59 research analysts with an average of 14 years of experience. The same investment team is shared amongst all strategies. Due to the retirement of CEO Churchill Franklin in January 2018, Ross Dowd (Director of the Global Client Group) became CEO. Shortly after Acadian's Director of Portfolio Management, Brendan Bradley, was appointed co-CIO (alongside John Chisholm) and fully succeeded Mr. Chisholm as Chief Investment Officer in 2019. Vladimir Zdorovtsov joined in December 2019 as Director of Global Equity Research.

Philosophy and Process

The team follows a quantitative process that is based on fundamental valuation. They believe market inefficiencies are caused by behavioral anomalies such as investors' overconfidence and pessimism.

Their process starts with a broad universe of 16,000 stocks that are ranked using bottom-up factors (value, growth, quality, technical), top-down factors (value, growth, technical, risk, macro), and peer factors (value and quality). Bottom-up factors receive the majority of the weight and are peer group relative.

After the universe has been ranked, an optimizer is used to mitigate risk and maximize return. Constraints used in the optimizer include risk targets, benchmark weights, estimated transaction costs, client restrictions, and security correlations. Portfolios are optimized to maximize idiosyncratic risk and subsequently, tend to reflect the benchmark in terms of industry and country/region exposures. The end portfolio will have a slight value orientation and be broadly diversified.



Manager Summary – Arrowstreet

Firm and Team

The Boston-based firm was founded in 1999 by Bruce Clarke, Peter Rathjens, and John Campbell. Arrowstreet primarily operates out of its Boston headquarters with other offices focused mainly on client service. The firm is 100% owned by senior employees and directors at the firm. Arrowstreet uses a quantitative model to implement strategies in global, international, and US equity, and the firm currently manages approximately \$160 billion.

The senior investment team includes 10 portfolio managers and 18 research analysts as well as the CIO. There are also individuals dedicated to investment processes, investment services, and analytics. The average industry experience is 19 years and the average tenure at Arrowstreet is 13 years. The senior investment team is supported by an additional 83 members. Overall, there are 18 members in the portfolio management group and 36 on the research team. No partner at the firm has ever left for a competitor. One of the founding members of the firm Peter Rathjens, CIO, will be retiring at the end of the year. However, this was announced well in advance.

Philosophy and Process

This purely quantitative strategy is dynamic in nature. Unlike many of their competitors, they don't have permanent style tilts. They are differentiated from competitors by the indirect effects as well. Their model looks at individual stock characteristics (direct effects) but also at how stocks are linked or indirect effects. These indirect effects include the following linkages: country, sector, country/sector as well as by their proprietary linkages model. Each of these effects has a multitude of factors or signals that are used to project alpha. The broad category factors include the following: valuation, momentum, quality, catalysts, extreme sentiment, and high frequency.

The proprietary risk model has a number of inputs, including estimated beta, country, and sector membership, exposure to forecast model signals, and market capitalization. Portfolio risk levels are dynamically adjusted to reflect the trade-offs of risk and return in the marketplace. The strategy has explicit limits on portfolio weights: stocks +/- 4% and sectors +/- 19%. The portfolio generally holds approximately 325-775 stocks. An evaluation of liquidity and transaction costs is an integral part of the process to allow the model to generate alpha efficiently while limiting market impact and trading expenses. The long-term beta should be close to 1.0. Gross exposure on average is from 200% to 260% and net exposure from 40% to 160%. The targeted tracking error is 9.5% to 13.5% per year.



RE: Litigation Update

(No Action Requested)

<u>EEE (OHWM title dispute / takings claim)</u> – ND Federal District Court issued order May 31, 2022, granting Board's motion to dismiss on all counts: federal preemption, sovereign immunity, takings; Plaintiffs appealed to 8th Circuit; on August 30, 2023, the 8th Circuit three judge panel issued its opinion in our favor affirming the trial court's dismissal on all counts; on September 12, 2023, Plaintiffs requested a rehearing in front of the full 8th Circuit Court; awaiting court response

Commencement: December 2020

Assigned Attorney: Philip Axt, ND Solicitor General

Win = Takings claim dismissed resulting in no liability to state

Lose = Plaintiff's case can proceed resulting in trial to determine validity of claims

 <u>Whitetail Wave (OHWM title dispute / takings claim)</u> – On August 22, 2023, Whitetail Wave appealed the trial court's rulings for the state (takings, Wenck Line, quiet title) and the award of attorney fees to co-defendant XTO Energy. Briefings and oral arguments before the North Dakota Supreme Court to follow.

Commencement: June 2015

Assigned Attorney: David Garner, Assistant Attorney General

Win = Takings claim dismissed resulting in no liability to state

Lose = Plaintiff's case can proceed resulting in trial to determine validity of claims

• <u>Continental Oil Royalty Deductions</u> – Now that the Newfield gas royalty deductions case has been resolved, this case comes off stay and the parties are required to file a status report with the Court by November 3, 2023.

Commencement: December 2017

Assigned Attorney: David Garner, Assistant Attorney General

Win = Clarity that Land Board oil & gas lease does not allow for deductions from oil royalties resulting in tens of millions of dollars in deductions being repaid to the state

Lose = Deductions from oil royalties are allowed under the lease, requiring additional administrative rules/case law to clarify extent



• <u>MHA (Missouri riverbed ownership)</u> – On July 7, 2023, the United States filed a motion to amend its pleading to add a quiet title crossclaim against North Dakota as a new Intervenor in the case. We filed a motion requesting a change of venue to North Dakota that the Court is now considering.

Commencement: July 2020

Assigned Attorneys: Beveridge & Diamond, Washington, D.C. Charles Carvell, Special Assistant Attorney General Matthew Sagsveen, AG Dir. of Natural Resources and Indian Affairs

Win = North Dakota owns historical Missouri Riverbed (mineral rights) through Fort Berthhold Indian Reservation resulting in release to state of tens of millions of dollars in withheld oil & gas royalties

Lose = U.S. owns the riverbed in trust for MHA Nation so royalties are released to the tribe

 <u>Continental Interpleader (OHWM fed/state dispute)</u> – ND Federal District Court issued opinion March 21, 2023, granting Board's motion for partial summary judgment on "Acquired Federal Lands" issue; this means the Wenck survey controls for establishing the historical ordinary high-water mark of the Missouri River in areas where the uplands were acquired by the federal government, and not original "public domain lands"; federal government appealed and we filed cross appeal; briefing scheduled to be completed in November 2023

Commencement:December 2016Assigned Attorneys:Charles Carvell, Special Assistant Attorney General
Philip Axt, ND Solicitor General

Win = State survey controls where U.S. lands abut the Wenck line resulting in retention of 2,500 mineral acres

Lose = Federal surveys control resulting in loss of approximately 2,500 mineral acres

• <u>Leland/Whiting (OHWM river island ownership)</u> – Watford City trial September 12-16, 2022; post-trial briefing scheduled for completion in November 2023

Commencement: January 2016

Assigned Attorneys: Matthew Sagsveen, AG Dir. of Natural Resources and Indian Affairs James Wald, DTL General Counsel

Win = State owns at issue Yellowstone River island and related oil & gas royalties

Lose = Plaintiffs owns at issue Yellowstone River island and related oil & gas royalties

Procedures for Executive Session regarding Attorney Consultation and Consideration of Closed Records

Overview

- 1) The governing body must first meet in open session.
- 2) During the meeting's open session the governing body must announce the topics to be discussed in executive session and the legal authority to hold it.
- 3) If the executive session's purpose is attorney consultation, the governing body must pass a motion to hold an executive session. If executive session's purpose is to review confidential records a motion is not needed, though one could be entertained and acted on. The difference is that attorney consultation is not necessarily confidential but rather has "exempt" status, giving the governing body the option to consult with its attorney either in open session or in executive session. Confidential records, on the other hand, cannot be opened to the public and so the governing body is obligated to review them in executive session.
- 4) The executive session must be recorded (electronically, audio, or video) and the recording maintained for 6 months.
- 5) Only topics announced in open session may be discussed in executive session.
- 6) When the governing body returns to open session, it is not obligated to discuss or even summarize what occurred in executive session. But if "final action" is to be taken, the motion on the decision must be made and voted on in open session. If, however, the motion would reveal "too much," then the motion can be abbreviated. A motion can be made and voted on in executive session so long as it is repeated and voted on in open session. "Final actions" DO NOT include guidance given by the governing body to its attorney or other negotiator regarding strategy, litigation, negotiation, etc. (See NDCC §44-04-19.2(2)(e) for further details.)

Recommended Motion to be made in open session:

Under the authority of North Dakota Century Code Sections 44-04-19.1 and 44-04-19.2, the Board close the meeting to the public and go into executive session for purposes of attorney consolations regarding:

• Continental Resources, Inc. v. North Dakota Board of University and School Lands and the United States of America – Case No. 1:17-cv-014 (Continental Interpleader)

Action Record	Motion	Second	Aye	Nay	Absent
Secretary Howe					
Superintendent Baesler					
Treasurer Beadle					
Attorney General Wrigley					
Governor Burgum					

Statement:

"This executive session will be recorded and all Board members are reminded that the discussion during executive session must be limited to the announced purpose for entering into executive session, which is anticipated to last approximately <u>30 minutes</u>.

The Board is meeting in executive session to provide guidance or instructions to its attorneys regarding the identified litigation. Any formal action by the Board will occur after it reconvenes in open session.

Board members, their staff, employees of the Department of Trust Lands and counsel with the Attorney General staff will remain, but the public is asked to leave the room.

The executive session will begin at: _____AM, and will commence with a new audio recording device. When the executive session ends the Board will reconvene in open session."

Statements upon return to open session:

State the time at which the executive session adjourned and that the public has been invited to return to the meeting room.

State that the Board is back in open session.

State that during its executive session, the Board consulted with attorneys regarding the identified legal issue.

State that no final action will be taken at this time as a result of the executive session discussion

-or- .

Ask for a formal motion and a vote on it.

Move to the next agenda item.