

Governor's Conference Room and Microsoft Teams meeting

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[+1 701-328-0950,,827996138#](#) United States, Fargo

Phone Conference ID: **827 996 138#**

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

➤ = **Board Action Requested**

1. Call to Order – Chairman Burgum

A. Roll Call and Pledge of Allegiance

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

[September 26, 2024](#) – 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. 6

C. Unclaimed Property – pg. 8

D. Financials – (Audited financials to be presented at December 12th meeting)

4. Investments – Frank Mihail, CIO

A. Investment Update – pg. 9

➤ B. International Equity Recommendation – presented by RVK – Matt Sturdivan pg. 14

5. Special Projects – Joseph Heringer

A. Mineral Tracker Mineral Valuation Presentation – pg. 65

B. Potential 2025 Legislation – pg. 79

6. Litigation Update – Joseph Heringer – pg. 80

➤ **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. 83**

- **Continental Resources, Inc. v. North Dakota Board of University and School Lands and the United States of America (Royalty Deductions Case)**

- **Royalty Settlements**

Next Meeting Date – November and December combined meeting on December 12, 2024

RE: Commissioner's Report
(No Action Requested)

- 2026 National Association of State Trust Lands Annual Conference – awarded to host July 2026 in Medora to coincide with the Theodore Roosevelt Presidential Library Grand Opening; great opportunity to showcase North Dakota and our leadership in minerals and land management to a national audience; planning begins!
- State Investment Board - attended September 27, 2024, full State Investment Board meeting as a voting member
- State Investment Board Investment Committee - attended October 17, 2024, meeting as a voting member
- Legislative Session – planning continues with budget submitted to OMB and legislation ideas compiled
- Clifton Strengths Training – hosted October 2nd DTL Leadership training on identifying and leveraging employee strengths for improved team collaboration, communication, and efficiency

SURFACE DIVISION

ENCUMBRANCES ISSUED

Encumbrances issued by the Commissioner during September 2024: 36 Right of Way Agreements generating \$242,544 in income for the Trusts.

Photo Credit: Jacob Lardy
September in Mountrail County 156-89-16



SURFACE DIVISION

TRUST LANDS ACRES AFFECTED BY FIRE

Approximate acres of Trust Lands burned (as of October 21, 2024)

- **Elkhorn Fire: 640 acres**

McKenzie Co. 149-98-36

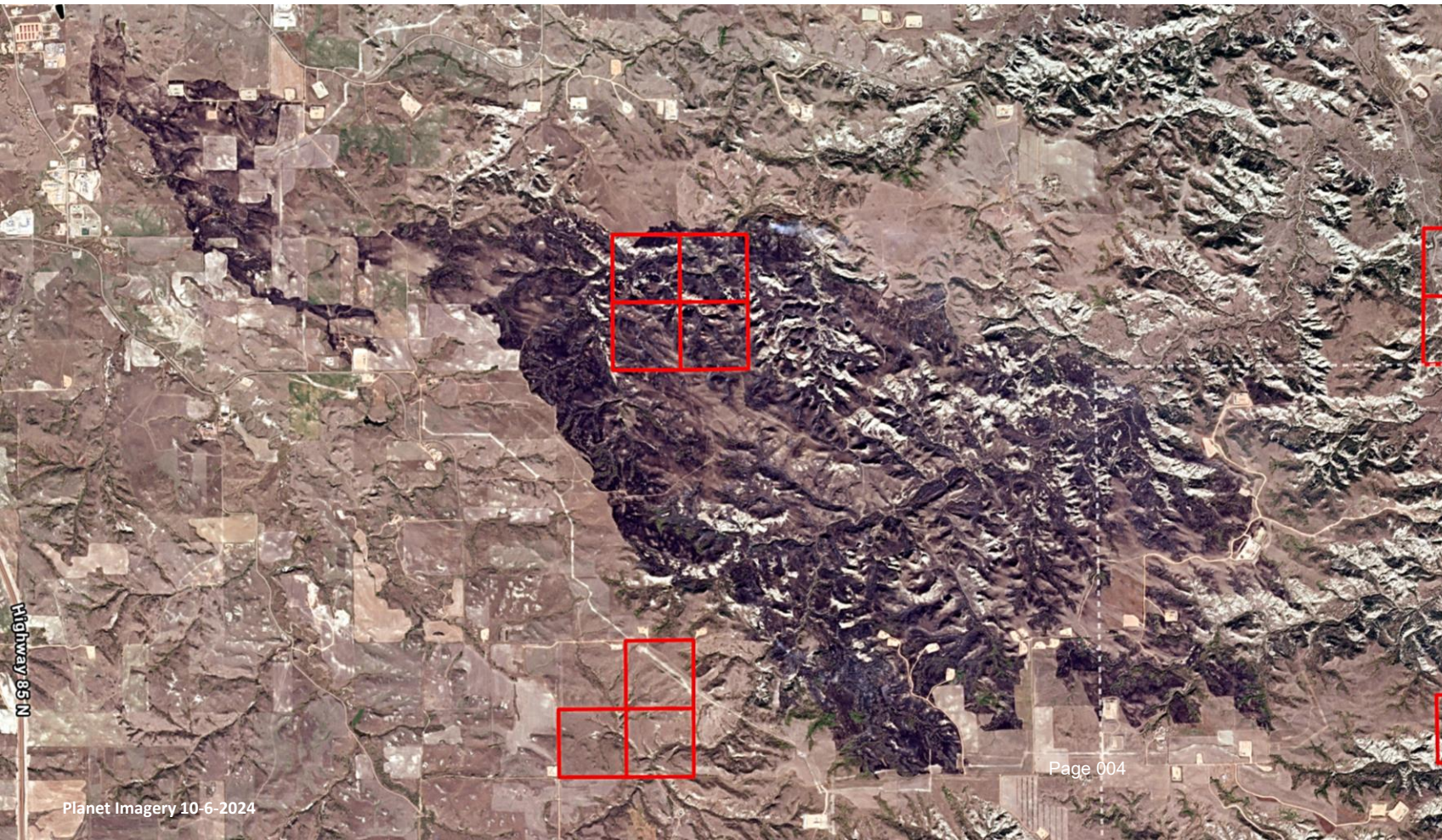


Image from ND Fire Monitor 2024 Map, ND Dept of Emergency Services



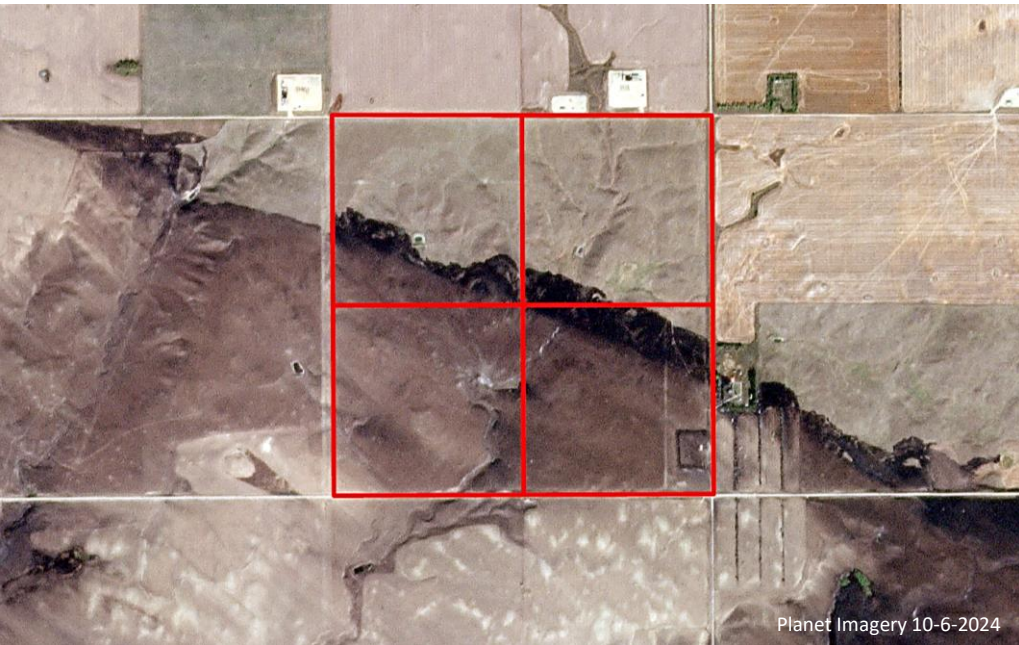
SURFACE DIVISION

TRUST LANDS ACRES AFFECTED BY FIRE

Approximate acres of Trust Lands burned (as of October 21, 2024)

- **Ray/Tioga Fires: 427 acres**

Williams Co. 157-98-16



Planet Imagery 10-6-2024

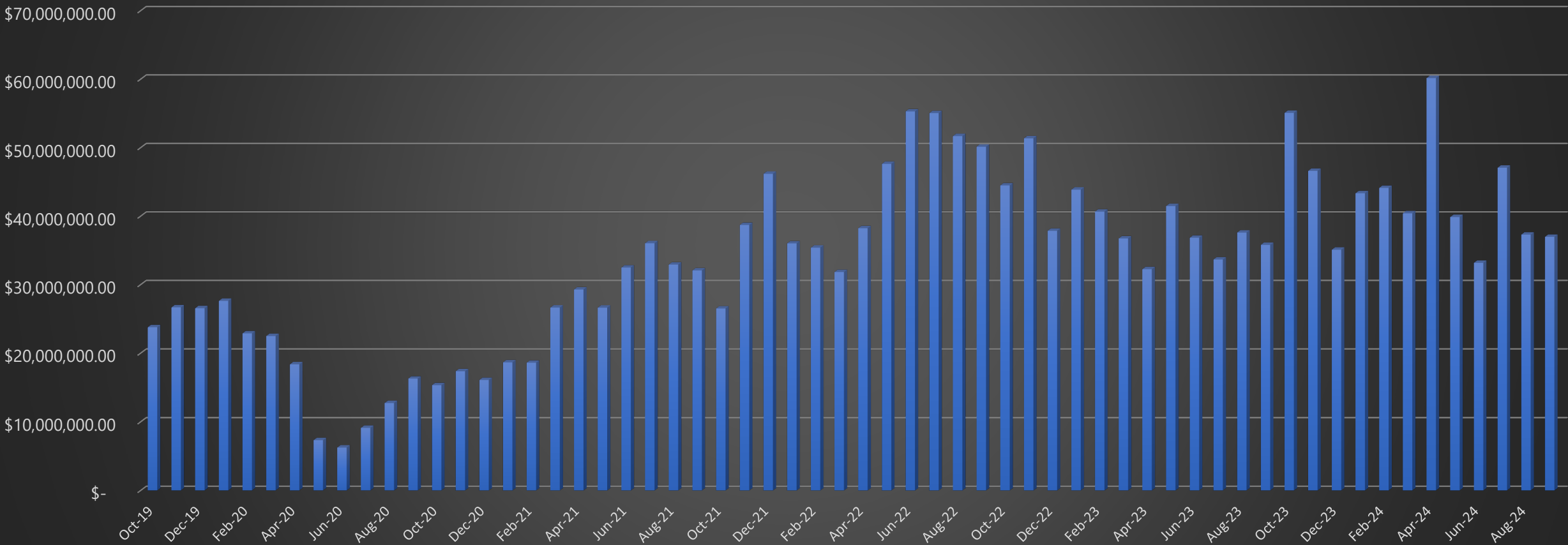


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MINERALS DIVISION FISCAL YTD O/G ROYALTIES

As of September 30, 2024*, for fiscal year 2024-25 the Department has received **\$121,366,854** in royalties as compared to **\$107,073,583** last fiscal year at this time.

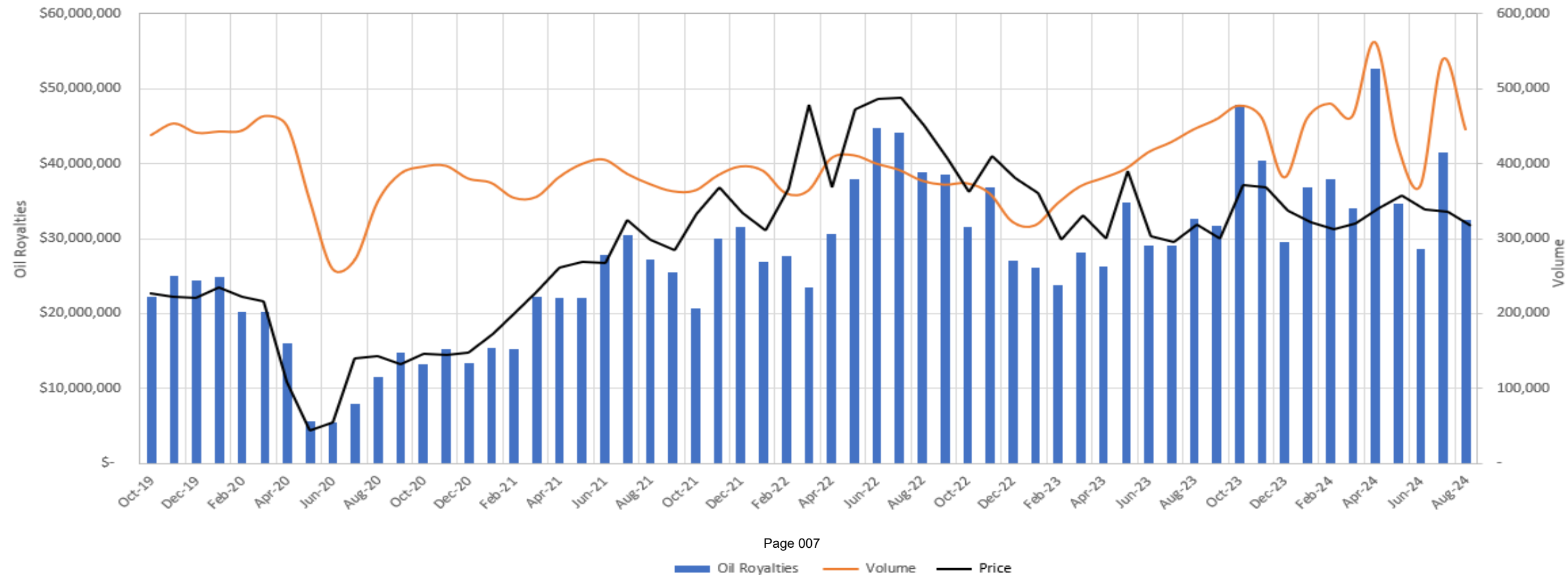
ROYALTIES - CASH COLLECTED



*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 stable, averaging 458,069 barrels per month over the past twelve months, the price of oil & gas is the main driver of monthly royalty variations.

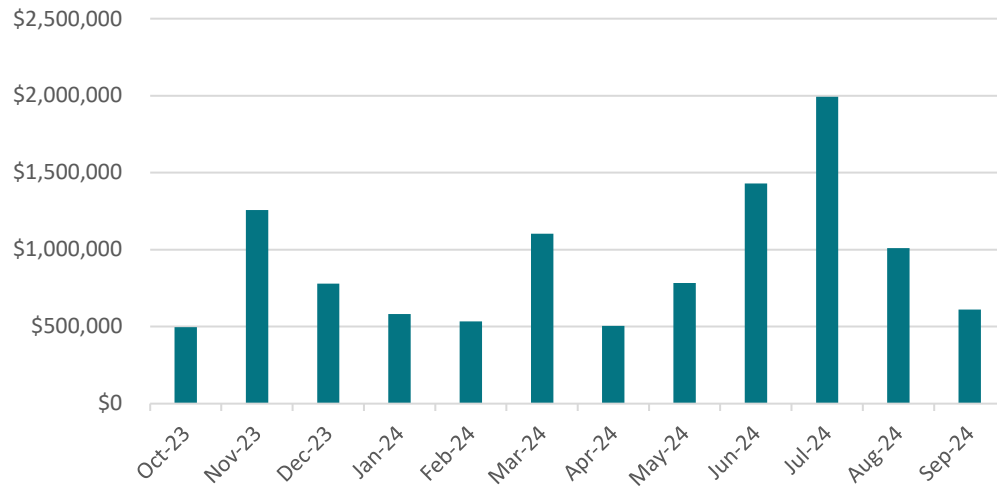


UNCLAIMED PROPERTY DIVISION

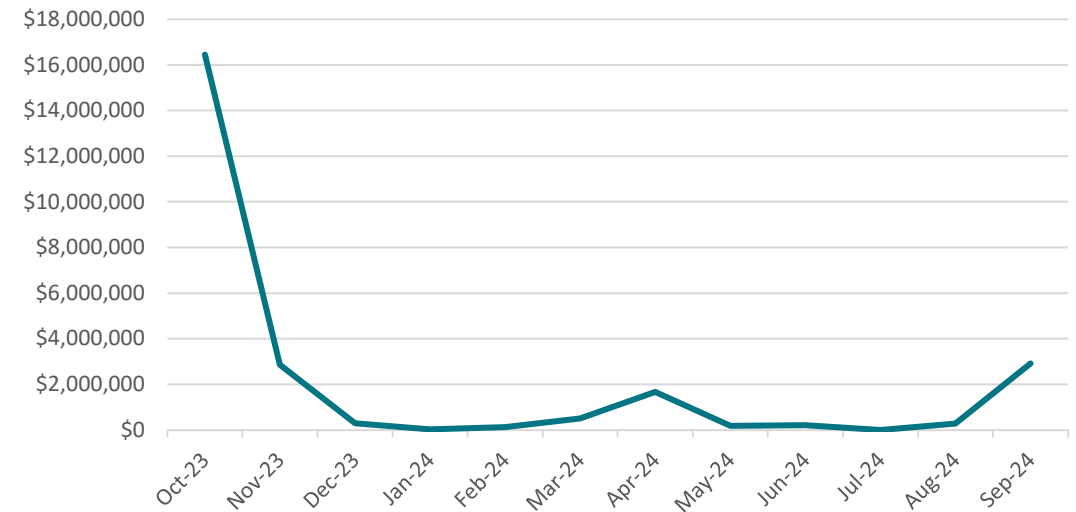
<https://unclaimedproperty.nd.gov>

For the month of September 2024, the Division paid 971 claims with \$610,243 returned to rightful owners. The Division also received 626 holder reports with a dollar value of \$2,914,142.

TOTAL DOLLAR VALUE OF CLAIMS PAID

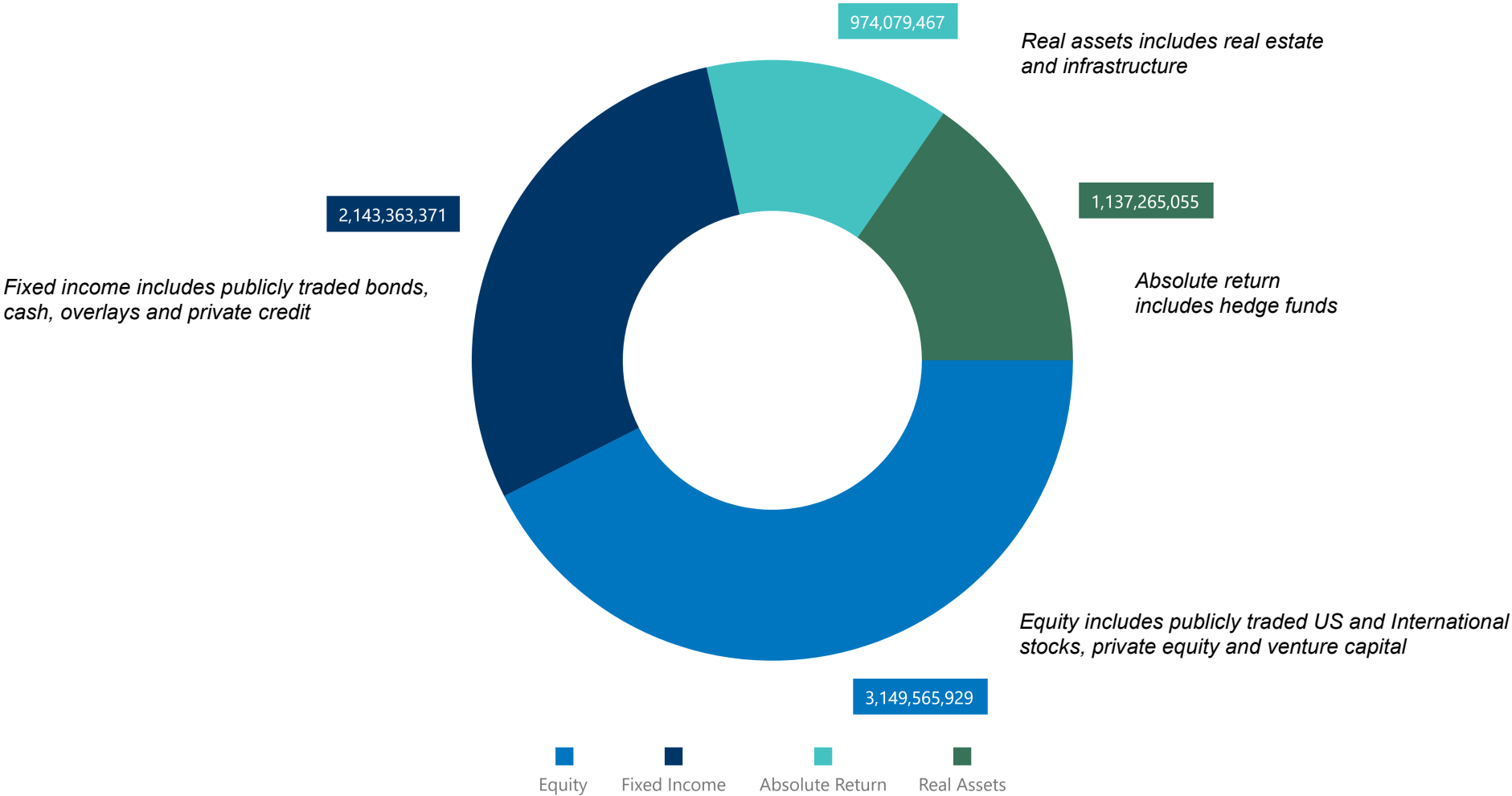


TOTAL VALUE OF PROPERTY REPORTED



Report as of 9/30/2024

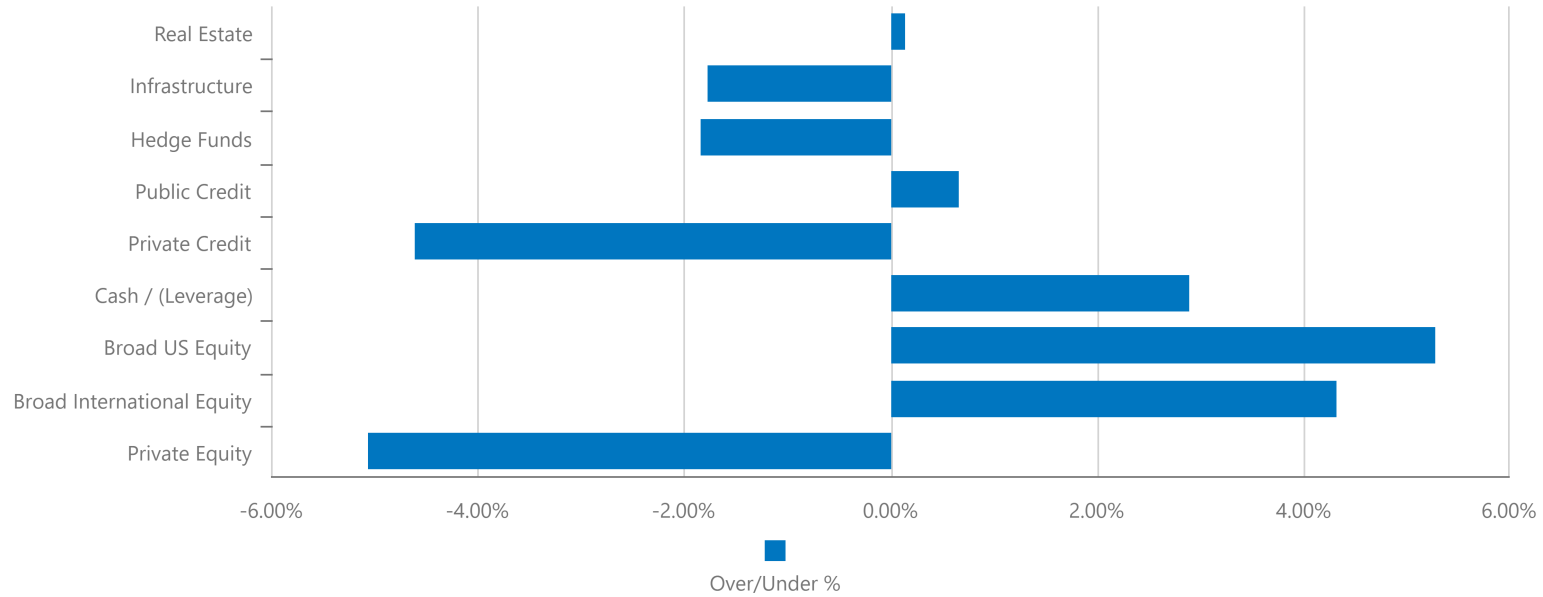
Asset Allocation



Asset	Total Value	% Of All Value
All	7,404,273,823	100 %
Equity	3,149,565,929	43 %
Fixed Income	2,143,363,371	29 %
Absolute Return	974,079,467	13 %
Real Assets	1,137,265,055	15 %

Report as of 9/30/2024

Actual vs. Target Weight

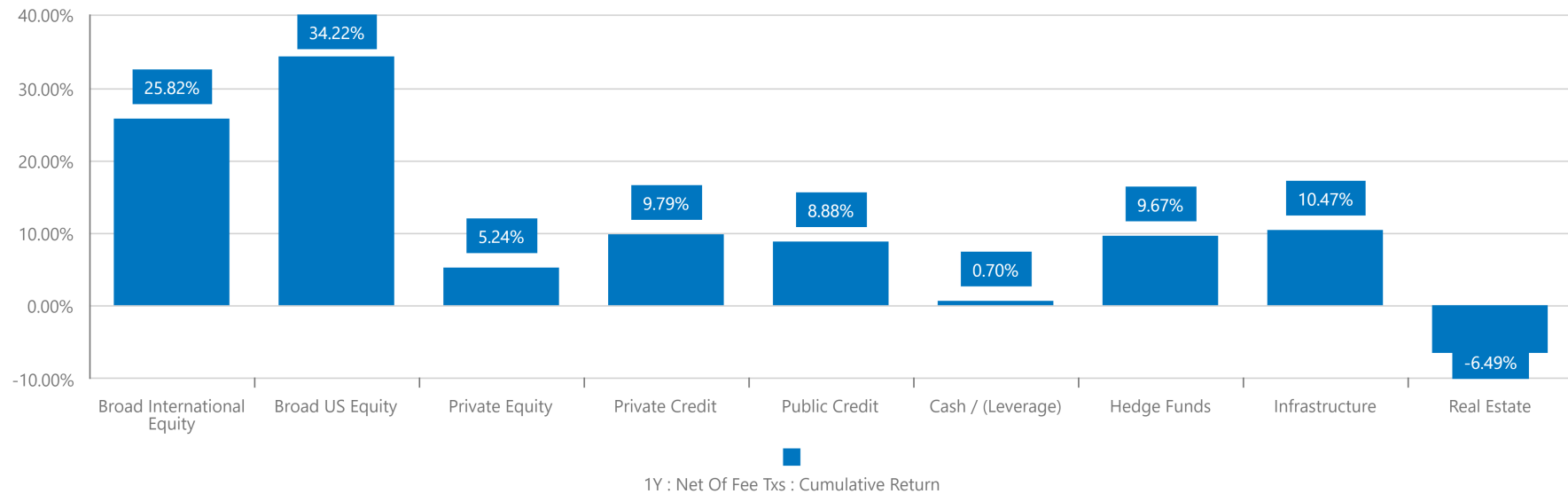


Asset	Total Value	% Of All Value	Target Weight	Over/Under %	Over/Under \$
All (MTD)	7,404,272,900	100%	100%	0%	--
Equity	3,149,565,929	42.54%	38%	4.54%	335,942,227
Private Equity	217,517,923	2.94%	8%	-5.06%	-374,823,909
Broad International Equity	1,430,521,271	19.32%	15%	4.32%	319,880,336
Broad US Equity	1,501,526,735	20.28%	15%	5.28%	390,885,800
Fixed Income	2,143,363,371	28.95%	30%	-1.05%	-77,918,499
Cash / (Leverage)	-156,082,788	-2.11%	-5%	2.89%	214,130,857
Private Credit	1,139,321,824	15.39%	20%	-4.61%	-341,532,757
Public Credit	1,160,124,335	15.67%	15%	0.67%	49,483,400
Absolute Return	974,078,545	13.16%	15%	-1.84%	-136,562,390
Hedge Funds	974,078,545	13.16%	15%	-1.84%	-136,562,390
Real Assets	1,137,265,055	15.36%	17%	-1.64%	-121,461,338
Infrastructure	386,562,607	5.22%	7%	-1.78%	-131,736,496
Real Estate	750,702,449	10.14%	10%	0.14%	10,275,159

Report as of 9/30/2024

Flash Performance Report

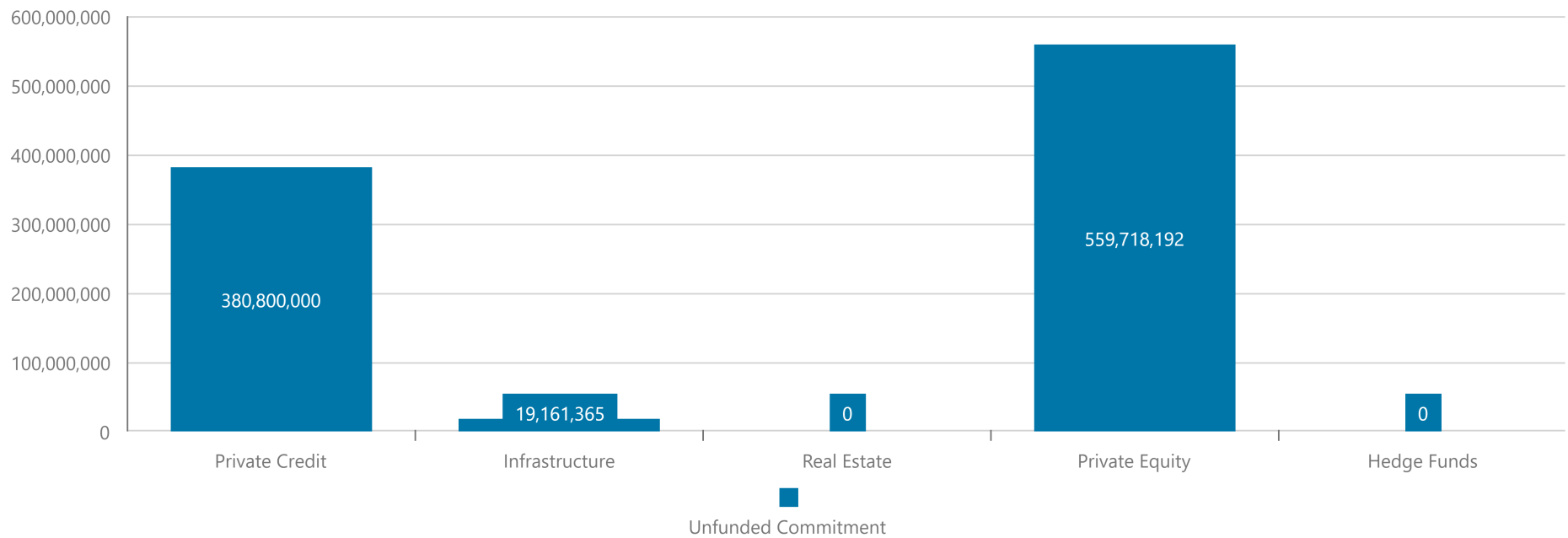
Unaudited preliminary estimates



	MTD	QTD	YTD	FYTD	1Y
	Net of Fees Tx's				
Asset ↕	Cumulative Return ↕	Cumulative Return ↕	Cumulative Return ↕	Cumulative Return ↕	Cumulative Return ↕
Total Portfolio ▼	1.1%	3.28%	9.44%	3.28%	14.34%
Equity ▼	1.9%	5.89%	16.8%	5.89%	28.36%
Broad International Equity ▶	1.93%	6.61%	15.35%	6.61%	25.82%
Broad US Equity ▶	2.16%	6.06%	20.27%	6.06%	34.22%
Private Equity ▶	0%	0%	1.77%	0%	5.24%
Fixed Income ▼	0.61%	2.09%	5.62%	2.09%	9.39%
Private Credit ▶	0.18%	1.15%	7.24%	1.15%	9.79%
Public Credit ▶	1.01%	3.1%	4.35%	3.1%	8.88%
Cash / (Leverage) ▶	0.53%	0.7%	0.7%	0.7%	0.7%
Absolute Return ▼	0.38%	1.1%	7.72%	1.1%	9.11%
Hedge Funds ▶	0.38%	1.1%	7.72%	1.1%	9.67%
Real Assets ▼	0.47%	0.53%	0.89%	0.53%	-1.57%
Infrastructure ▶	1.34%	1.53%	6.87%	1.53%	10.47%
Real Estate ▶	0.03%	0.03%	-1.81%	0.03%	-6.49%

Report as of 9/30/2024

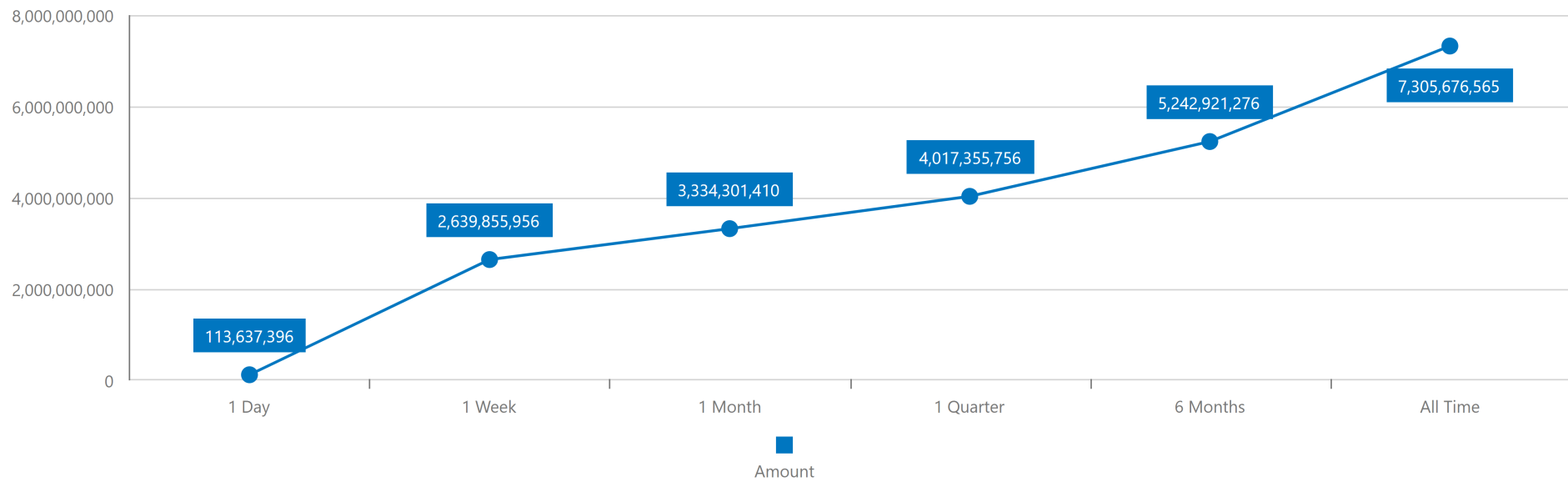
Uncalled Commitments



Asset	Commitment (\$M)	Funded Commitment (\$M)	Uncalled Capital (\$M)
All (MTD)	3,872	2,913	960
Ares	300	100	200
GCM Grosvenor	580	159	421
Hamilton Lane	50	31	19
Monarch	120	73	47
Morgan Stanley	175	166	9
Blue Owl	125	70	55
a16z	35	--	35
Industry Ventures	50	--	50
Khosla Ventures	35	12	23
Pantheon	100	--	100

Report as of 9/30/2024

Liquidity Waterfall



Entity ▾	1 Day (\$M) ⬆	1 Week (\$M) ⬆	1 Month (\$M) ⬆	1 Quarter (\$M) ⬆	6 Months (\$M) ⬆	1 Year (\$M) ⬆	All Time (\$M) ⬆
All ▾	114	2,640	3,334	4,017	5,243	5,623	7,306
Equity ▶	--	1,618	2,313	2,873	2,873	2,873	3,082
Fixed Income ▶	114	1,022	1,022	1,022	1,299	1,338	2,136
Absolute Return ▶	--	--	--	122	299	460	965
Real Assets ▶	--	--	--	--	772	951	1,123

Measures how long it would take to liquidate the entire portfolio

MEMORANDUM TO THE BOARD OF UNIVERSITY AND SCHOOL LANDS
October 31, 2024

RE: International Equity – Extended Equities

The International Equity portfolio is currently at \$1.4 billion with approximately 40% of assets actively managed. The goal of this proposal is to shift the allocation closer to benchmark and increase active management to 70%.

The benchmark for international equities is MSCI All Country World Index (ACWI) ex USA which tracks non-US stocks in developed (70%) and emerging markets (30%). Staff recommends shifting the emerging markets allocation closer to benchmark by rebalancing Arrowstreet to 30% when capacity becomes available in the future. The developed markets portion is commonly referred to as Europe, Australasia and the Far East (EAFE) and is comprised of large and mid-cap companies from over 20 countries. Staff recommends shifting the developed markets allocation closer to benchmark by broadening the mandate for Acadian to include large and mid-cap companies. The new international equity allocation targets will be as follows:

Old Target	New Target	Benchmark	Manager	Passive/Active
60%	30%	MSCI World ex-US	State Street	Passive
20%	30%	MSCI Emerging Markets	Arrowstreet	Active
20%	0%	MSCI EAFE Small Cap	Acadian	Active
0%	40%	MSCI EAFE	Acadian	Active

Staff and RVK recommend converting Acadian Non-US Small Cap Equity Extension to Acadian EAFE Equity Extension. Acadian Asset Management was founded in 1986 and is headquartered in Boston. Acadian is well-known for its systematic/quantitative approach to investing. They have over \$100 billion in assets under management and a 100+ person investment team. Acadian has a 35-year track record in international equities and a 20-year track record in active extension strategies. The EAFE Equity Extension strategy will target 5-7% active risk (deviation from benchmark) by investing both long and short across small, mid and large companies in developed international countries, including Canada.

To fund the new EAFE Equity Extension strategy, transfers will be as follows:
(\$250-300M) full redemption from Acadian Non-US Small Cap Equity Extension
(\$250-300M) partial redemption from SSGA World ex-US Index
\$500-600M subscription to Acadian EAFE Equity Extension

Recommendation: The Board approve a full redemption from Acadian Non-US Small Cap Equity Extension and new investment to Acadian EAFE Equity Extension, subject to standard legal review/documentation.

Attachment 1: RVK International Equity Manager Recommendations and Structure Analysis
Attachment 2: Acadian Presentation

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



International Equity Manager Recommendations and Structure Analysis

October 31, 2024



Summary of Recommendations

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

- Transition the Acadian International Small Cap 130/30 strategy to the Acadian EAFE 130/30 (all cap) strategy at a larger allocation size and increase the allocation to the Arrowstreet Emerging Markets 150/50/60 strategy.
- Reduce the passive Developed International Large/Mid Cap exposure.

The recommended structure is expected to generate higher tracking error after the transition due to a higher active allocation. The recommended structure is detailed in the following table.

	ND IE Current	ND IE Alternative
Int'l Developed Large/Mid		
<i>Acadian EAFE 130/30</i>	0	40
<i>SSgA Passive IE Large/Mid</i>	60	30
Int'l Developed Small		
<i>Acadian IESC 130/30</i>	20	0
Emerging Markets		
<i>Arrowstreet EM 150/50/60</i>	20	30
Excess Return, %	3.65	6.18
Tracking Error	1.47	3.17
Information Ratio	2.47	1.95

Active Returns in International Equity

Within the emerging markets and developed international equity 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 elevated, providing a better opportunity for active managers to add value within emerging markets and developed international equity.
- Reasons for the lower information efficiency within emerging markets and developed international markets include: fewer analysts covering each stock, language barriers, and reduced availability of company information.

Long-Term 3-Year Rolling Average (Net of Fees)

January 2001 – December 2023

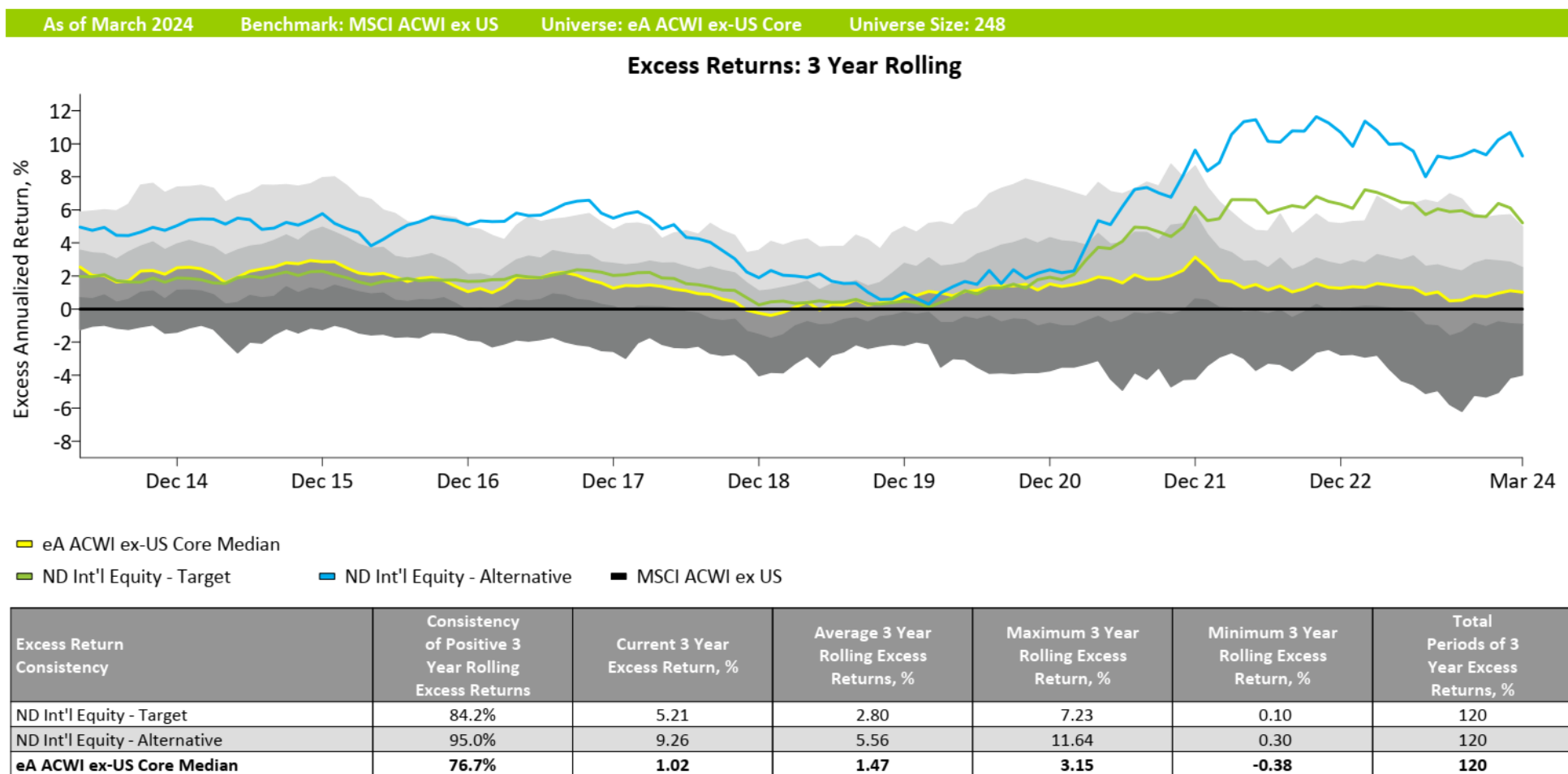
International & Global Equity Excess Returns, %			
	25 th Percentile	Median	75 th Percentile
Developed Non-US All Cap	2.28	0.32	-1.38
Emerging Markets All Cap	3.00	0.58	-1.52

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.

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.



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.

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). Despite the higher risk level of the recommended portfolio, the efficiency of alpha transfer would have been relatively similar historically compared to the current portfolio.

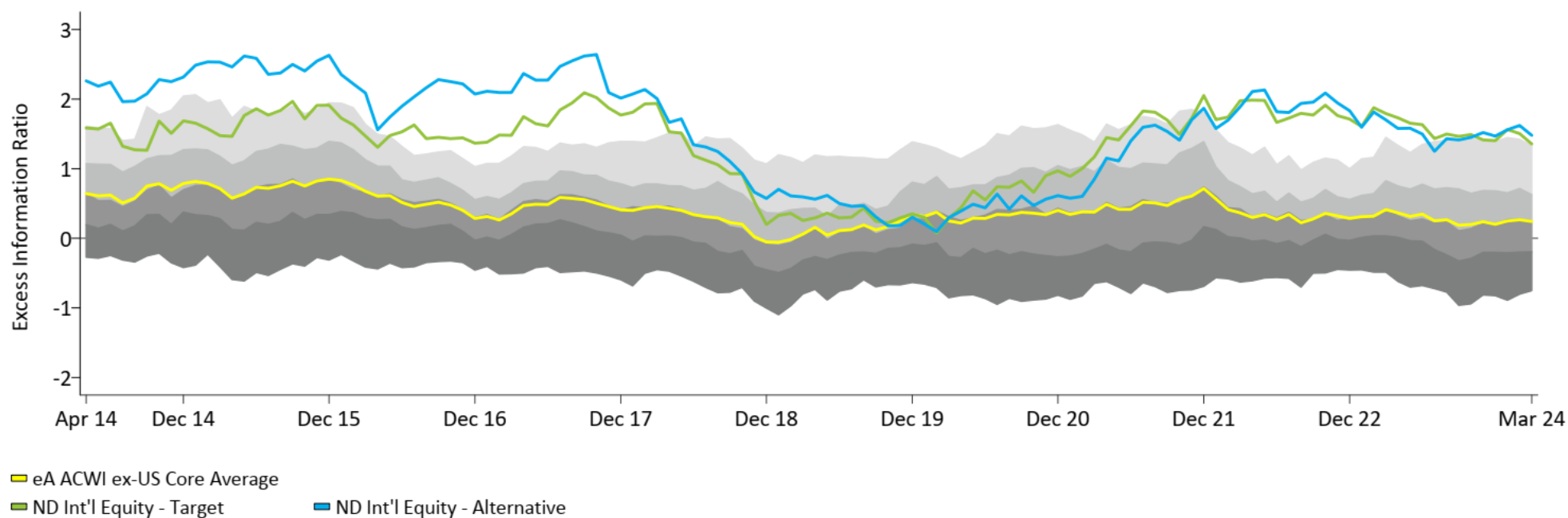
As of March 2024

Benchmark: MSCI ACWI ex US

Universe: eA ACWI ex-US Core

Universe Size: 248

Information Ratio: 3 Year Rolling



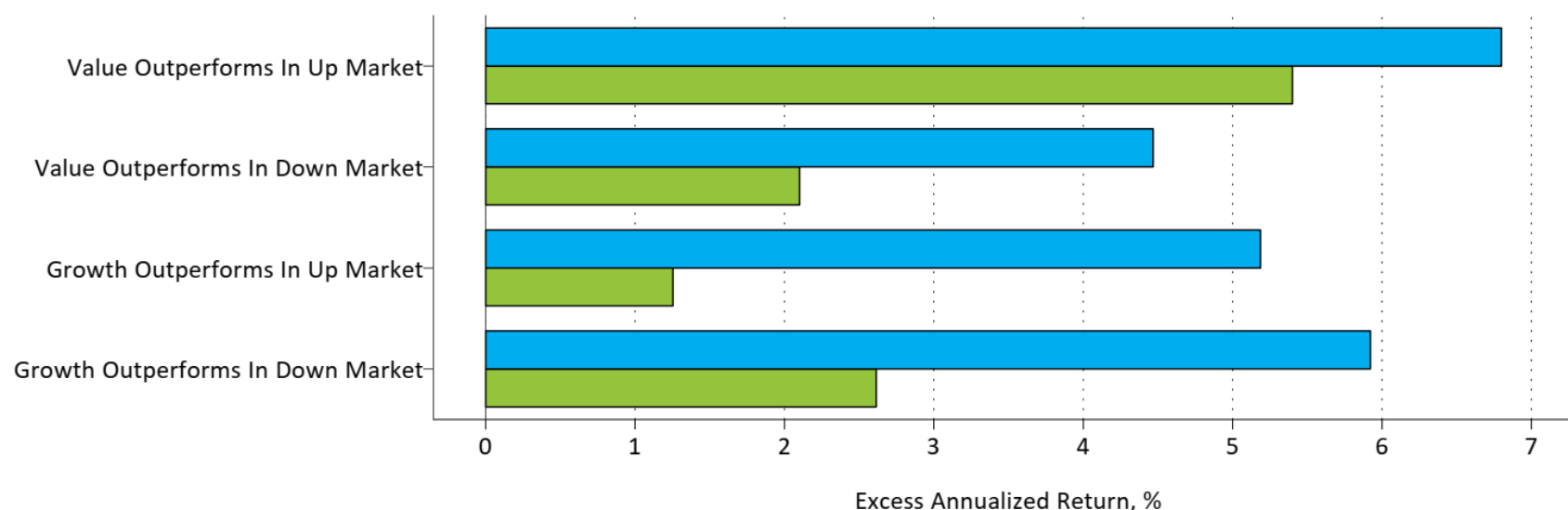
Information Ratio Rank Consistency	How often has the Information Ratio ranked above median over past 3 year time periods?	Average 3 Year Rolling Information Ratio Rank	Total Periods of 3 Year Performance
ND Int'l Equity - Target	98.3%	12	120
ND Int'l Equity - Alternative	97.5%	11	120

Excess Returns in Value/Growth Led Markets

The recommended portfolio has performed better across different historical style and volatility environments compared to the current target structure.

As of March 2024 Benchmark: MSCI ACWI ex US Universe: eA ACWI ex-US Core Universe Size: 248

Annualized Excess Returns in Past Style Led Months (Grouped by Up/Down Market Returns)



■ ND Int'l Equity - Target ■ ND Int'l Equity - Alternative

	Annualized Excess Returns				# of Months of Style Leadership			
	Growth Outperforms In Down Market	Growth Outperforms In Up Market	Value Outperforms In Down Market	Value Outperforms In Up Market	Growth Outperforms In Down Market	Growth Outperforms In Up Market	Value Outperforms In Down Market	Value Outperforms In Up Market
ND Int'l Equity - Target	2.61	1.25	2.10	5.40	53	51	22	54
ND Int'l Equity - Alternative	5.92	5.19	4.47	6.80	51	47	22	51

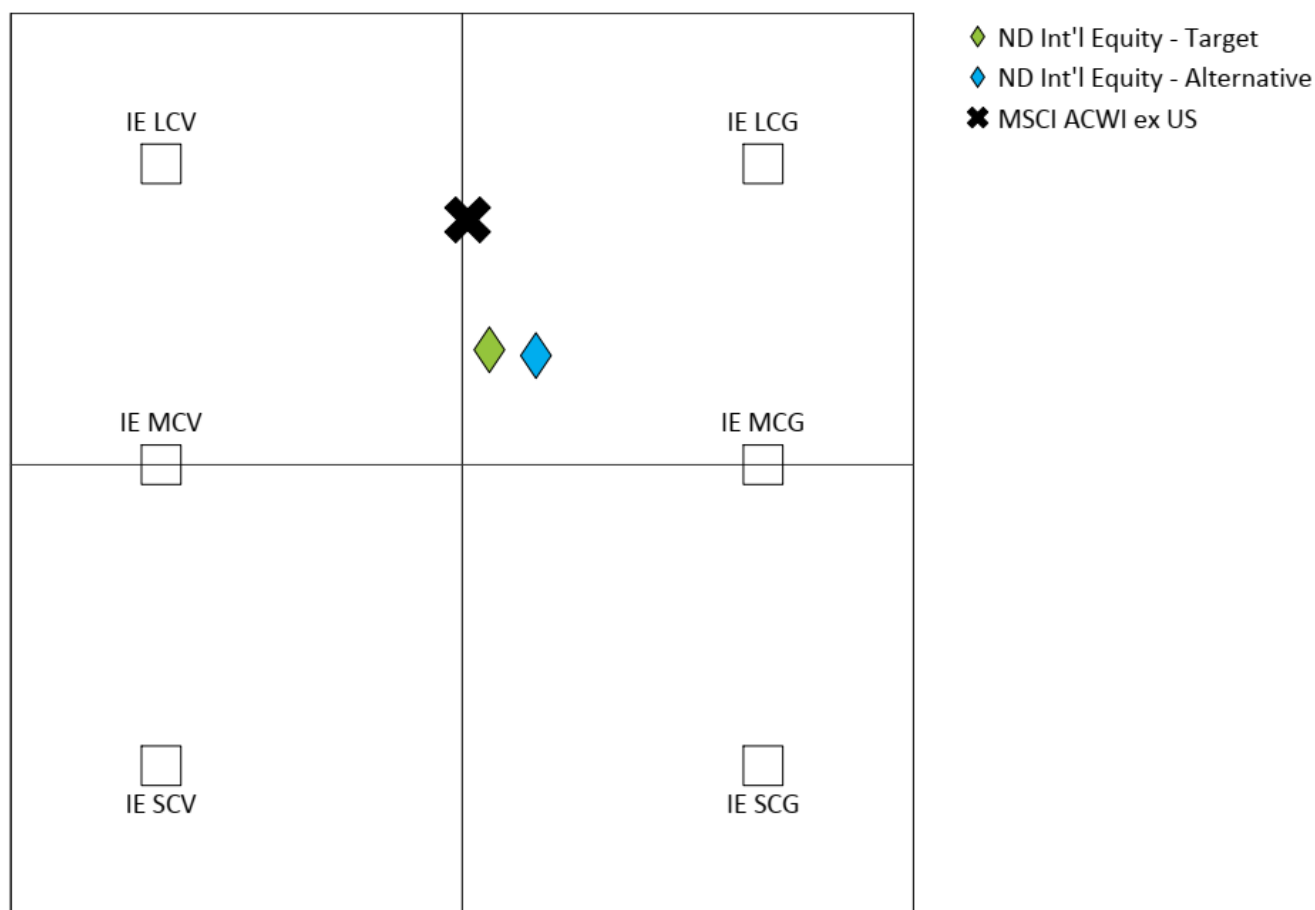
Excess Returns of the managers in both value-led and growth-led months are grouped together and then separated by whether the general market had positive or negative returns for a given month. The monthly returns within the four groups are annualized to illustrate the performance of each strategy in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

Style Analysis

The recommended portfolio remains diversified across style and size dimensions providing a similar footprint as the current target structure.

Style Analysis - Common Period

Jan 10 - Mar 24



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

PORTLAND

BOISE

CHICAGO

NEW YORK

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Memorandum

To	North Dakota Board of University and School Lands (NDBUSL)
From	RVK, Inc. (RVK)
Subject	International Equity Alpha Extension Recommendation
Date	October 31, 2024

Summary

In October 2023, Staff and RVK recommended a transition to the Alpha Extension versions of existing international equity strategies in the Broad International Equity Composite. These strategies were managed by the incumbent active managers within the composite, Acadian and Arrowstreet. This memo recommends transitioning to a similar strategy offered by Acadian which will enable an increase to the active management allocation within the Broad International Equity Composite. This change is intended to increase the alpha potential within an equity asset class where active management is relatively successful. The change is not intended to significantly increase volatility risk, create market cap biases, or alter the region exposure provided by the Broad International Equity Composite. There is no recommended transition related to the Arrowstreet strategy.

The current 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 taking short positions in negatively rated stocks (30% exposure). The end result is a portfolio that targets 100% net exposure and similar volatility risk as the target market. The current strategy is limited to investing primarily in small cap stocks listed in developed international markets. The proposed Acadian strategy uses the same approach, but it is applied to a broader universe of stocks inclusive of large, mid and small cap stocks while maintaining a focus on developed international markets. Acadian is launching a commingled fund for this strategy, the Acadian EAFE 130/30 strategy, which is the recommended vehicle for this investment. As background, NDBUSL currently invests in the commingled fund for the Non-US Small Cap 130/30 strategy.

Similarly, the existing Arrowstreet Emerging Markets 150/50/60 strategy provides approximately 150% long exposure while implementing short exposure using a similar framework. In addition, this strategy may go long or short up to 60% in equity index futures in order to manage the portfolio's beta to the equity benchmark.

RVK views these two incumbent managers as top-tier providers within this space based on performance, history of track records at significant asset levels, 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 recent onsite visits heavily informed and guided this manager selection process.

The Acadian strategy transition from a small cap focused portfolio to an all cap strategy allows for increasing the allocation to active management without introducing a structural bias to a given market cap or region within the Broad International Equity composite. The existing passive investment to the

World ex US Index (Developed International Large/Mid) would be decreased to 30% from 60% in the recommended structure. The reduced allocation to passive management would be used to increase the Acadian allocation to 40% and the exposure to Arrowstreet to 30%, pending available capacity. This structure would result in a market cap and style-neutral portfolio structure relative to the policy benchmark that would remain similar to the current structure. This recommendation seeks higher alpha generation, higher active share, and the continued alignment of performance-based fees with NDBUSL performance objectives. These objectives are expected to be met without taking excessive absolute or uncompensated relative risks.

Performance and Peer Comparison

The following exhibits summarize performance statistics across 10-year results for Acadian based on a simulated track record, which uses the same quantitative process they apply across strategies. The results for the existing Arrowstreet strategy shows 5-year results (incepted in February 2019).

10-Year Statistics versus EAFE IMI Index	Excess Returns, %	Tracking Error, %	Information Ratio	Sharpe Ratio	Upside Market Capture, %	Downside Market Capture, %	Beta
Acadian Asset Management	6.31	6.43	0.98	0.68	108.55	79.08	0.91
eVestment EAFE All Cap Median	0.78	4.30	0.21	0.28	99.36	95.21	0.97

5-Year Statistics versus MSCI Emerging Markets Index	Excess Returns, %	Tracking Error, %	Information Ratio	Sharpe Ratio	Upside Market Capture, %	Downside Market Capture, %	Beta
Arrowstreet Capital	23.23	12.73	1.82	1.14	117.84	36.58	0.83
eVestment EM Median	1.76	5.60	0.34	0.10	103.67	96.88	1.00

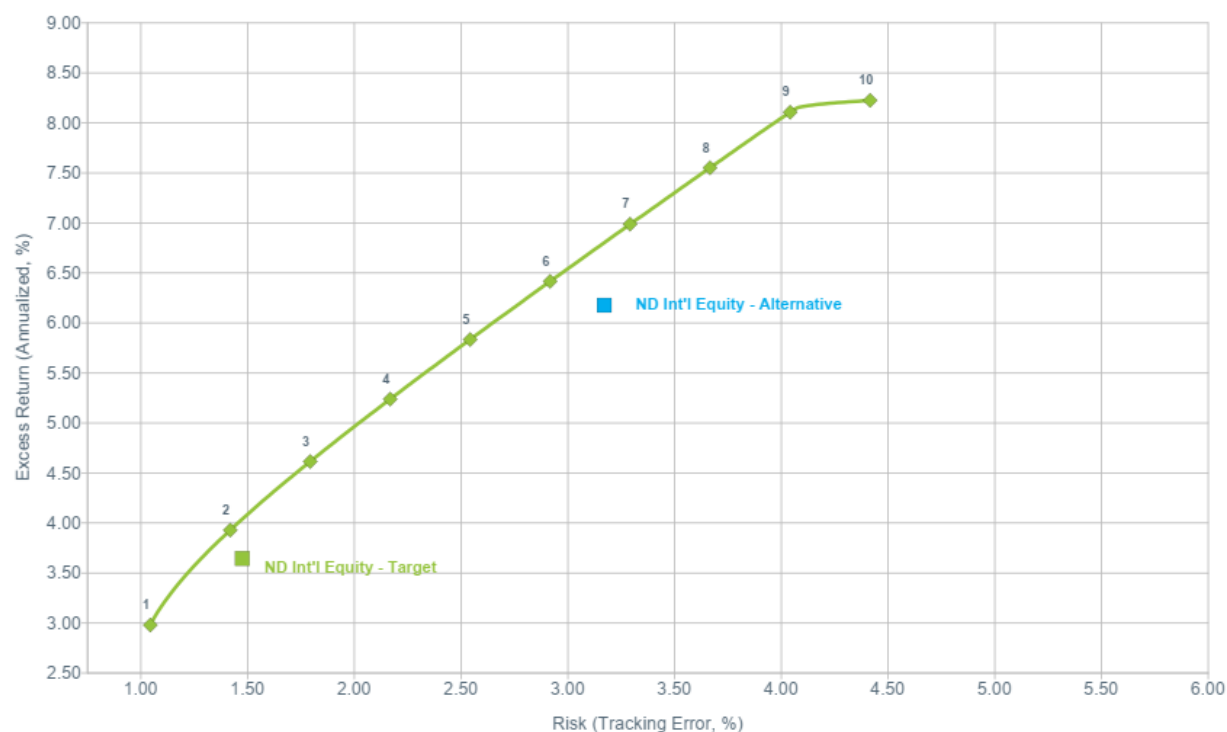
Relative to peers, the performance and risk-based analysis shows both strategies have the potential to generate attractive excess returns with better risk/reward ratios (Information Ratio and Sharpe Ratio) than most comparable managers. The results reported by Acadian and Arrowstreet have outpaced the 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 favorably versus peers over full market cycles.

A comprehensive review of alternative weighting scenarios for the NDBUSL international equity composite was also conducted by RVK, and is summarized by the following results. A track record proxy for Arrowstreet, using the same process used in the 2023 transition analysis, was used to estimate the expected risk and return of the strategy. The analysis includes a long-term period ranging from January 2010 through March 2024.

The following table shows the range of possible optimal allocations. This range illustrates the trade-off between return and risk; additional excess return can only be achieved by undertaking additional risk (measured by tracking error).

	Min	Max	1	2	3	4	5	6	7	8	9	10	ND Int'l Equity - Target	ND Int'l Equity - Alternative
Acadian IESC 130/30	0	30	12	12	13	14	14	15	16	16	20	30	20	0
Arrowstreet EM Proxy	0	30	16	17	19	20	21	21	22	23	25	15	20	30
Acadian EAFE 130/30	0	50	2	12	19	25	31	36	42	48	50	50	0	40
SSgA World ex US	0	70	70	58	50	42	34	27	20	13	6	5	60	30
Combined Emerging/Small, %	10	45	28	30	31	33	35	36	38	40	44	45	40	30
Excess Return			2.98	3.93	4.61	5.24	5.83	6.42	6.99	7.55	8.11	8.23	3.65	6.18
Tracking Error			1.04	1.42	1.79	2.17	2.54	2.92	3.29	3.67	4.04	4.42	1.47	3.17
Information Ratio			2.86	2.77	2.57	2.42	2.30	2.20	2.12	2.06	2.01	1.86	2.47	1.95

The following graph illustrates the relationship between risk (tracking error) and excess return. The line connecting the points represents all the optimal portfolios subject to the given constraints (efficient frontier).



The scenario analysis suggests that the proposed allocation for the NDBUSL international equity composite will have the potential to produce an attractive level of excess returns through increasing tracking error risk driven by the higher active management allocation. The higher allocation to active management within Broad International Equity is viewed as beneficial given the relatively lower informational efficiency and associated higher success rates of active management within the asset class.

Management Fees

Both Acadian and Arrowstreet offer performance-based fees for investors. These structures result in base fees below the 5th percentile of their respective peer groups, with any additional fees only incurred if the managers provide excess returns above their stated benchmarks. Fees for Arrowstreet will remain unchanged while the fees for the Acadian EAFE 130/30 strategy represent as more advantageous structure compared to the past arrangement used for the Non-US Small Cap 130/30 strategy.

RVK views the proposed arrangements favorably given the further alignment it provides with NDBUSL performance objectives.

Recommendation

RVK recommends that NDBUSL approve the transition to the Acadian EAFE 130/30 strategy. The recommended structure would include a 30% allocation to the existing passive MSCI World ex US Index strategy, a 40% allocation to Acadian and a 30% allocation to 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, 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. The firm currently manages approximately \$111 billion.

Acadian has a sizable investment team consisting of 36 portfolio managers with an average of 20 years of industry experience as well as 58 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. Mr. Dowd was replaced by Kelly Young in December 2023. 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 based on fundamental valuation, with the belief that market inefficiencies are caused by behavioral anomalies such as investors' overconfidence and pessimism. The investment 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 resulting 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 \$205 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. One of the founding members of the firm Peter Rathjens, CIO, moved into a reduced role at the end of 2023 with Derek Vance assuming the CIO position following a previously announced transition period.

Philosophy and Process

This purely quantitative strategy is dynamic in nature. Unlike many of their competitors, strategies do not rely on long term style tilts. They are also differentiated from competitors by harnessing indirect analytical effects on stocks. 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 portfolio generally holds approximately 325-775 stocks and includes sector exposure limits. 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.

North Dakota Board of University & School Lands

October 31, 2024

The background of the slide is a complex, abstract network diagram. It consists of numerous small, light blue circular nodes connected by thin, light blue lines. The connections form a dense, interconnected web that fills the entire page. Some nodes are slightly larger than others, and the overall structure is non-hierarchical and organic.

OVERVIEW

Acadian

Investing systematically for over 30 years, we combine intellectual rigor, rich data, and powerful tools to deliver results with analytical clarity.

Acadian Systematic Investing Built On



Economic intuition & insights of a talented, experienced, diverse group of investors:

100+ person investment team | 1600+ years' collective experience
100+ advanced analytical degrees

PEOPLE

DATA

Extensive data repository supplemented by alternative data scouting effort:

518M+ daily observations | 58TB+ data
150+ global markets | 40K+ traded assets



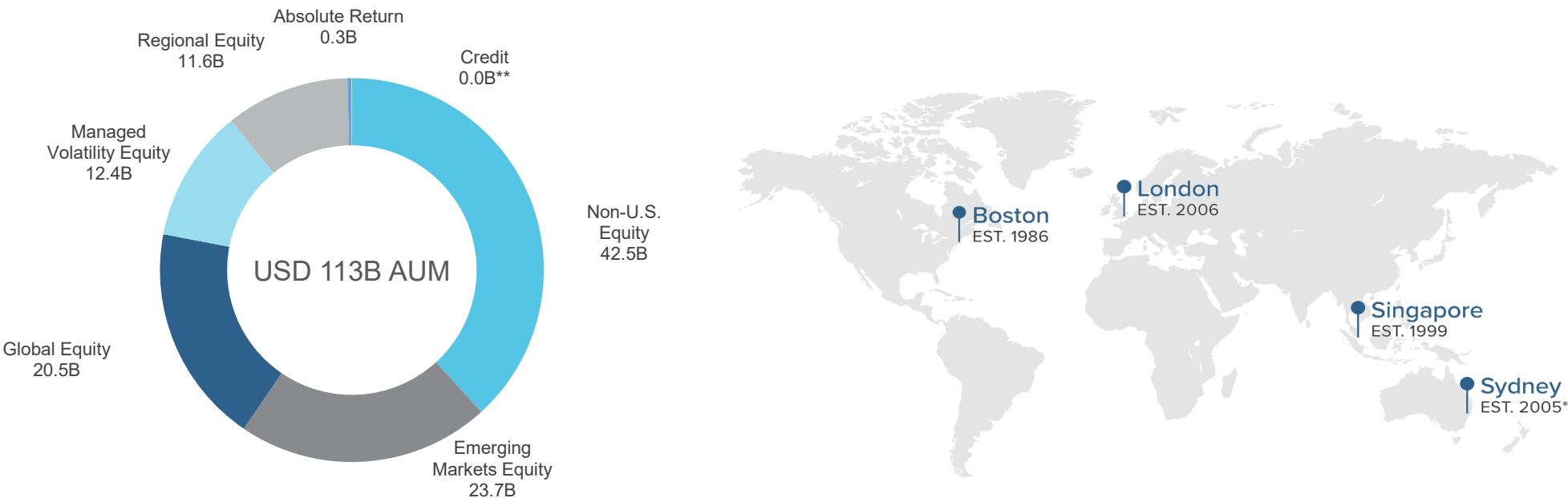
Transforming information into insights:

Robust technological infrastructure
Sophisticated analytical tools & portfolio attribution illuminate trends, relationships, and drivers of alpha

CLARITY

Organizational Overview

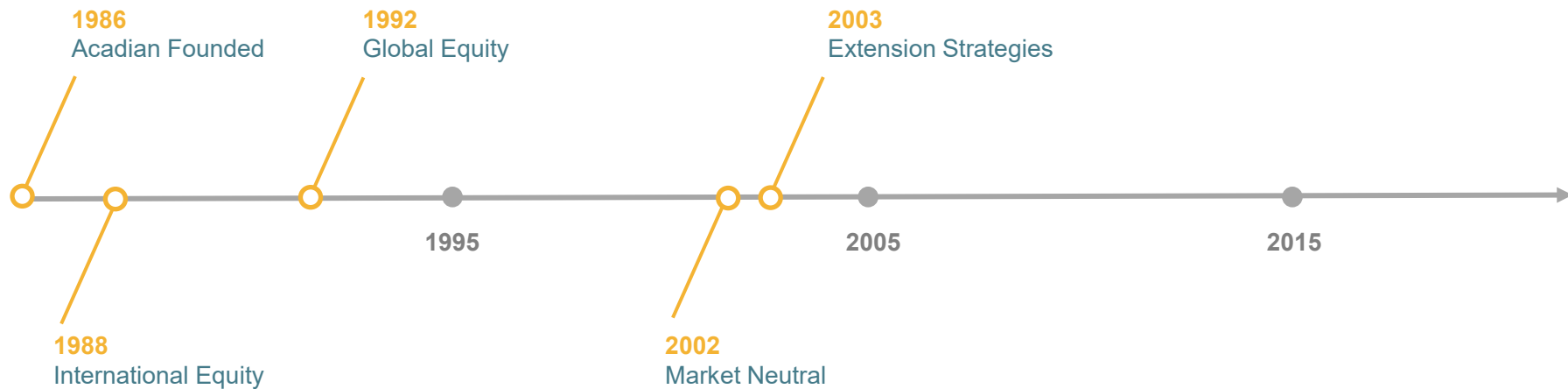
- Acadian has been a pioneer in systematic investing since our founding in 1986
- We believe that a systematic approach grounded in fundamentals is well suited to delivering consistent risk-adjusted returns
- Our 365-person team is focused on continuous research and innovation



June 30, 2024
 Rounding is applied to the total firm AUM which includes \$1350.2 million in model advisory contracts where Acadian does not have trading authority. The individual strategy level assets under management (AUM) are rounded to the nearest million unless otherwise noted and do not include model advisory assets.
 *As a separate legal entity, Acadian Asset Management (Australia) Limited. This was initially established as a joint venture with Colonial First State Investments Limited and became a wholly owned entity on June 30, 2015.
 **Credit AUM: \$31.6M

Strategy Innovation

- Over 35 years of experience managing systematic strategies, since 1986
- 21 years of experience managing market neutral strategies, since 2002
- 20 years of experience managing extension strategies, since 2003



Investment Team – Equities



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PROCESS

Investment Philosophy

- Financial assets are often **mispriced** due to investors incorrectly processing information, having incomplete information, or both
- **Systematic** processes best capture inefficiencies arising from mispriced fundamental and market information
- Our **edge** comes from embracing new ideas and a continuous investment in people, technology, and data

Investment Process



Non-U.S.

15,500 stock investment universe



Objective Return Forecast

Stock-specific

Selection within traditionally defined groups

+

Peer

Overlooked information from alternative peer groups

+

Macro

Top-down group signals (industry and country)



Disciplined Portfolio Construction

Multi-horizon forecasts

Proprietary risk models

Dynamic transaction cost modeling



Structured Trading Process

Systematic approach

Dynamic routing based on order profiling

Real-time oversight

Return Forecast Example

Model	Theme		Sample signals	Forecast
Stock-Specific	Value	→	Adjusted Intrinsic Value Extended Asset Value	-1.21
	Quality	→	Financial Strength Management Behavior	-0.12
	Growth	→	Earnings Surprise Recommendation Change	-0.48
	Technical	→	Institutional Investor Crowding Smart Reversal	-1.91
Peer	Proprietary Networks	→	Momentum Fundamentals	-0.18
Macro	Country	→	Corruption Adjusted Valuation Macro Environment	+0.15
	Industry	→	Quality Global Growth Sensitivity	+0.05
	Country/Industry Intersection	→	Price Momentum Adjusted Valuation	-0.06

Total Forecast -3.75%	
Company:	AUTOSTORE HOLDING INC
Market Cap:	USD 5B
Country:	Norway
Industry:	Capital Goods
Description:	Provides advanced industrial materials rare earth magnetic powders and magnets

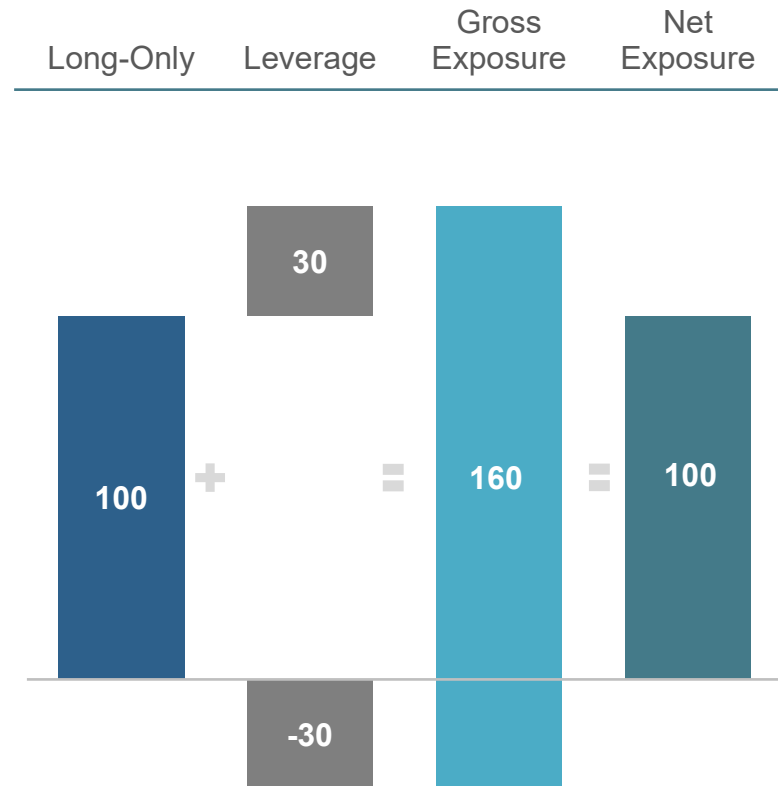
Source: Acadian Asset Management LLC. The information provided is for illustrative purposes only based on proprietary models. There can be no assurance that the forecasts will be achieved. The selected stock is intended to be an example of the process and is not a recommendation to buy or sell this specific security.

The background of the slide is a complex, abstract network diagram. It consists of numerous small, light blue circular nodes connected by thin, light blue lines. The nodes are distributed across the entire page, with some areas being more densely connected than others, creating a sense of a large, interconnected system. The overall aesthetic is clean and modern, typical of a corporate or academic presentation.

EXTENSION SUMMARY

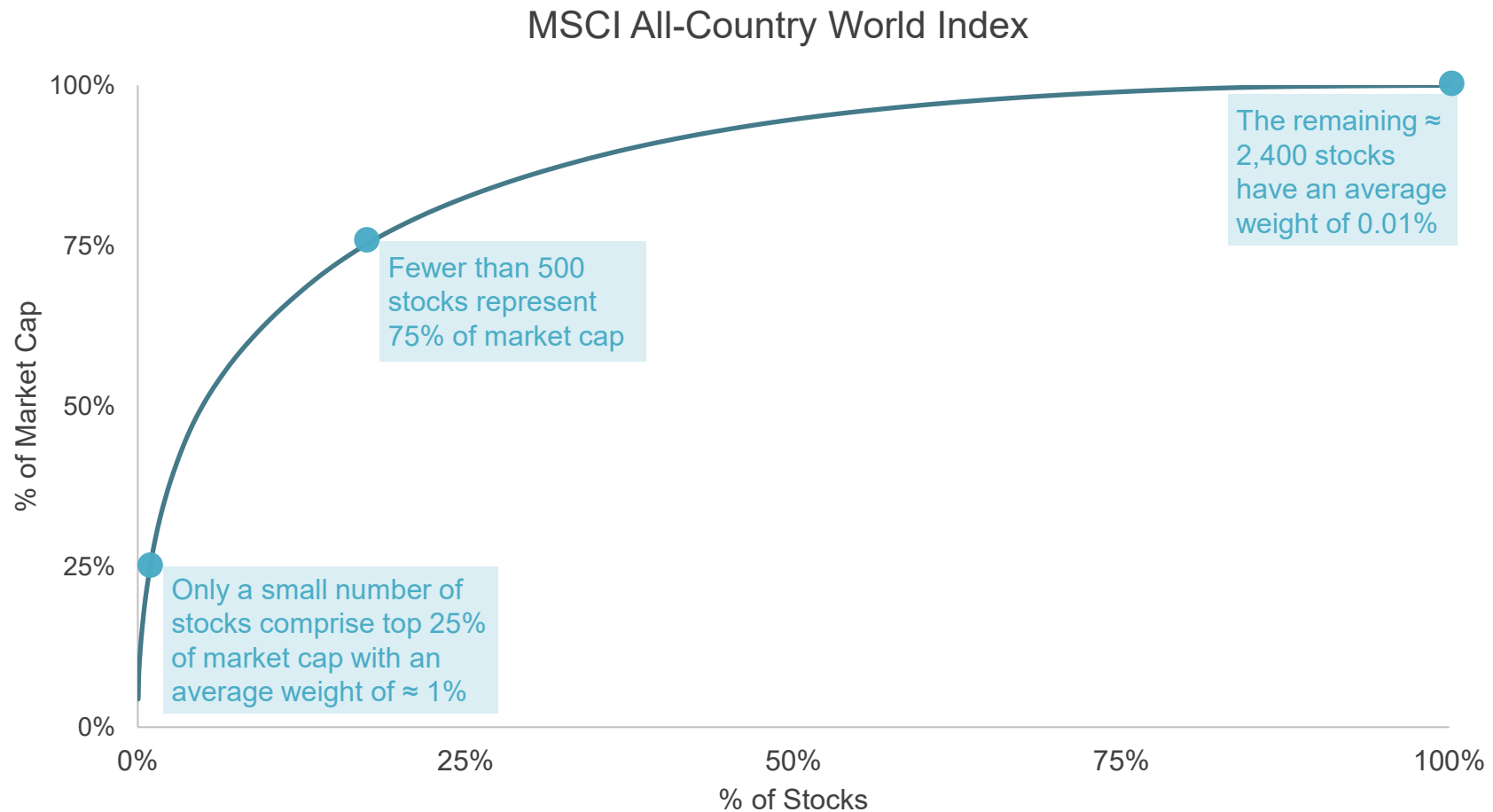
Benefits of Extension Strategies

- Shorting grants access to the broadest range of return forecasts
- Extension strategies maintain full market exposure with increased alpha exposure
- Objective is higher alpha and greater consistency of excess return



Extension Strategies: Increased Opportunity Set

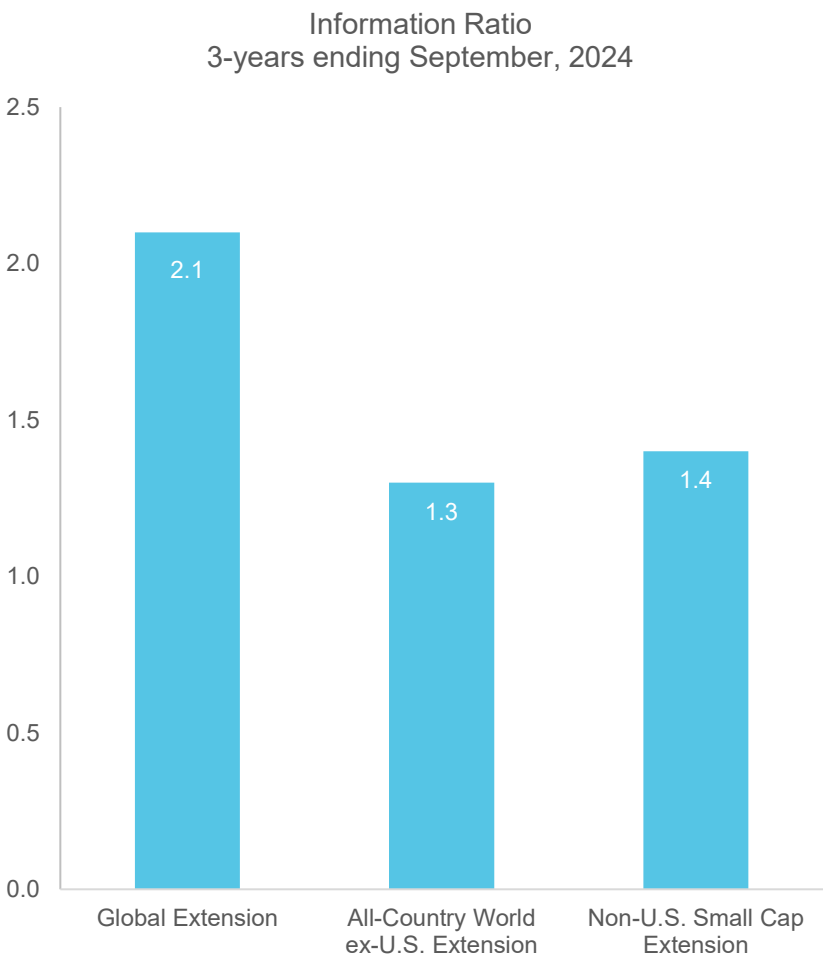
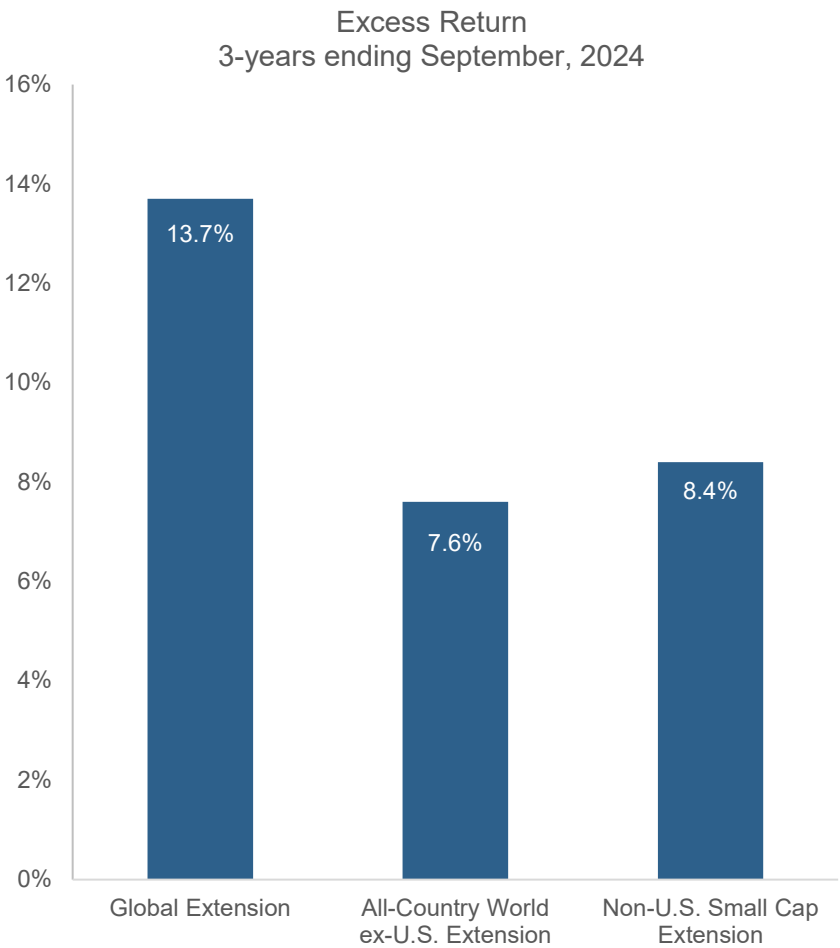
Leveraging Short-side Alpha Allows for Targeted, Risk-Aware Exposures



The background of the slide is a complex, abstract network diagram. It consists of numerous small, light blue circular nodes connected by thin, light blue lines. The nodes are distributed across the entire page, with some areas being more densely connected than others, creating a sense of a global or interconnected system. The overall aesthetic is clean and modern, typical of a corporate or academic presentation.

SUPPORTING EXHIBITS

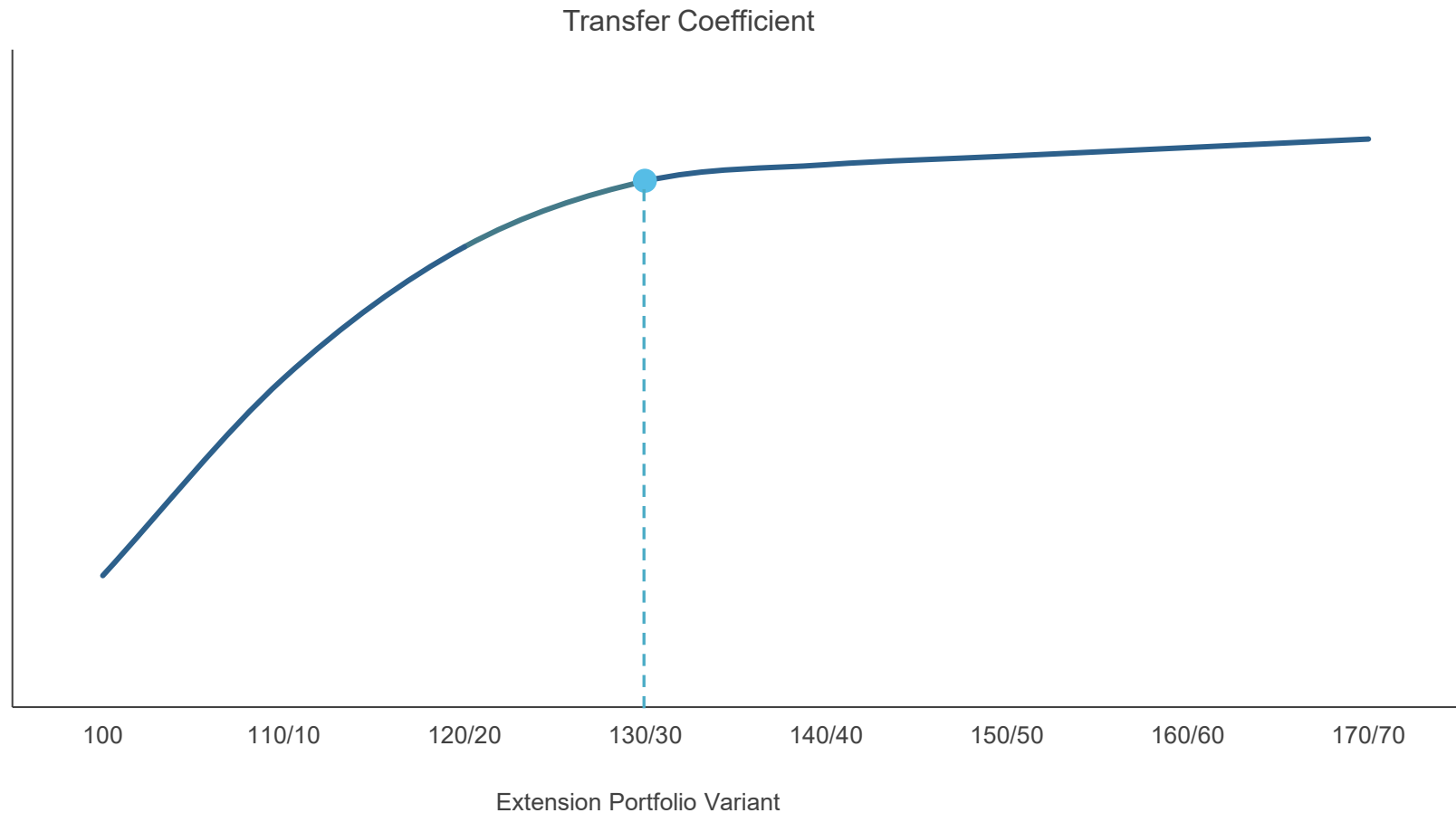
Acadian’s Extension Strategy Experience



Source: Acadian Asset Management LLC.
 Excess Returns and Information Ratios are annualized as of August 31, 2024, net of management fees, versus each strategy’s benchmark. Returns in USD. See the GIPS Disclosures for more information. Composite inception May 1, 2005: All-Country World ex-U.S. Equity Extension. Benchmark: MSCI AC World ex-USA Index (net). Composite inception November 1, 2005: Global Equity Extension. Benchmark: MSCI AC World Index (net). Composite inception October 1, 2003: Non-U.S. Small-Cap Equity Extension. Benchmark: MSCI EAFE Small Cap Index (net).
 Reference to the benchmark is for comparative purposes only and is not intended to indicate that the composite will contain the same investments as the benchmark. Investors have the opportunity for losses as well as profits. Past performance is no guarantee of future results. Past performance may differ significantly from future performance due to market volatility. The complete performance disclosure can be found in the composite performance disclosure pages attached. MSCI Index Source: MSCI Copyright MSCI 2024. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI. S&P Index Source: Copyright © 2024. Standard & Poor’s Financial Services LLC. All rights reserved.

Variations of Extension Strategies

Benefits beyond 130/30 are increasingly less advantageous



World Equity Valuation

September 30, 2024*

Universe	Index	Price/ Earnings	Price/ Book	Price/ Sales	Price/ Cash	Yield
Emerging Markets	MSCI Emerging Markets	16.3	1.9	1.5	10.2	2.5%
Emerging Markets Small-Cap	MSCI EM Small-Cap	21.0	1.6	1.1	11.0	2.2%
Europe	MSCI Europe	15.2	2.1	1.5	9.5	3.1%
Frontier Markets	MSCI Frontier 15% Country Capped	10.1	1.5	1.2	6.9	4.6%
Japan Large-Cap	TOPIX	14.6	1.3	0.9	8.5	2.3%
Non-U.S. Equity	MSCI EAFE	15.5	1.9	1.5	9.7	3.0%
Non-U.S. Small-Cap Equity	MSCI EAFE Small-Cap	16.3	1.3	0.9	8.5	3.0%
Non-U.S. Micro-Cap	MSCI World ex-U.S. Micro-Cap	29.3	0.8	0.6	7.0	2.6%
U.S. Large-Cap	S&P 500	26.8	5.1	3.1	18.1	1.3%
U.S. Small-Cap	Russell 2000	57.1	2.1	1.3	17.6	1.3%
U.S. Micro-Cap	MSCI U.S. Micro-Cap	-10.8	1.5	0.7	-9.2	1.2%
World	MSCI World	22.7	3.5	2.4	14.7	1.8%

*Preliminary. Data Source: MSCI, TOPIX, Russell, and S&P.

It is not possible to invest directly in any index.

Index Sources: Standard & Poor's, Russell, Morgan Stanley Capital International and Russell/Nomura. MSCI Copyright MSCI 2024. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI. Copyright © 2024, Standard & Poor's Financial Services LLC. All rights reserved. Russell Investments Copyright© Russell Investments 1998 – 2024. All rights reserved.

Global Data

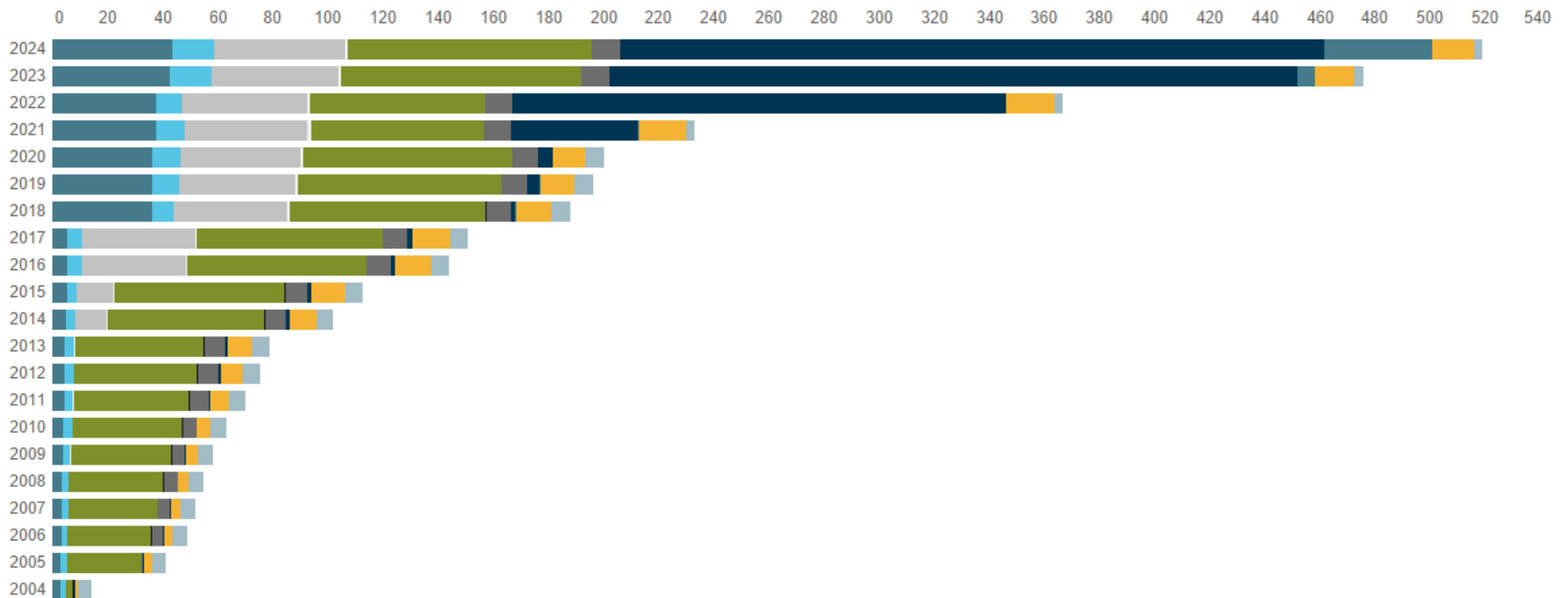
44,000 COMPANIES
100 COUNTRIES

518 MILLION DAILY
OBSERVATIONS

58 TERABYTE
DATABASE

Daily data from over 40 sources including regulatory authorities, company websites, media sources, and industry trade organizations not available in standard vendor offerings:

Millions of Data Observations Daily



All-Country World ex-U.S. Equity Extension Composite

Performance (Returns in USD – Before and After Management and Incentive Fees)

Time Period	Composite (gross)*	Composite (net)*	Benchmark	Value-Added (gross) vs. Benchmark
2005 (Inception: May 1, 2005)	22.7%	21.8%	19.4%	3.3%
2006	38.7	35.9	26.7	12.0
2007	13.7	13.4	16.7	(3.0)
2008	(49.6)	(49.8)	(45.5)	(4.1)
2009	30.9	30.5	41.4	(10.5)
2010	20.7	18.5	11.2	9.5
2011	(10.7)	(11.5)	(13.7)	3.0
2012	20.0	19.1	16.8	3.2
2013	20.3	19.0	15.3	5.0
2014	0.7	(0.5)	(3.9)	4.6
2015	3.6	1.5	(5.7)	9.3
2016	6.2	5.6	4.5	1.7
2017	31.1	30.0	27.2	3.9
2018	(15.1)	(15.3)	(14.2)	(0.9)
2019	15.8	15.4	21.5	(5.7)
2020	12.4	11.8	10.7	1.7
2021	37.2	31.0	7.8	29.4
2022	(12.4)	(13.3)	(16.0)	3.6
2023	26.2	23.8	15.6	10.6
2024 through September	23.0	21.0	14.2	8.8
One Year Annualized Return	38.2	35.3	25.4	12.8
Three Year Annualized Return	14.0	11.8	4.1	9.9
Five Year Annualized Return	17.8	15.5	7.6	10.2
Ten Year Annualized Return	11.4	9.8	5.2	6.2
Since-Inception Annualized Return	9.6	8.3	5.7	3.9
Since-Inception Annualized Standard Deviation	17.4	17.3	17.1	
Since-Inception Active Risk				5.5
Since-Inception Information Ratio				0.7

Composite: All-Country World ex-U.S. Equity Extension. **Benchmark:** MSCI All-Country World ex-U.S. (net).

*Returns that include the most recent month are preliminary. Acadian Asset Management LLC claims compliance with the Global Investment Performance Standards (GIPS®). GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein. Reference to the benchmark is for comparative purposes only and is not intended to indicate that the composite will contain the same investments as the benchmark. Investors have the opportunity for losses as well as profits. Past performance is no guarantee of future returns. The complete performance disclosure can be found in the composite performance disclosure page attached. Index Source: MSCI Copyright MSCI 2024. All Rights Reserved. Unpublished. PROPRIETARY TO MSCI.

Global Equity Extension Composite

Performance (Returns in USD – Before and After Management and Incentive Fees)

Time Period	Composite (gross)*	Composite (net)*	Benchmark	Value-Added (gross) vs. Benchmark
2005 (Inception: Nov 1, 2005)	3.1%	3.0%	6.2%	(3.1)%
2006	32.4	29.8	21.0	11.4
2007	10.2	9.9	11.7	(1.5)
2008	(44.9)	(45.0)	(42.2)	(2.7)
2009	12.9	12.6	34.6	(21.7)
2010	14.0	13.5	12.7	1.3
2011	(4.4)	(5.2)	(7.3)	2.9
2012	16.0	15.7	16.1	(0.1)
2013	26.1	25.2	22.8	3.3
2014	14.3	12.0	4.2	10.1
2015	0.1	(0.6)	(2.4)	2.5
2016	8.7	8.3	7.9	0.8
2017	17.6	17.3	24.0	(6.4)
2018	(6.5)	(7.3)	(9.4)	2.9
2019	19.1	18.8	26.6	(7.5)
2020	1.4	1.1	16.3	(14.9)
2021	57.5	49.3	18.5	39.0
2022	(2.4)	(5.8)	(18.4)	16.0
2023	44.5	39.7	22.2	22.3
2024 through September	16.1	15.8	18.7	(2.6)
One Year Annualized Return	32.0	31.1	31.8	0.2
Three Year Annualized Return	25.6	21.8	8.1	17.5
Five Year Annualized Return	23.6	20.4	12.2	11.4
Ten Year Annualized Return	14.5	12.6	9.4	5.1
Since-Inception Annualized Return	10.3	9.0	7.9	2.4
Since-Inception Annualized Standard Deviation	15.7	15.5	15.9	
Since-Inception Active Risk				6.3
Since-Inception Information Ratio				0.4

Composite: Global Equity Extension. **Benchmark:** MSCI All-Country World (net).

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Non-U.S. Small-Cap Equity Extension Composite

Performance (Returns in USD – Before and After Management and Incentive Fees)

Time Period	Composite (gross)*	Composite (net)*	Benchmark	Value-Added (gross) vs. Benchmark
2003 (Inception: Oct 1, 2003)	16.1%	15.9%	15.6%	0.5%
2004	45.2	41.3	28.7	16.5
2005	28.5	26.7	22.1	6.4
2006	41.4	38.4	29.4	12.0
2007	18.2	15.6	7.3	10.9
2008	(40.6)	(42.3)	(47.7)	7.1
2009	40.0	39.4	45.1	(5.1)
2010	26.3	24.9	22.0	4.3
2011	(1.3)	(4.3)	(14.5)	13.2
2012	30.4	27.5	18.6	11.8
2013	31.9	30.2	26.1	5.8
2014	5.0	2.9	(3.4)	8.4
2015	11.3	9.8	5.9	5.4
2016	3.7	3.2	4.5	(0.8)
2017	44.1	41.3	33.0	11.1
2018	(16.5)	(17.1)	(17.9)	1.4
2019	18.7	18.1	25.0	(6.3)
2020	6.6	6.1	12.3	(5.7)
2021	31.1	26.4	10.1	21.0
2022	(13.2)	(15.2)	(21.4)	8.2
2023	20.0	18.1	13.2	6.8
2024 through September	22.3	19.7	11.1	11.2
One Year Annualized Return	34.3	31.6	23.5	10.8
Three Year Annualized Return	10.7	8.1	(0.4)	11.1
Five Year Annualized Return	14.5	12.2	6.4	8.1
Ten Year Annualized Return	11.3	9.6	6.0	5.3
Since-Inception Annualized Return	15.3	13.3	8.3	7.0
Since-Inception Annualized Standard Deviation	15.9	16.1	18.1	
Since-Inception Active Risk				6.3
Since-Inception Information Ratio				1.1

Composite: Non-U.S. Small-Cap Equity Extension. **Benchmark:** MSCI EAFE Small-Cap (net) 2016-08-01 To Present, S&P Developed Small-Cap ex-U.S. (total) 2003-10-01 To 2016-08-01.

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BIOGRAPHIES

Investment Team

Brendan Bradley, Ph.D. – Executive Vice President, Chief Investment Officer

- 26 years of investment experience
- Member of the Acadian Board of Managers, Executive Management Team, Executive Committee, Responsible Investing Committee
- Ph.D. in applied mathematics from Boston University
- B.A. in physics from Boston College

Alexandre Voitenok – Senior Vice President, Deputy Chief Investment Officer

- 23 years of investment experience
- Member of Acadian's Executive Committee, Executive Management Team and Diversity & Inclusion Forum
- M.Sc. in software engineering from Minsk Radio Engineering Institute

Malcolm Baker, Ph.D. – Director, Research

- 22 years of investment experience
- Research consultant since 2006
- Robert G. Kirby Professor of Finance, Harvard Business School
- Ph.D. from Harvard University
- M.Phil. From Cambridge University
- B.A. from Brown University

Michael Gleason – Senior Vice President, Director, Equity Alternative

- 28 years of investment experience
- MSF from Northeastern University
- B.S. in management science from Bridgewater State University

Andy Moniz Ph.D., CFA – Senior Vice President, Director of Responsible Investing

Acadian Asset Management (U.K.) Limited

- 24 years of professional experience
- Ph.D. in natural language processing and information retrieval from Erasmus University
- MSc. in applied statistics from the University of London
- M.A. in economics from Cambridge University
- B.A. in economics from Cambridge University
- CFA charterholder and member of CFA Society U.K.

Ryan Taliaferro, Ph.D. – Senior Vice President, Director, Investment Strategies

- 22 years of professional experience
- Member of Acadian's Executive Committee
- Ph.D. in business economics (finance) from Harvard University
- M.B.A. in finance and economics from the University of Chicago
- A.M. in economics from Harvard University
- A.M. and A.B. in physics from Harvard University

Fanesca Young, Ph.D., CFA – Senior Vice President, Director, Equity Portfolio Management

- 19 years of professional experience
- Ph.D. in statistics from Columbia University
- M.Phil. in statistics from Columbia University
- M.A. in statistics from Columbia University
- B.A. in mathematics from the University of Virginia
- CFA charterholder

Vladimir Zdorovtsov, Ph.D. – Senior Vice President, Director, Global Equity Research

- 22 years of investment experience
- Ph.D. in finance from University of South Carolina
- M.B.A. from University of Arkansas
- B.A. in international economics from Sumy University, Ukraine

Francis Seah, CFA – Senior Vice President, Portfolio Manager and Managing Director, Acadian Singapore Acadian Asset Management (Singapore) Pte Ltd

- 20 years of investment experience
- B.S. and M.S. from Nanyang Technological University
- CPA, Institute of Certified Public Accountants Singapore
- CFA charterholder and a member of CFA Singapore
- Computational Finance Certificate from Carnegie Mellon University

Jean Christophe (J.C.) De Beaulieu, CFA – Senior Vice President, Head of Investments, Australia

Acadian Asset Management (Australia) Limited

- 26 years of investment experience
- Advanced Master in financial techniques from ESSEC Business School
- D.E.A. in numerical analysis from Pierre and Marie Curie University and Ecole Polytechnique
- M.S. in mathematics from Pierre and Marie Curie University
- CFA charterholder and member of CFA Society Boston

Mark Birmingham, CFA – Senior Vice President, Head of Risk Modeling, Portfolio Manager

- 29 years of investment experience
- A.B. in computer science from Princeton University
- CFA charterholder and member of CFA Society Boston

Doug Eisenstein – Senior Vice President, Head of Investment Data Solutions

- 24 years of professional experience
- Studied computer science at Suffolk University

Investment Team

Joel Feinberg – Senior Vice President, Head of Trading

- 18 years of investment experience
- MSIM from Boston University
- B.B.A. in finance from the University of Massachusetts

Alexander Galakatos, Ph.D. – Senior Vice President, Head of Investment Data Engineering

- 5 years of professional experience
- Ph.D. in computer science from Brown University
- ScM in computer science from Brown University
- B.Sc. in computer engineering from Lehigh University

Anton Kapliy, Ph.D., CFA – Senior Vice President, Head of Portfolio Analytics

- 10 years of professional experience
- Ph.D. in high energy physics from University of Chicago
- B.A. in physics from University of Pennsylvania
- CFA charterholder and a member of CFA Society Boston

Jian Pan, CFA – Senior Vice President, Head of Quantitative Systems

- 30 years of professional experience
- M.S. in computer science from the University of Massachusetts
- B.S. industrial automation control from Nanjing University of Technology, China

Michael McCart, CFA – Senior Vice President, Investment Systems Architect

- 26 years of investment experience
- B.S. in engineering and economics, University of Pennsylvania
- CFA charterholder and a member of CFA Society Boston

Javier Alcazar, Ph.D. – Senior Vice President, Portfolio Manager, Research Acadian Asset Management (U.K.) Limited

- 22 years of professional experience
- Ph.D. in mechanical engineering from the Universidad Pontificia Comillas, ICAI, Spain
- M.Sc. in advanced mathematics and theoretical Physics from the University of Cambridge
- M.Sc. in aeronautical engineering from the Universidad Politecnica de Madrid, Spain
- M.Sc. in parallel computing from Imperial College London
- B.Sc. in theoretical physics from Universidad Complutense de Ciencias Fisicas, Spain

Daniel Adamson – Senior Vice President, Portfolio Manager, Implementation

- 21 years of professional experience
- M.B.A. from Boston College
- B.A. in accountancy and management information systems from Miami University

Ioannis Baltopoulos – Senior Vice President, Portfolio Manager

- 15 years of professional experience
- M.Sc. in advanced computing from Imperial College London
- B.Sc. in computer science from the University of Kent

Pavel Bandarchuk, Ph.D., CFA – Senior Vice President, Portfolio Manager, Research

- 17 years of investment experience
- Ph.D. in international economics and finance from Brandeis University
- M.S. in finance from Brandeis University
- Diploma in international economics from Belarusian State University
- Certified FRM and CFA charterholder

Scott Brymer, CFA – Senior Vice President, Portfolio Manager

- 26 years of professional experience
- B.B.A. in finance from the University of Massachusetts Amherst
- CFA charterholder and a member of CFA Society Boston

Heidi Chen, CFA – Senior Vice President, Portfolio Manager

- 10 years of professional experience
- S.M. in computational science and engineering from Harvard University
- B.A. with Honors in mathematics from Williams College
- CFA charterholder and member of CFA Society Boston

Zhe Chen, Ph.D., CFA – Senior Vice President, Portfolio Manager, Research

Acadian Asset Management (Australia) Limited

- 15 years of professional experience
- Ph.D. in empirical finance from Macquarie University
- Bachelor of Engineering (bioinformatics), First Class Honours and University Medal, from the University of New South Wales
- Bachelor of Commerce (finance) from UNSW
- CFA charterholder

Chris Covington, CFA – Senior Vice President, Portfolio Manager

- 17 years of professional experience
- M.S. in investment management from Boston University
- B.A. in mathematical economics from Colorado College
- CFA charterholder

Thomas Dobler, Ph.D. – Senior Vice President, Portfolio Manager

- 28 years of investment experience
- Member of Acadian's Diversity & Inclusion Forum
- Ph.D. in mathematics from Columbia University
- M.S. in mathematics from University of Illinois
- B.S. in mathematics from University of Vienna, Austria

Investment Team

Denys Glushkov, Ph.D. – Senior Vice President, Portfolio Manager, Research

- 18 years of professional experience
- Ph.D. in finance, University of Texas at Austin
- M.S. in economic cybernetics, Dnipropetrovsk State University (Ukraine)
- M.A. in economics, Central European University (Hungary)

Katrina Khoupongsy, CFA – Senior Vice President, Portfolio Manager, Research

Acadian Asset Management (Australia) Limited

- 30 years of professional experience
- Bachelor in mathematics and finance (Hons) from the University of Technology, Sydney
- Graduate Diploma in applied finance and investments from the Securities Institute of Australia
- CFA charterholder

Owen Lamont, Ph.D. – Senior Vice President, Portfolio Manager, Research

- 36 years of professional experience
- Ph.D. in economics from the Massachusetts Institute of Technology
- B.A. in economics from Oberlin College

Devin Nial – Senior Vice President, Portfolio Manager, ESG

- 19 years of professional experience
- M.S. in finance from Boston College
- M.A. in computer science from Boston University
- B.A. in English literature from SUNY Albany

Dmitry Olevsky, CFA – Senior Vice President, Portfolio Manager, Research

- 22 years of investment experience
- M.B.A. from Harvard Business School
- B.S. in structural engineering from Michigan Technological University
- FRM designation and CFA charterholder

Matthew Picone, CFA – Senior Vice President, Portfolio Manager, ESG

Acadian Asset Management (Australia) Limited

- 20 years of professional experience
- Bachelor of Commerce in finance and econometrics from the University of Sydney
- CFA charterholder
- Member of the PRI Australian Advisory Committee

Lukasz Pomorski, Ph.D. – Senior Vice President, Portfolio Manager

- 18 years of professional experience
- Ph.D. in finance from the University of Chicago
- M.A. in finance from Tilburg University
- M.A. and B.A. in economics from the Warsaw School of Economics

Mark Roemer – Senior Vice President, Portfolio Manager

- 28 years of professional experience
- M.S. in finance from London Business School
- M.S. in engineering from Stanford University
- B.S. in mechanical engineering from Virginia Polytechnic Institute & State University

Bin Shi, Ph.D., CFA – Senior Vice President, Portfolio Manager, Research

- 18 years of investment experience
- Ph.D. in industrial and systems engineering from Georgia Institute of Technology
- M.S. in operations research from Georgia Institute of Technology
- B.S. in mechanical engineering from Southeast University, China
- CFA charterholder

Olivia Tang, Ph.D., CFA – Senior Vice President, Portfolio Manager, Research

- 14 years of professional experience
- Ph.D. in systems engineering, with a concentration in operations research, from Boston University
- B.S. in mathematics from Peking University (China)
- CFA charterholder

Charles Augello, CFA – Senior Vice President, Lead Analyst, Integration, Multi-Asset Class Strategies

- 19 years of professional experience
- B.A. in engineering sciences and economics from Dartmouth College
- CFA charterholder

Rob Ricciarelli, CFA – Senior Vice President, Lead Analyst, IPD

- 28 years of professional experience
- M.B.A. from Suffolk University
- B.S. in management and B.A. in psychology from the University of Massachusetts, Boston
- CFA charterholder

Jeffrey Sutthoff, CFA – Senior Vice President, Lead Analyst, Integration

- 29 years of professional experience
- M.B.A. in finance from Boston College
- B.S. in mathematics from Stetson University
- CFA charterholder

Mark Weissman – Senior Vice President, Lead Analyst, Research

- 18 years of investment experience
- B.S. in computer science, SUNY at Buffalo
- B.S. in chemical engineering from SUNY at Buffalo

Investment Team

Xiaoting Zhang, CFA, FRM – Senior Vice President, Lead Analyst, Integration

- 20 years of investment experience
- M.B.A. from the University of Chicago
- M.S. in financial mathematics from the University of Chicago
- M.S. in computer science from Loyola University Chicago
- B.A. in architecture from Tianjin University, China
- Certified FRM and CFA charterholder

Deborah Waters – Senior Vice President, Senior Trader, Implementation

- 34 of years of professional experience
- B.S. in finance from Northeastern University

Giuliano Amantini, Ph.D. – Vice President, Portfolio Manager

- 19 years of professional experience
- Ph.D. in engineering and applied sciences from Yale University
- M.S. in mathematical finance from Bocconi University
- M.S. in mechanical engineering from Yale University
- M.S. in aerospace engineering from La Sapienza University
- B.S. in mechanical engineering from Tor Vergata University

Tom Bilbe – Vice President, Portfolio Manager

Acadian Asset Management (U.K.) Limited

- 12 years of professional experience
- MSc in finance and investment from the University of Edinburgh Business School
- BEng in mechanical engineering with management from the University of Edinburgh

Timothy Ellerton, CFA – Vice President, Portfolio Manager

Acadian Asset Management (U.K.) Limited

- 24 years of professional experience
- M.Sc. in mathematical trading & finance from the Bayes Business School at City University
- B.A. in law & society from the University of Exeter
- CFA charterholder and member of CFA Society U.K

Stephen Fang – Vice President, Portfolio Manager, Research

- 7 years of investment experience
- M.S. in computational science and engineering from Harvard University
- B.A. in mathematics and economics from Middlebury College

Sean Geary, CFA – Vice President, Portfolio Manager

- 16 years of professional experience
- M.B.A. from Boston College
- M.S. in mechanical engineering from Boston University
- B.S. in physics from James Madison University
- CFA charterholder and member of CFA Society Boston

Charles Johnson – Vice President, Portfolio Manager

- 22 years of professional experience
- M.S. in finance from Northeastern University
- M.B.A. from Northeastern University
- B.S. in finance from the University of Massachusetts at Dartmouth

John King – Vice President, Portfolio Manager

- 23 years of professional experience
- Associate's degree in computer technology from Southern Maine Community College
- B.S. in analytics from Northeastern University

Dan Le, CFA – Vice President, Portfolio Manager

- 19 years of professional experience
- B.A. in psychology from Brown University
- CFA charterholder and a member of CFA Society Boston

Adhi Mallik, CFA – Vice President, Portfolio Manager

- 13 years of investment experience
- M.B.A. with a concentration in finance & accounting from Carnegie Mellon University
- B.A. in economics from University of CA – San Diego
- CFA charterholder
- Holds the CQF designation from CQF Institute

Ken Masse, CFA – Vice President, Portfolio Manager

- 32 years of investment experience
- M.S. in finance from Boston College Carroll School of Management
- B.S. in finance from Bentley University
- CFA charterholder

Kyle McCarthy, CFA – Vice President, Portfolio Manager, Implementation

- 18 years of professional experience
- B.S. in finance from Bentley University
- CFA charterholder and member of CFA Society Boston

Brendan O'Leary, CFA – Vice President, Portfolio Manager, Research

- 11 years of professional experience
- B.S.E. in mechanical & aerospace engineering from Princeton University
- CFA charterholder

Louis Seng – Vice President, Portfolio Manager, Implementation

Acadian Asset Management (Singapore) Pte Ltd

- 15 years of investment experience
- B.B.M in finance from Singapore Management University

Linda Wang – Vice President, Portfolio Manager, Research

- 11 years of investment experience
- Master of Finance from MIT's Sloan School of Management
- B.S. in finance and accounting from Drexel University
- Certified FRM

Investment Team

Steven Wong – Vice President, Portfolio Manager, Research Acadian Asset Management (Australia) Limited

- 13 years of professional experience
- Doctor of Philosophy in statistics from the University of Sydney
- Master of Finance from the University of New South Wales
- Bachelor of Commerce and Bachelor of Engineering from the University of New South Wales

Xunqi (Richie) Yu, CFA – Vice President, Portfolio Manager

- 16 years of professional experience
- Ph.D. in electrical and computer engineering from the University of Miami
- M.S. in computational finance from Carnegie Mellon University, Tepper School of Business
- B.S. in information engineering from Wuhan University, School of Remote Sensing and Information Engineering
- CFA charterholder

Wesley Jeng, CFA – Vice President, Associate Portfolio Manager, Implementation

Acadian Asset Management (Australia) Limited

- 11 years of investment experience
- Dual Master's Degree from UT Austin and ESCP Europe
- BA (Hons) from University of Nottingham
- CFA charterholder

Anna Papush, Ph.D. – Vice President, Associate Portfolio Manager,

- 10 years of professional experience
- Ph.D. in operations research from Massachusetts Institute of Technology
- B.A. in mathematics from Cornell University

Shivani Patnaik – Vice President, Associate Portfolio Manager

- 13 years of professional experience
- M.S. in mathematical finance from Boston University
- B.S. in chemical engineering from University of Maryland

Alexander Rikun – Vice President, Associate Portfolio Manager

- 14 years of professional experience
- Ph.D. in operations research from Massachusetts Institute of Technology
- B.S. in applied mathematics with a minor in economics from Columbia University

Vincent Tang – Vice President, Associate Portfolio Manager, Research

- 7 years of investment experience
- M. Eng. in financial engineering from Cornell University
- B. Econ in finance, with a minor in computer science, from Wuhan University

James Coder, CFA – Vice President, Lead Analyst, Integration

- 11 years of investment experience
- B.S. in finance from the University of Kansas
- CFA charterholder

Bhaskar Edara, CFA, FRM – Vice President, Lead Analyst, Implementation

- 29 years of professional experience
- M.S. in finance from Boston College
- B.Tech. in mechanical engineering from the National Institute of Technology, India
- Certified FRM and CFA charterholder

Lucas Manley, CFA – Vice President, Lead Analyst

- 20 years of investment experience
- M.S. in investment management from Boston University
- B.S. in business administration from Northeastern University
- CFA charterholder and a member of CFA Society Boston

Bernard Sim – Vice President, Lead Analyst, IPD

Acadian Asset Management (Singapore) Pte Ltd

- 23 years of professional experience
- Bachelor of Commerce in finance from the Australia National University

Michael Szrom, CFA – Vice President, Lead Analyst, Implementation

- 7 years of professional experience
- B.S. in computer science and computer engineering from Northeastern University
- CFA charterholder

Michael Vashevko – Vice President, Lead Analyst, Implementation

- 28 years of professional experience
- M.S. in applied mathematics and computer science from Belarusian State University

Yu (Richard) Wang, CFA, FRM – Vice President, Lead Analyst, Integration

- 19 years of professional experience
- M.B.A. from the University of Chicago Booth
- M.S. in computer science from Cornell University
- B.S. in computer science from National University of Singapore
- FRM and CFA charterholder

Shin Zhao, CFA – Vice President, Lead Analyst, Integration

- 21 years of professional experience
- M.S. in electrical and computer engineering from the University of Massachusetts
- B.S. in physics from the University of Science and Technology of China
- CFA charterholder

Matthew Calder – Vice President, Senior Analyst, Investment Data Engineering

- 26 years of professional experience
- Ph.D. in probability and mathematical statistics from Colorado State University
- B.S. in mathematics and statistics from the University of Wisconsin

Investment Team

Chong Chen – Vice President, Senior Analyst, Integration

- 9 years of professional experience
- M.A. in mathematics of finance from Columbia University
- M.S. in economics from Shanghai Jiao Tong University
- B.S. in finance and mathematics from Wuhan University

Rei Cheong, CFA – Vice President, Senior Analyst, IPD

Acadian Asset Management (Singapore) Pte Ltd

- 20 years of professional experience
- Masters in Business Administration from the Singapore Management University
- Graduate Diploma in Financial Management from the Singapore Institute of Management
- Bachelor of Electrical Engineering from the National University of Singapore
- CFA charterholder

Eric Guenterberg – Vice President, Senior Analyst, Implementation

- 25 years of professional experience
- M.S. in electrical engineering from University of Texas at Dallas
- B.S. in electrical engineering from University of California, Los Angeles

Soichi Hayashi – Vice President, Senior Analyst, Implementation

- 23 years of professional experience
- B.S. in computer science and physics from Henderson State University

Shi He – Vice President, Senior Analyst, Integration

- 6 years of professional experience
- M.S. in data science from Worcester Polytechnic Institute
- B.S. in computer science from Hubei University of Police, China

Michael Kelsey – Vice President, Senior Analyst, Implementation

- 22 years of professional experience
- M.B.A. from Northeastern University
- B.S. from Babson College

Anthony King – Vice President, Senior Analyst, IPD

- 24 years of professional experience
- M.S. in computer science from Boston University
- B.S. in management science and information systems from The Pennsylvania State University

Anna Lang, CFA – Vice President, Senior Analyst, IPD

- 12 years of professional experience
- M.B.A. from Boston University
- B.S. in accounting from the International Slavic University
- CFA charterholder and a member of CFA Society Boston

Zhenan (Micky) Li, CFA – Vice President, Senior Analyst, IPD

- 13 years of investment experience
- M.S. in economics from Boston University
- B.S. in international business and trade from ShanDong University of Science & Technology
- B.S. in business management and administration from Cambridge College
- CFA charterholder and member of CFA Society Boston

Guy Mann – Vice President, Senior Analyst, Implementation

- 21 years of professional experience
- B.S. in computer science from Worcester Polytechnic Institute

David Meadows – Vice President, Senior Analyst

- 15 years of professional experience
- B.Sc. in computer science from Newcastle University

Diego Torres Patino, Ph.D. – Vice President, Senior Analyst, Implementation

- 9 years of investment experience
- Ph.D. in economics from Stanford University
- B.S. degrees in industrial engineering and in economics from Instituto Tecnológico Autonomo de Mexico

Yevgen Revtsov, CFA – Vice President, Senior Analyst, Integration

- 11 years of professional experience
- B.S. in computer systems engineering from Boston University
- CFA charterholder

Sam Rogers – Vice President, Senior Analyst, Integration

- 7 years of professional experience
- B.A. in economics from The University at Buffalo

Alagappan Solaiappan – Vice President, Senior Analyst, Data Engineering

- 19 years of professional experience
- M.E. in engineering from Anna University
- B.E. in engineering from Madurai Kamaraj University

Carl Thunman – Vice President, Senior Analyst, Implementation

- 13 years of professional experience
- B.S. in engineering and computer science from Princeton University

Shikun (George) Xue, CFA – Vice President, Senior Analyst, Integration

- 15 years of professional experience
- M.A. in finance from Peking University
- B.A. in economics and B.S. in mathematics from Wuhan University
- CFA charterholder

Investment Team

Jason Withrow – Vice President, Senior Analyst, Integration

- 27 years of professional experience
- Member of Acadian's Diversity & Inclusion Forum
- B.A. in computer science from the University of Rhode Island

Ted Zhang, CFA – Vice President, Senior Analyst, IPD

- 18 years of professional experience
- M.S. in finance from Bentley University
- B.S. accounting from Bentley University
- CFA charterholder and a member of CFA Society Boston

Jian Du- Vice President, Senior Trader, Implementation Acadian Asset Management (Australia) Limited

- 12 years of professional experience
- Masters in Finance from London Business School
- Bachelor of Engineering from The University of Melbourne

Benjamin Hutchens, CAIA – Vice President, Senior Trader, Implementation

- 17 years of professional experience
- M.S. in investment management from Boston University
- B.A. in international affairs and political science from Northeastern University
- CAIA charterholder

Jason Littlefield – Vice President, Senior Trader, Implementation

- 19 years of professional experience
- M.S. in finance from Northeastern University
- B.S. in business administration, with a dual concentration in accounting and marketing, from Northeastern University

Udaiy Ogirala – Vice President, Senior Trader, Multi-Asset

- 24 years of professional experience
- B.A. in English from University of Rochester

Sean Paylor – Vice President, Senior Trader, Implementation

- 18 years of professional experience
- B.A. in sociology from Princeton University

Gregory Spyropoulos, CFA – Vice President, Credit Trader, Implementation

- 21 years of professional experience
- B.S in finance from Bentley College
- CFA charterholder

Jianing Duan – Assistant Vice President, Associate Portfolio Manager, Research

- 6 years of professional experience
- Ph.D. in mathematical finance from Boston University
- MSc in financial mathematics from University of Chicago
- BSc in applied mathematics from Peking University

Eric Huang – Assistant Vice President, Associate Portfolio Manager

- 8 years of professional experience
- B.S. in operations research and financial engineering from Princeton University

Jeffrey Lobdell, CMT – Assistant Vice President, Associate Portfolio Manager, Implementation

- 16 years of professional experience
- M.B.A.in finance from the University of Massachusetts
- B.A. in communications from the University of Massachusetts
- CMT charterholder

James Toppa, CFA, CAIA – Assistant Vice President, Associate Portfolio Manager, Implementation

- 16 years of professional experience
- B.S. in business administration from Bryant University
- CAIA charterholder
- CFA charterholder

Jerry Yu, Ph.D., CFA – Assistant Vice President, Associate Portfolio Manager, ESG

- 4 years of investment experience
- Ph.D. in political science and scientific computing from the University of Michigan
- M.A. in statistics from the University of Michigan
- CFA charterholder and a member of the CFA Society Boston

Anh Huynh – Assistant Vice President, Senior Analyst, Integration

- 10 years of professional experience
- M.Sc. in mathematics from the University of Washington
- B.Sc. in mathematics from MIT

Aashir Naqvi – Assistant Vice President, Senior Analyst, Implementation

- 5 years of professional experience
- B.S. in industrial engineering from Northeastern University

Steven Wang – Assistant Vice President, Senior Analyst Acadian Asset Management (Australia) Limited

- 17 years of professional experience
- Bachelor of Engineering (software engineering), First Class Honours, from the University of New South Wales
- Bachelor of Commerce (finance) from the University of New South Wales

Rajasekar (Raj) Karuppiiah – Assistant Vice President, Data Engineer

- 18 years of professional experience
- B.E. in electrical and electronics engineering from Anna University, Chennai, India

Siyu Chen – Assistant Vice President, Analyst, IPD

- 5 years of professional experience
- M.S. in management and finance from Case Western Reserve University
- B.S. in economics from Beihang University

Investment Team

Ian Chong, CFA – Assistant Vice President, Analyst, IPD

Acadian Asset Management (Singapore) Pte Ltd

- 7 years of professional experience
- Master of IT in business (artificial intelligence) from Singapore Management University
- M.S. in applied finance from Singapore Management University
- Specialist diploma in data science (artificial intelligence) from Singapore Polytechnic
- Bachelor of Business and Commerce from Monash University
- CFA charterholder

Jacob Hall – Assistant Vice President, Analyst, IPD

- 5 years of professional experience
- B.A. in business, entrepreneurship, and organizations from Brown University

Shirley Lu – Assistant Vice President, Analyst

- 8 years of investment experience
- M.S. in finance from MIT
- B.Econ. from Shanghai Jiao Tong University

Kunbo Wang – Assistant Vice President, Analyst, Research

- 3 years of investment experience
- Ph.D. in applied math and statistics from Johns Hopkins University
- M.Sc. in financial mathematics from Johns Hopkins University

The background of the page is a complex, abstract network diagram. It consists of numerous small, light blue circular nodes connected by thin, light blue lines. The nodes are distributed across the entire page, with some areas being more densely connected than others, creating a sense of a large, interconnected system. The overall aesthetic is clean and modern, typical of a corporate or technical report.

APPENDIX

Annual Performance Disclosure

All-Country World ex-U.S. Equity Extension Composite

	Composite Return (%) Gross-of-Fees	Composite Return (%) Net-of-Fees	Composite Return (%) Net-Net-of-Fees	Benchmark Return (%)	Dispersion of Returns Within Composite (%)	Three-Year ex-Post Standard Deviation of Absolute Gross Returns		Number of Portfolios in Composite	Assets In Composite (\$MMs)	Total Firm Assets Under Management (\$MMs)
						Composite	Benchmark			
2014	0.7	0.4	-0.5	-3.9	n/a	13.3	12.8	1	145	70,339
2015	3.6	3.3	1.5	-5.7	n/a	11.6	12.1	1	148	66,834
2016	6.2	5.9	5.6	4.5	n/a	11.6	12.5	1	154	74,174
2017	31.1	30.7	30.0	27.2	n/a	10.7	11.9	1	251	96,765
2018	-15.1	-15.3	-15.3	-14.2	n/a	12.3	11.4	1	203	85,338
2019	15.8	15.4	15.4	21.5	n/a	12.9	11.3	1	131	101,232
2020	12.4	12.1	11.8	10.7	n/a	17.5	17.9	1	77	107,229
2021	37.2	36.8	31.0	7.8	n/a	16.3	16.8	1	95	116,160
2022	-12.4	-12.7	-13.3	-16.0	n/a	18.9	19.3	1	80	92,796
2023	26.2	25.9	23.8	15.6	n/a	15.7	16.1	1	15	102,930

Performance Inception: May 1, 2005. This composite was created on: June 1, 2005. All figures stated in USD.

Acadian Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Acadian Asset Management has been independently verified for the periods January 1, 1994 through December 31, 2023¹. A copy of the verification report is available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. Reference to the benchmark is for comparative purposes only and is not intended to indicate that the composite will contain the same investments as the benchmark. Investors have the opportunity for losses as well as profits. **Past performance is no guarantee of future returns.** Acadian Asset Management is an investment adviser specializing in global equity management. Acadian Asset Management is defined to include assets managed by Acadian Asset Management LLC, an investment adviser registered with and regulated by the United States Securities and Exchange Commission, as well as assets managed by its wholly-owned affiliates, Acadian Asset Management (Australia) Limited (ABN 41 114 200 127), Acadian Asset Management Singapore Pte Ltd, (Registration Number: 199902125D) is licensed by the Monetary Authority of Singapore, and Acadian Asset Management (UK) Limited, authorized and regulated by the Financial Conduct Authority of the United Kingdom. On June 30, 2015, Acadian acquired the assets of Acadian's Australian office.

Methodology: Returns are net of foreign withholding taxes on dividends, interest, and capital gains. Since January 1, 2010 Acadian's methodology was augmented to produce a more accurate gross return figure by eliminating modest cash flows such as securities lending income and custodial fees which are regarded as independent of the investment management process; the reinvestment of all income and trading expenses continue to be included. Monthly composite results are asset-weighted by beginning-of-month asset values of member portfolios which are geometrically linked to arrive at the annual composite return. Net-of-fee performance is calculated on a monthly basis by deducting a model management fee equal to 1/12 of the highest annual management fee listed in the standard fee schedule for accounts shown below. The standard fee schedule for accounts managed with this product is 0.3% on assets managed and 20% of annual relative performance. This fee schedule was changed on 9/1/2023, and the new fee has been used to calculate the net-net-of-fees performance for the entire history of the composite. The incentive fee is accrued monthly and calculated as 20% of the net-of-fee relative return. This excess return is calculated arithmetically and resets annually. The standard fee schedule for the Acadian All Country World ex-U.S. Equity Extension Fund, which is included in the composite, is 0.30% on all assets and 20% of annual relative performance. For the most recent annual period shown above, operating expenses were 0.46%, and the total expense ratio was 2.81%. The model incentive fee methodology for the fund matches that of the composite. Incentive fees for the Fund are based on the standard fee schedule, crystallize annually, and were 2.05% for 2023. Management fees may vary according to the range of services provided, investment performance, and the amount of assets under management. Constituent portfolios are included from the first full month after inception to the present or the last full month prior to cessation of the client relationship with the firm. For example, an account that opened January 15, 2019 will be included beginning February 1, 2019. An account that terminated February 12, 2019 will be included through January 31, 2019. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.

Dispersion and Standard Deviation: Acadian's broad definitions are mainly the product of a highly customized process that may result in modest differences with regards to portfolio characteristics among constituents. All accounts managed with directly comparable investment objectives are included, though it's possible for members to utilize slightly different benchmarks in optimization and reporting. Although at times dispersion among constituents may be high, the long-term forecast for each portfolio is consistent with the overall composite. The 'Dispersion' statistic presented above uses gross of fee returns and is an annual, asset-weighted standard deviation calculation performed only on those portfolios who have been members for the entire calendar year. These figures are not applicable if there is only one portfolio in the composite for the full year. Thirty-six months are required to calculate the 'Three Year ex-Post Standard Deviation' statistic. These figures are not applicable if thirty-six months of composite returns are not available.

Composite Description: This composite invests in long and short equity positions in developed and emerging markets, excluding U.S. equities. The strategy allocates approximately 130% in long holdings and 30% in short holdings. The strategy takes long and short positions in securities directly and/or through swap agreements. As of May 1, 2024, this composite was renamed from "All-Country World ex-U.S. 130/30 Long/Short Equity." Complete lists of the firm's composite descriptions, limited distribution pooled fund descriptions, and broad distribution funds are available upon request.

Benchmark Description: The benchmark for the composite is MSCI All-Country World ex-U.S. (net of dividend withholding taxes). The MSCI ACWI (All Country World Index) ex US Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets excluding the United States.

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¹Ashland Partners verified Acadian's GIPS Compliance claim through March 31, 2017. ACA Compliance Group acquired Ashland's GIPS Verification unit and provided subsequent verifications.

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Annual Performance Disclosure

Global Equity Extension Composite

	Composite Return (%)	Composite Return (%)	Composite Return (%)	Benchmark Return (%)	Secondary Benchmark Return (%)	Dispersion of Returns Within Composite (%)	Three-Year ex-Post Standard Deviation of Absolute Gross Returns			Number of Portfolios in Composite	Assets In Composite (\$MMs)	Total Firm Assets Under Management (\$MMs)
	Gross-of-Fees	Net-of-Fees	Net-Net-of-Fees				Composite	Benchmark	Secondary Benchmark			
2014	14.3	14.0	12.0	4.2	4.9	1.0	9.9	10.5	10.2	2	142	70,339
2015	0.1	-0.2	-0.6	-2.4	-0.9	4.3	10.2	10.8	10.8	2	158	66,834
2016	8.7	8.4	8.3	7.9	7.5	0.8	10.7	11.1	10.9	2	164	74,174
2017	17.6	17.3	17.3	24.0	22.4	3.9	10.0	10.4	10.2	2	54	96,765
2018	-6.5	-6.8	-7.3	-9.4	-8.7	n/a	11.9	10.5	10.4	1	52	85,338
2019	19.1	18.8	18.8	26.6	27.7	n/a	12.6	11.2	11.1	1	49	101,232
2020	1.4	1.1	1.1	16.3	15.9	n/a	17.1	18.1	18.3	1	38	107,229
2021	57.5	57.0	49.3	18.5	21.8	n/a	17.1	16.8	17.1	1	84	116,160
2022	-2.4	-2.7	-5.8	-18.4	-18.1	n/a	18.8	19.9	20.4	1	96	92,796
2023	44.5	44.1	39.7	22.2	23.8	n/a	16.3	16.3	16.7	1	220	102,930

Performance Inception: November 1, 2005. This composite was created on: December 1, 2005. All figures stated in USD.

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Methodology: Returns are net of foreign withholding taxes on dividends, interest, and capital gains. Since January 1, 2010 Acadian's methodology was augmented to produce a more accurate gross return figure by eliminating modest cash flows such as securities lending income and custodial fees which are regarded as independent of the investment management process; the reinvestment of all income and trading expenses continue to be included. Monthly composite results are asset-weighted by beginning-of-month asset values of member portfolios which are geometrically linked to arrive at the annual composite return. Net-of-fee performance is calculated on a monthly basis by deducting a model management fee equal to 1/12 of the highest annual management fee listed in the standard fee schedule for accounts shown below. The standard fee schedule for accounts managed with this product is 0.3% on assets managed and 20% of annual relative performance. This fee schedule was changed on 9/1/2023, and the new fee has been used to calculate the net-net-of-fees performance for the entire history of the composite. The incentive fee is accrued monthly and calculated as 20% of the net-of-fee relative return. This excess return is calculated arithmetically and resets annually. The Net-net-of-fees performance shown above is calculated relative to the primary benchmark. Management fees may vary according to the range of services provided, investment performance, and the amount of assets under management. Constituent portfolios are included from the first full month after inception to the present or the last full month prior to cessation of the client relationship with the firm. For example, an account that opened January 15, 2019 will be included beginning February 1, 2019. An account that terminated February 12, 2019 will be included through January 31, 2019. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.

Dispersion and Standard Deviation: Acadian's broad definitions are mainly the product of a highly customized process that may result in modest differences with regards to portfolio characteristics among constituents. All accounts managed with directly comparable investment objectives are included, though it's possible for members to utilize slightly different benchmarks in optimization and reporting. Although at times dispersion among constituents may be high, the long-term forecast for each portfolio is consistent with the overall composite. The 'Dispersion' statistic presented above uses gross of fee returns and is an annual, asset-weighted standard deviation calculation performed only on those portfolios who have been members for the entire calendar year. These figures are not applicable if there is only one portfolio in the composite for the full year. Thirty-six months are required to calculate the 'Three Year ex-Post Standard Deviation' statistic. These figures are not applicable if thirty-six months of composite returns are not available.

Composite Description: This composite invests in long and short equity positions globally within developed and emerging markets. The strategy allocates approximately 130% in long holdings and 30% in short holdings. The strategy takes long and short positions in securities directly and/or through swap agreements. As of May 1, 2024, this composite was renamed from "Global 130/30 Long/Short Equity." Complete lists of the firm's composite descriptions, limited distribution pooled fund descriptions, and broad distribution funds are available upon request.

Benchmark Description: The benchmark for the composite is MSCI All-Country World (net of dividend withholding taxes). The MSCI ACWI (All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The secondary benchmark is MSCI World (net of dividend withholding taxes) for purposes of additional comparison. The MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

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¹Ashland Partners verified Acadian's GIPS Compliance claim through March 31, 2017. ACA Compliance Group acquired Ashland's GIPS Verification unit and provided subsequent verifications.

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Annual Performance Disclosure

Non-U.S. Small-Cap Equity Extension Composite

	Composite Return (%) Gross-of-Fees	Composite Return (%) Net-of-Fees	Composite Return (%) Net-Net-of-Fees	Benchmark Return (%)	Dispersion of Returns Within Composite (%)	Three-Year ex-Post Standard Deviation of Absolute Gross Returns		Number of Portfolios in Composite	Assets In Composite (\$MMs)	Total Firm Assets Under Management (\$MMs)
						Composite	Benchmark			
2014	5.0	4.5	2.9	-3.4	n/a	11.0	13.0	1	236	70,339
2015	11.3	10.7	9.8	5.9	n/a	9.9	11.2	2	271	66,834
2016	3.7	3.2	3.2	4.5	n/a	9.5	12.1	1	15	74,174
2017	44.1	43.4	41.3	33.0	n/a	10.1	11.5	2	100	96,765
2018	-16.5	-17.0	-17.1	-17.9	0.1	11.8	12.7	3	399	85,338
2019	18.7	18.1	18.1	25.0	0.5	11.1	11.9	3	607	101,232
2020	6.6	6.1	6.1	12.3	1.4	17.0	20.3	3	491	107,229
2021	31.1	30.5	26.4	10.1	7.3	17.3	19.2	2	522	116,160
2022	-13.2	-13.6	-15.2	-21.4	0.0	20.4	22.5	2	446	92,796
2023	20.0	19.4	18.1	13.2	0.5	16.0	18.0	2	777	102,930

Performance Inception: October 1, 2003. This composite was created on: November 1, 2003. All figures stated in USD.

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Methodology: Returns are net of foreign withholding taxes on dividends, interest, and capital gains. Since January 1, 2010 Acadian's methodology was augmented to produce a more accurate gross return figure by eliminating modest cash flows such as securities lending income and custodial fees which are regarded as independent of the investment management process; the reinvestment of all income and trading expenses continue to be included. Monthly composite results are asset-weighted by beginning-of-month asset values of member portfolios which are geometrically linked to arrive at the annual composite return. Net-of-fee performance is calculated on a monthly basis by deducting a model management fee equal to 1/12 of the highest annual management fee listed in the standard fee schedule for accounts shown below. The standard fee schedule for accounts managed with this product is 0.5% on assets managed and 20% of annual relative performance. This fee schedule was changed on 9/1/2023, and the new fee has been used to calculate the net-net-of-fees performance for the entire history of the composite. The incentive fee is accrued monthly and calculated as 20% of the net-of-fee relative return. This excess return is calculated arithmetically and resets annually. The standard fee schedule for the Acadian Non-U.S. Small-Cap Equity Extension Fund, which is included in the composite, is 0.50% on all assets and 20% of annual relative performance. For the most recent annual period shown above, operating expenses were 0.15%, and the total expense ratio was 1.96%. The model incentive fee methodology for the fund matches that of the composite. Incentive fees for the Fund are based on the standard fee schedule, crystallize annually, and were 1.31% for 2023. Management fees may vary according to the range of services provided, investment performance, and the amount of assets under management. Constituent portfolios are included from the first full month after inception to the present or the last full month prior to cessation of the client relationship with the firm. For example, an account that opened January 15, 2019 will be included beginning February 1, 2019. An account that terminated February 12, 2019 will be included through January 31, 2019. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.

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Composite Description: This composite invests in long and short mid- and small-cap equity positions globally within developed and emerging markets, excluding the United States. The strategy allocates approximately 130% in long holdings and 30% in short holdings. The strategy takes long and short positions in securities directly and/or through swap agreements. As of May 1, 2024, this composite was renamed from "Non-U.S. Small-Cap 130/30 Long/Short Equity." Complete lists of the firm's composite descriptions, limited distribution pooled fund descriptions, and broad distribution funds are available upon request.

Benchmark Description: The benchmark for the composite is MSCI EAFE Small Cap (net of dividend withholding taxes) from August 1, 2016 to present. From inception to July 31, 2016, the benchmark was S&P Small-Cap Developed ex-U.S. The change was made to better align the benchmark with the composite's constituent benchmarks, and how the strategy was being managed. The S&P Developed ex-U.S. Small Cap Index is comprised of small cap and developed stocks from the Broad Market Index (BMI). The S&P Developed BMI index uses a float adjusted market capitalization-weighted rules based methodology to track returns in broadly defined developed markets globally. The MSCI EAFE Index is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

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NORTH DAKOTA DEPARTMENT OF TRUST LANDS **Mineral Value Estimation as of June 30, 2024**

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October 31, 2024

PRESENTATION OUTLINE

Valuation Update

-  Valuation Summary and Trends
-  Oil Price Forecasts
-  Volume Projections
-  Cash Flow Forecasting
-  Oil Price Sensitivities


Williston Basin Highlights

-  Expanding the Core
-  Enhanced Oil Recovery




VALUATION SUMMARY

Income Approach

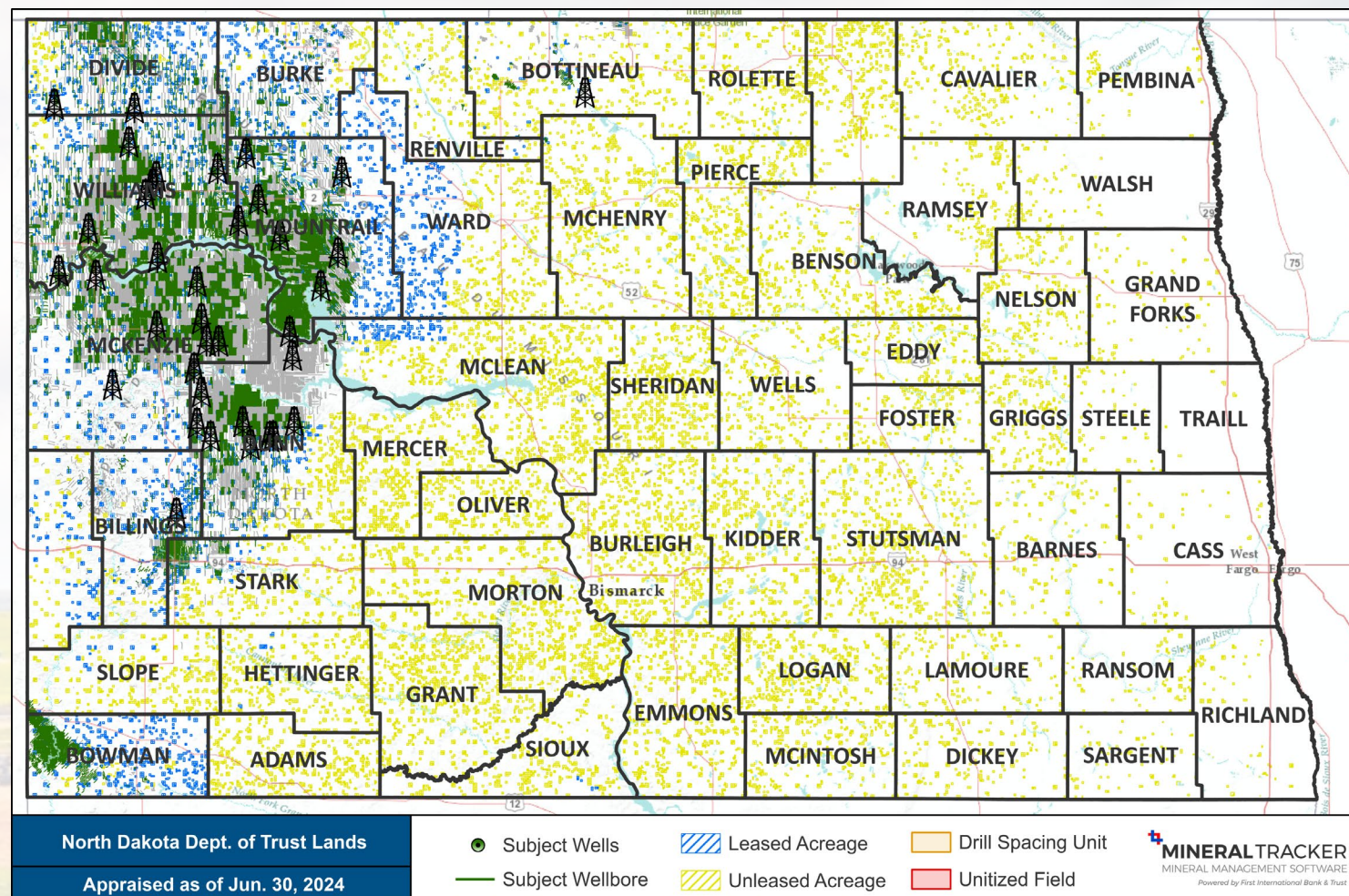
 Provides an indication of the value by converting future cash flows to a single current capital value.¹

Market Approach

 Provides an indication of value by comparing the subject asset with identical or similar assets for which price information is available.²

Mineral Value Estimation
as of June 30, 2024

\$2,461,271,622.00









1. IVSC. (2016, April 7). IVS 105: Valuation Approaches and Methods. International Valuations Standards Council. p. 13






2. IVS 105: Valuation Approaches and Methods. International Valuations Standards Council. p. 7

VALUATION SUMMARY

Reserve Categories






-  Proved Developed Producing ("PDP")
-  Proved Developed Shut-In ("PDSI")
-  Proved Developed Non-Producing ("PDNP")
-  Proved Undeveloped ("PUD")
-  Probable Undeveloped ("PROB")
-  Possible Undeveloped ("POSS")

Key Changes from Last Year

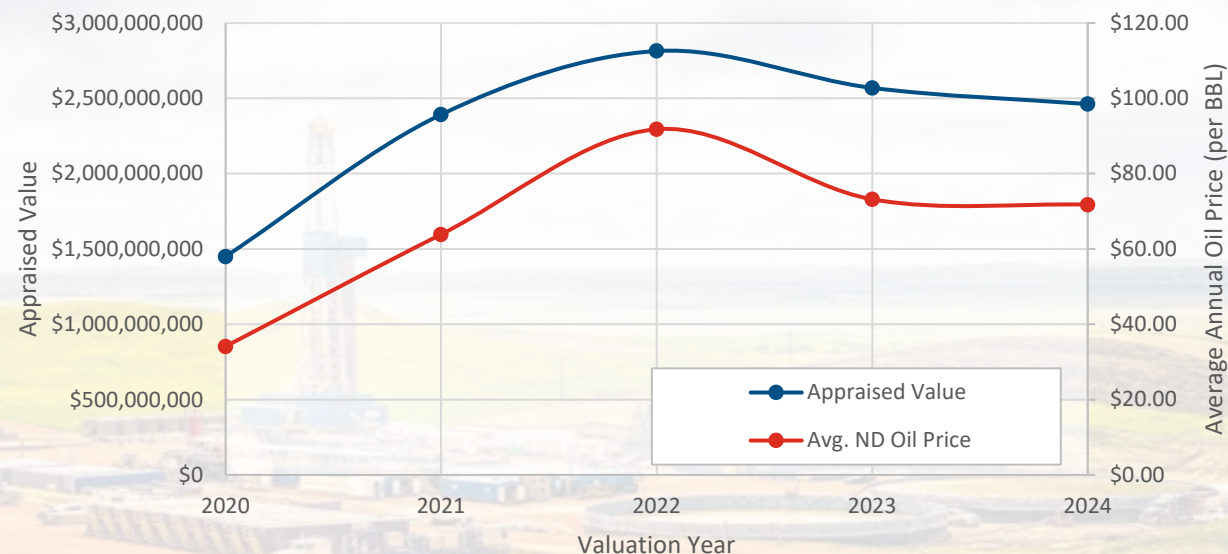
-  PDP count increased by 517 wells
-  PDNP count decreased by 135 wells
-  PDSI count decreased by 51 wells
-  Total wells increased by 87 wells
-  Value decreased by \$107MM

Reserve Class & Category	PDP	PDSI	PDNP	PUD	PROB	POSS	Total
Case Count	8,705	442	285	7,050	560	740	17,782
Cumulative Royalty Interest	237	10	7	197	15	21	487
Gross Oil (BBL)	1,473,281,697	12,201,288	166,624,531	3,347,479,522	105,699,693	104,921,016	5,210,207,747
Gross Gas (Mcf)	3,957,911,172	32,738,118	297,646,496	6,510,594,205	144,746,876	144,349,085	11,087,985,953
Gross Reserve (BOE)	2,132,933,559	17,657,641	216,232,281	4,432,578,556	129,824,172	128,979,197	7,058,205,406
Net Oil (BBL)	39,579,091	252,260	4,488,330	94,239,011	2,873,614	2,923,437	144,355,744
Net Gas (Mcf)	98,560,955	595,265	7,800,611	171,070,127	3,577,225	3,663,047	285,267,230
Net Reserve (BOE)	56,005,917	351,471	5,788,432	122,750,699	3,469,818	3,533,945	191,900,282
Undiscounted Cash Flow	\$2,629,636,495	\$16,585,569	\$294,298,755	\$6,040,057,392	\$180,301,683	\$183,474,450	\$9,344,354,345
NPV10	\$1,306,851,388	\$7,462,134	\$168,836,158	\$1,972,380,821	\$28,735,907	\$25,188,243	\$3,509,454,652
NPV12.5	\$1,166,994,207	\$6,517,068	\$155,036,471	\$1,614,516,870	\$19,744,523	\$16,721,131	\$2,979,530,271
NPV15	\$1,056,740,284	\$5,778,535	\$143,852,511	\$1,346,895,138	\$13,943,960	\$11,441,440	\$2,578,651,868
NPV20	\$893,796,528	\$4,700,881	\$126,604,166	\$979,355,031	\$7,501,141	\$5,835,564	\$2,017,793,311
NPV25	\$778,722,834	\$3,952,738	\$113,695,297	\$744,003,012	\$4,425,863	\$3,313,250	\$1,648,112,994
NPV30	\$692,713,942	\$3,402,546	\$103,509,416	\$583,756,553	\$2,837,118	\$2,076,198	\$1,388,295,773
Appraised Value Subtotal	\$2,443,078,059						
Additional Undeveloped Acreage	\$18,193,563						
Total Appraised Value	\$2,461,271,622						

VALUATION TRENDS

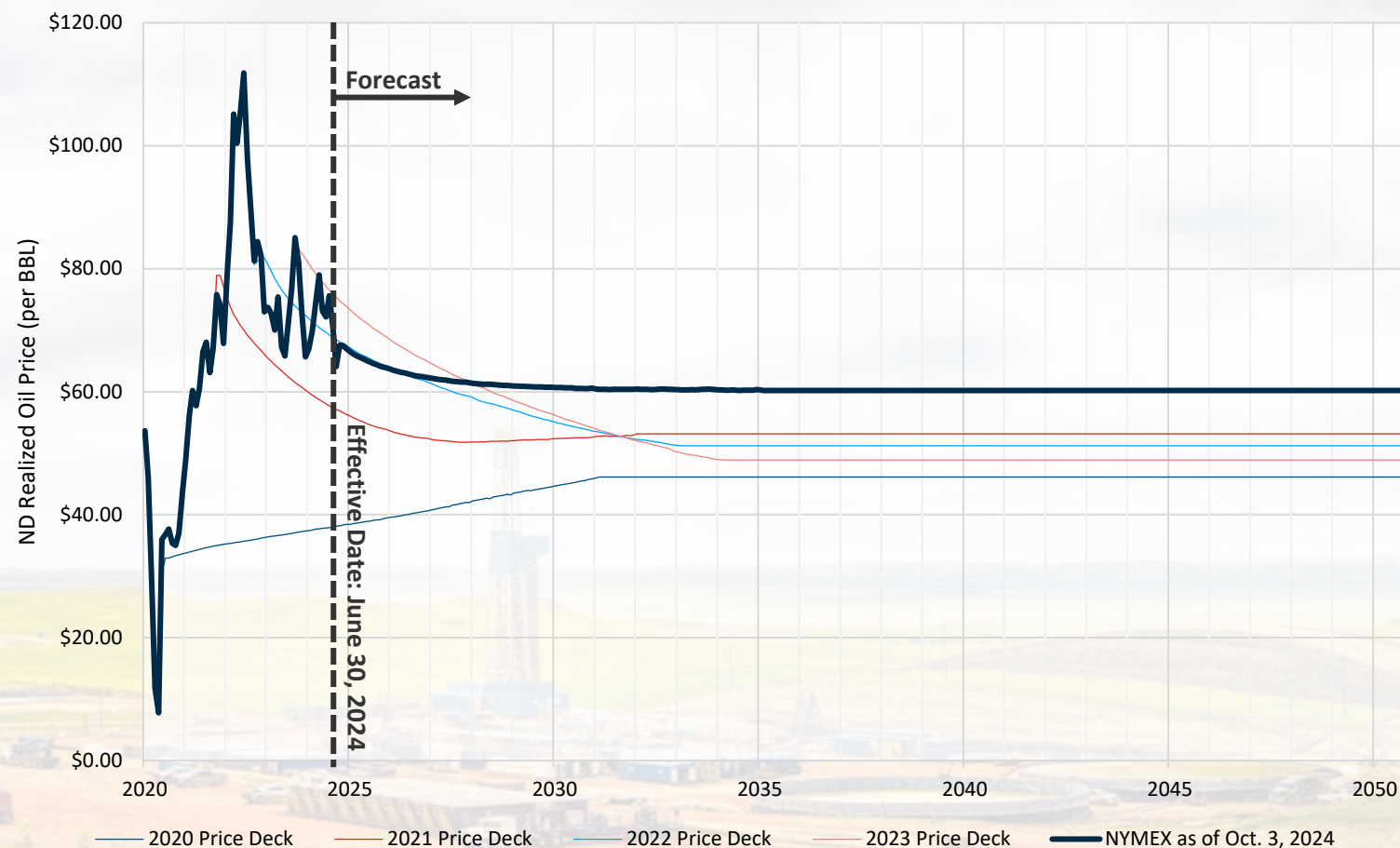
-  This Mineral Value Estimation represents the 5th consecutive year that MineralTracker has conducted the analysis for the ND Dept. of Trust Lands.
-  The analysis methodology has remained consistent each year.
-  There is a strong correlation between oil price and appraised value.
-  Royalties July-2023 through June-2024: **\$505MM**
-  The 4% decrease in value from the 2023 iteration results from liquidated reserves but is offset by improved long-term outlook on oil price.

Valuation Year	Appraised Value	% Change from Previous Analysis	Avg. ND Oil Price
2020	\$1.45 B		\$ 34/BBL
2021	\$2.39 B	+65%	\$ 64/BBL
2022	\$2.81 B	+18%	\$ 92/BBL
2023	\$2.57 B	-9%	\$ 73/BBL
2024	\$2.46 B	-4%	\$ 72/BBL

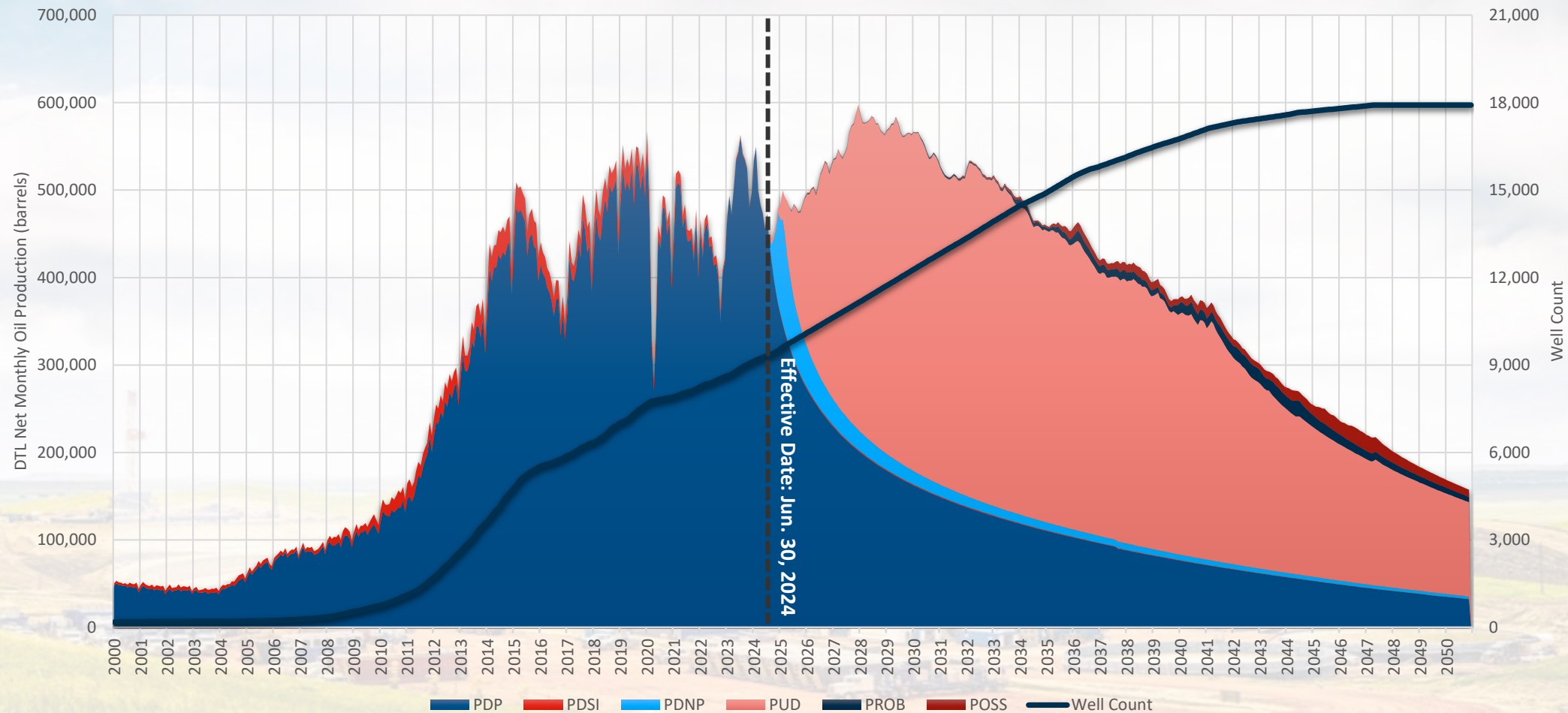


OIL PRICE

- Oil prices have been volatile following the previous valuation analysis, fluctuating up to 30% over the trailing twelve months.
- The “out” years of the current NYMEX pricing are the highest since MineralTracker first performed this analysis in 2020.
- Competing bullish and bearish factors: slowing demand, oversupply concerns, potential disruptions in the Middle-East.

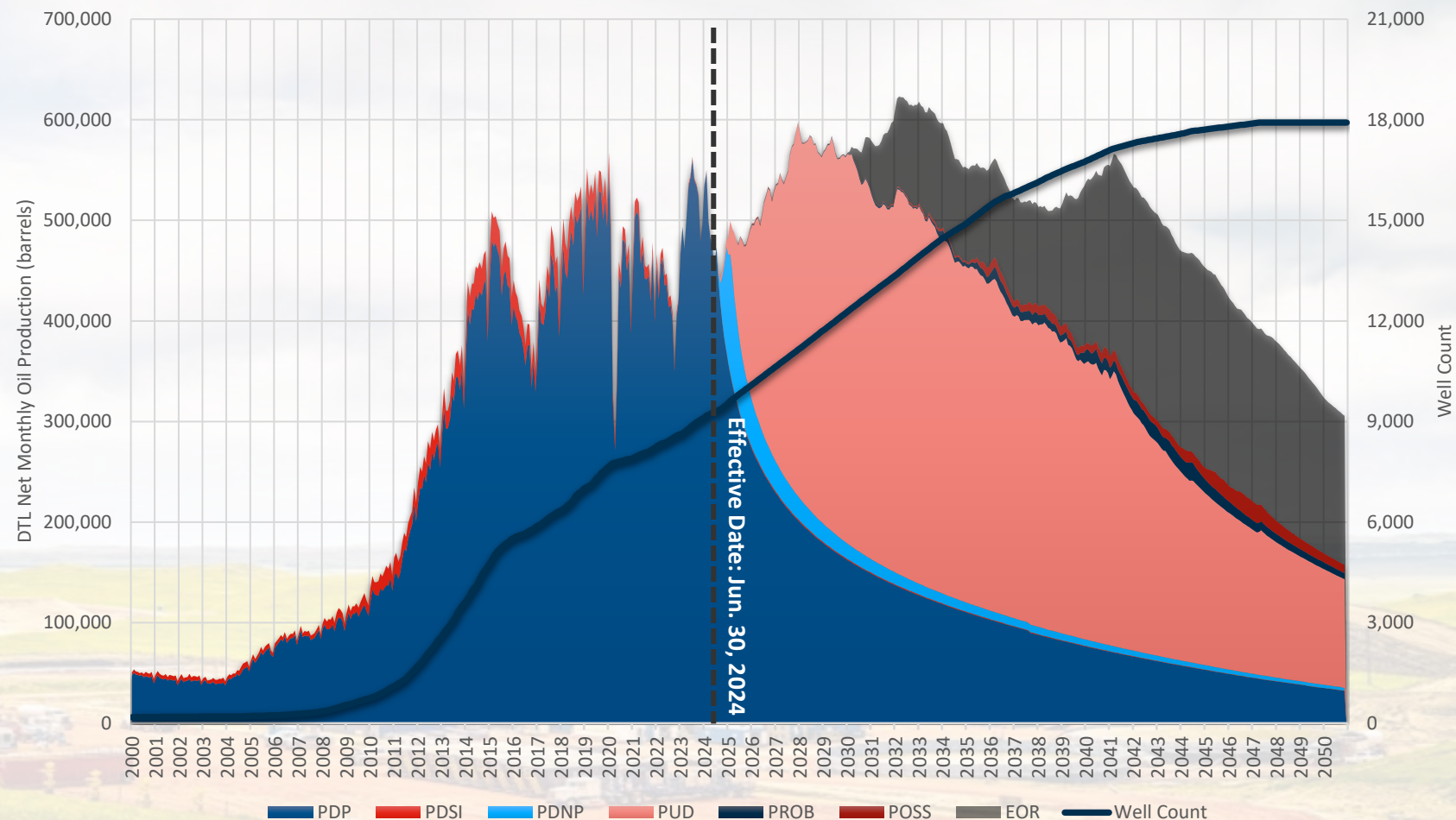


VOLUME PROJECTIONS



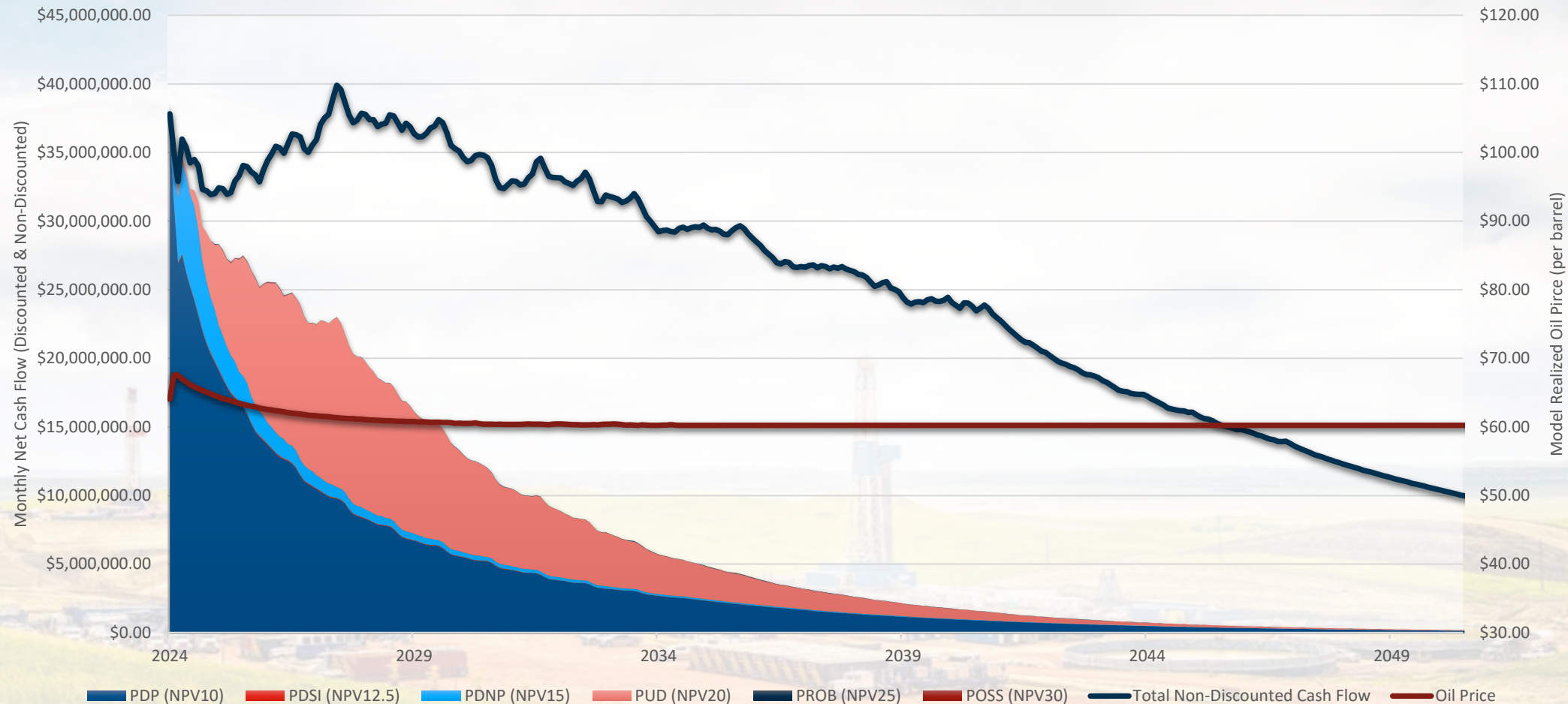
VOLUME PROJECTIONS

- In consultation with the EERC*, MineralTracker has constructed a hypothetical Bakken enhanced oil recovery (EOR) scenario for the State-owned royalties.
- Big thanks to the EERC for their valuable help on this topic!
- Key Assumptions:
 - Unlimited CO2 supply
 - Approximately 30% uplift to estimated ultimate recovery per well
 - EOR development begins in 2030 and continues for 35 years



* While this illustration relies on key elements of the EERC's recent work, it is not a direct reflection of their independent study. Meaningful differences in assumptions include 1) constraints surrounding the availability of CO2, 2) constraints around study timeline, and 3) assumptions around continued primary development of the Williston Basin.

CASH FLOW FORECASTING



OIL PRICE SENSITIVITY

NYMEX as of October 3, 2024		
Year	WTI Oil Price (\$/BBL)	Henry Hub Natural Gas Price (\$/MMBtu)
2023	74.99	2.60
2024	71.19	3.42
2025	69.04	3.66
2026	67.95	3.67
2027	67.34	3.58
2028	66.99	3.46
2029	66.77	3.38
2030	66.57	3.33
2031	66.57	3.20
2032	66.53	3.16
2033	66.44	3.17
2034	66.39	3.53

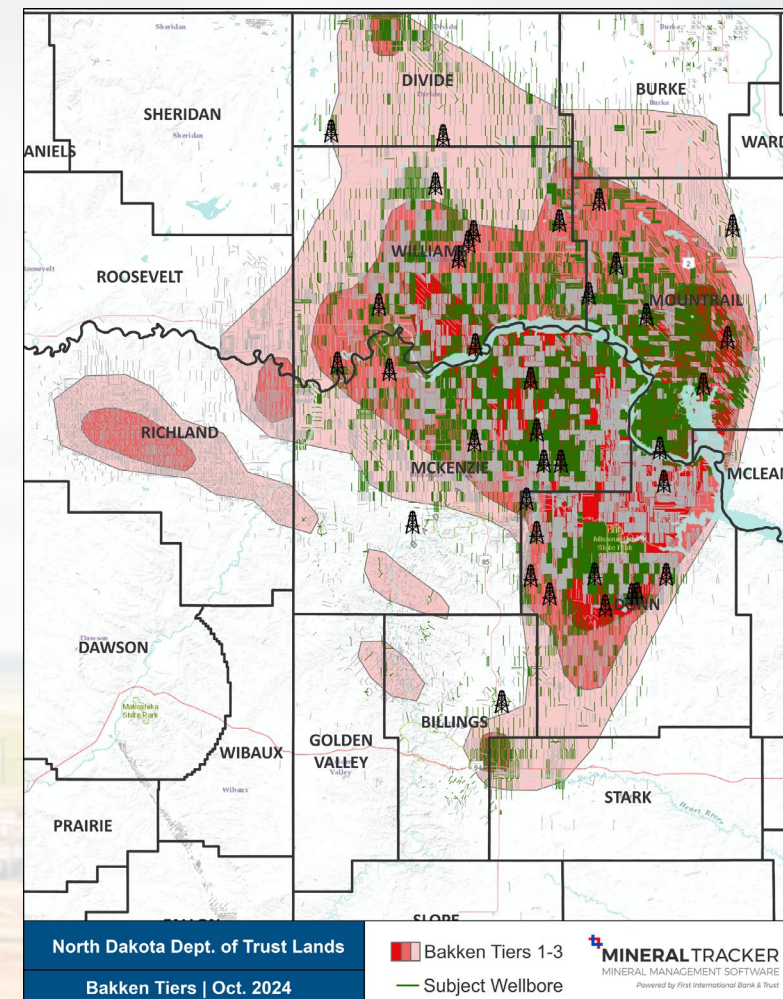
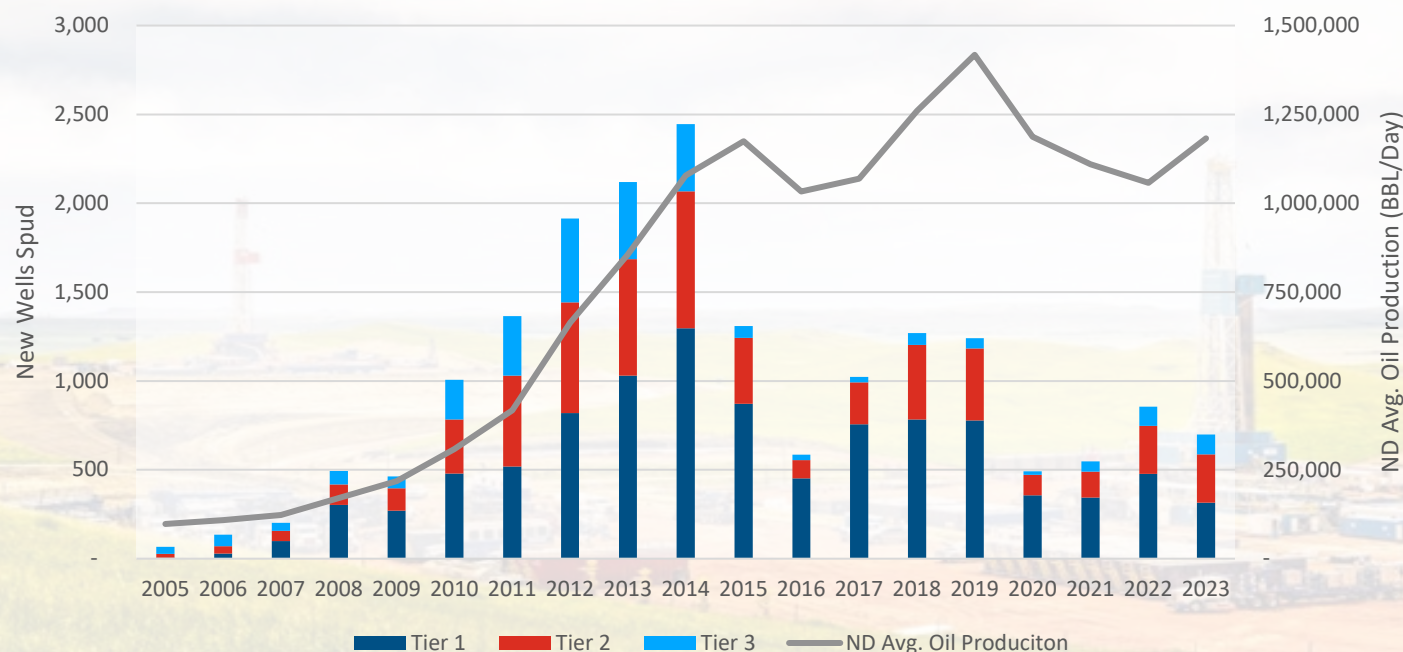
Modelled Oil Price	PDP (NPV10)	PDSI (NPV12.5)	PDNP (NPV15)	PUD (NPV20)	PROB (NPV25)	POSS (NPV30)	Undeveloped Acreage	Total Value
+\$30 per barrel	\$1,903M	\$10M	\$208M	\$1,434M	\$7M	\$3M	\$18M	\$3,583M
+\$20 per barrel	\$1,705M	\$9M	\$187M	\$1,282M	\$6M	\$3M	\$18M	\$3,209M
+\$10 per barrel	\$1,506M	\$8M	\$165M	\$1,131M	\$5M	\$2M	\$18M	\$2,836M
NYMEX as of Oct. 3, 2024	\$1,307M	\$7M	\$144M	\$979M	\$4M	\$2M	\$18M	\$2,461M
-\$10 per barrel	\$1,106M	\$5M	\$122M	\$828M	\$4M	\$2M	\$18M	\$2,086M
-\$20 per barrel	\$904M	\$4M	\$101M	\$676M	\$3M	\$1M	\$18M	\$1,709M
-\$30 per barrel	\$699M	\$3M	\$79M	\$525M	\$2M	\$1M	\$18M	\$1,328M

Modelled Oil Price	PDP (Non-Disc.)	PDSI (Non-Disc.)	PDNP (Non-Disc.)	PUD (Non-Disc.)	PROB (Non-Disc.)	POSS (Non-Disc.)	Total Non-Disc. Cash Flow
+\$30 per barrel	\$3,965M	\$26M	\$432M	\$8,910M	\$273M	\$282M	\$13,888M
+\$20 per barrel	\$3,521M	\$23M	\$386M	\$7,958M	\$243M	\$250M	\$12,380M
+\$10 per barrel	\$3,076M	\$20M	\$340M	\$7,002M	\$212M	\$217M	\$10,867M
NYMEX as of Oct. 3, 2024	\$2,630M	\$17M	\$294M	\$6,040M	\$180M	\$183M	\$9,344M
-\$10 per barrel	\$2,182M	\$13M	\$248M	\$5,068M	\$148M	\$150M	\$7,810M
-\$20 per barrel	\$1,734M	\$10M	\$202M	\$4,091M	\$116M	\$116M	\$6,269M
-\$30 per barrel	\$1,284M	\$7M	\$155M	\$3,108M	\$83M	\$81M	\$4,718M

Note: -\$6.18/bbl differential was applied to future cash flow estimates

EXPANDING THE CORE

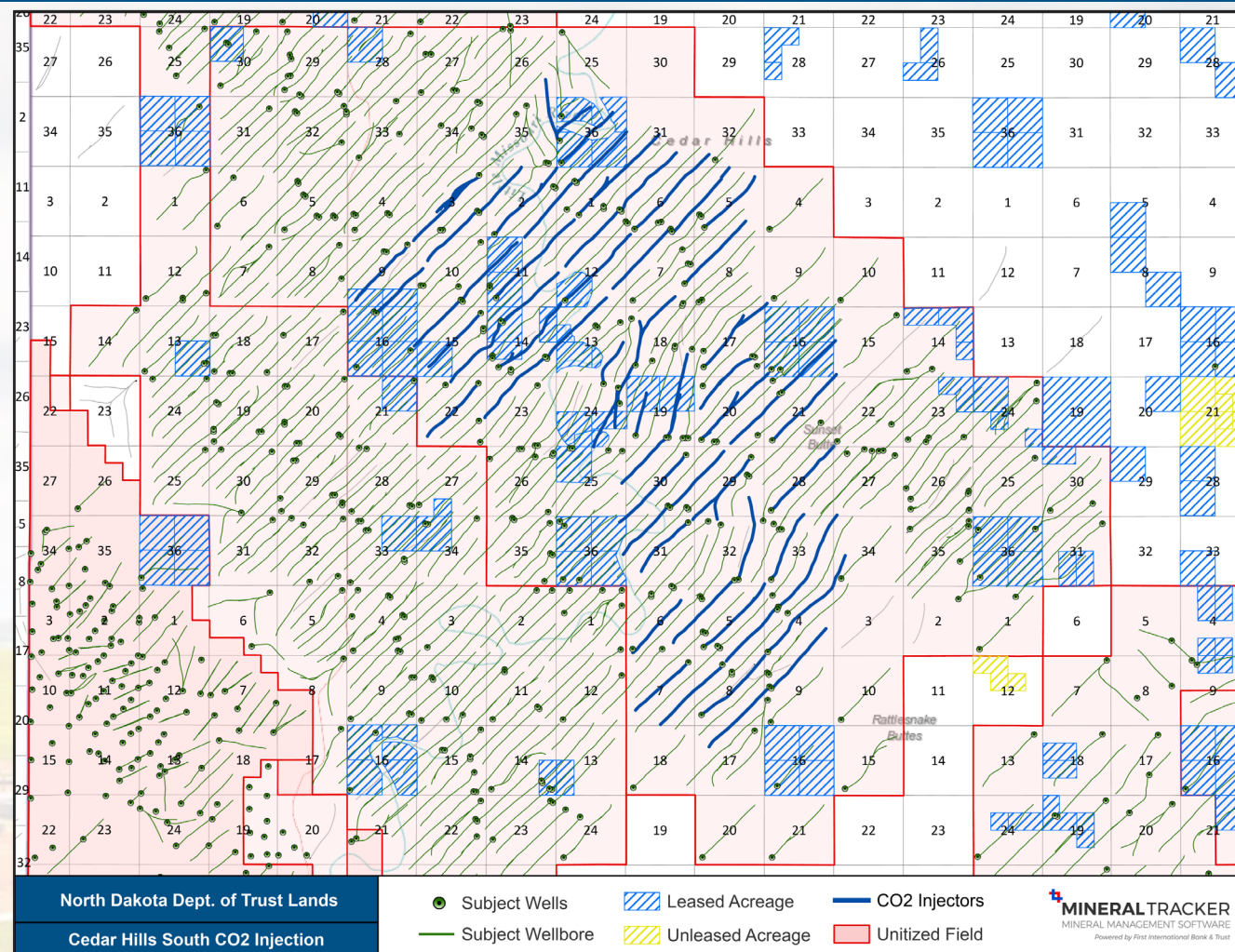
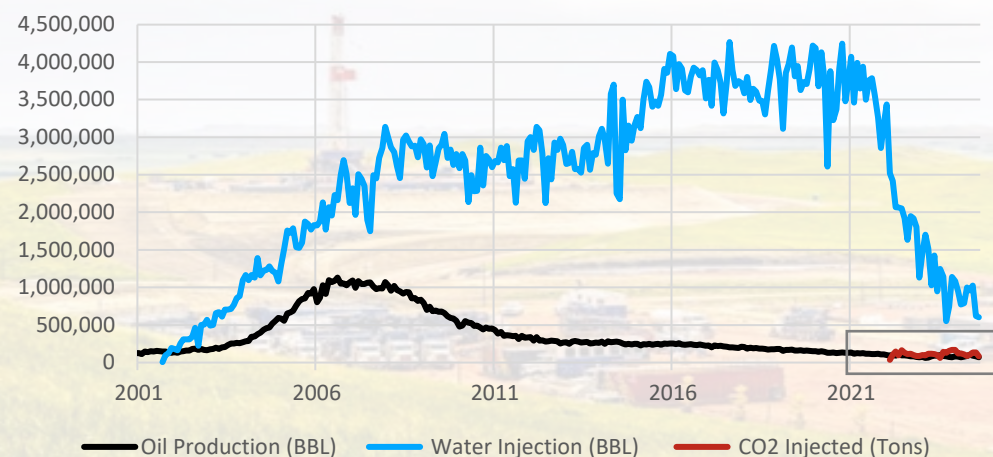
- 2023 is the first year since 2013 in which the majority of wells drilled in ND were drilled in Tier 2 and Tier 3.
- Despite drilling fewer wells in poorer geology, ND is growing or maintaining flat production.



ENHANCED OIL RECOVERY

Cedar Hills South Red River B Unit

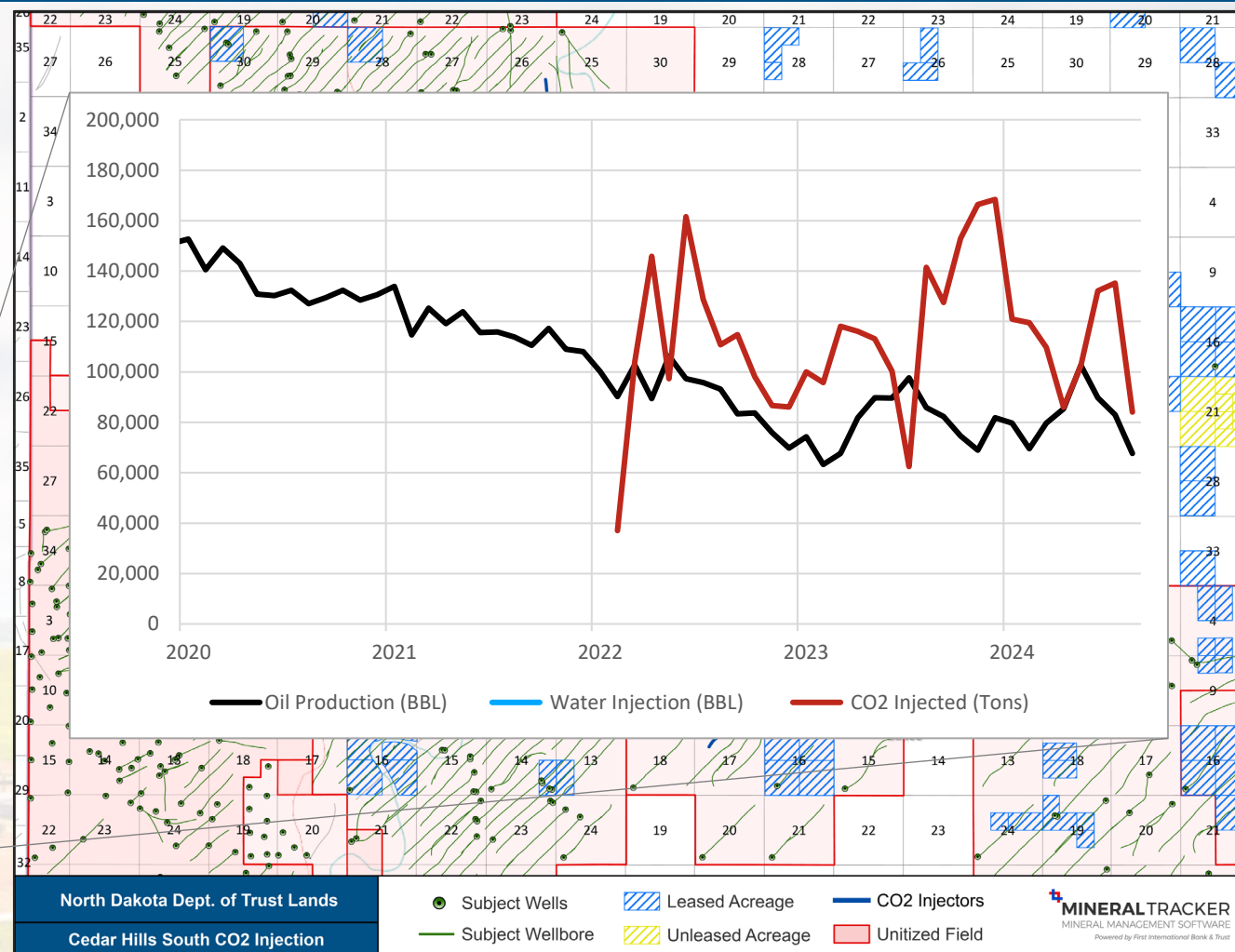
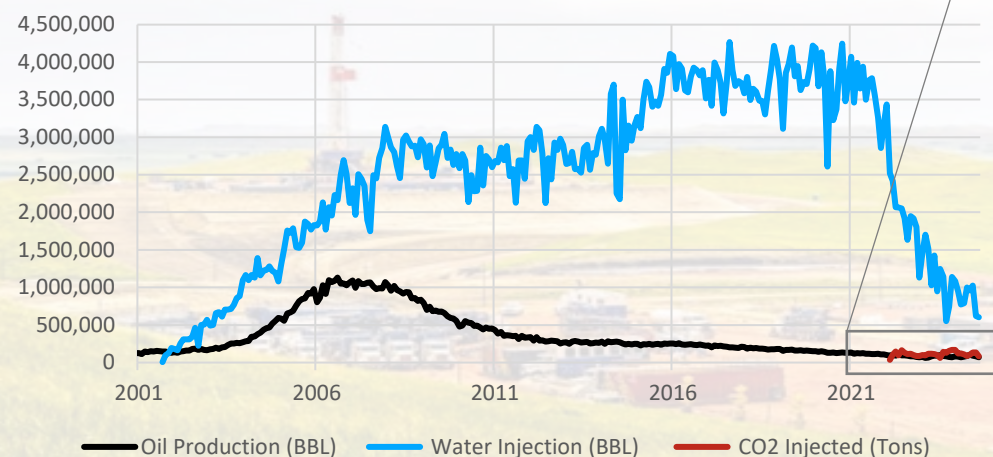
- Primary Recovery:** Horizontal Drilling from mid-1990's through the mid-2000's
- Secondary Recovery:** Waterflood starting in 2001
- Enhanced Oil Recovery:** CO2 flood starting in 2022



ENHANCED OIL RECOVERY

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Contact Us

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RE: 2025 Potential Legislation
(No Action Requested)

Notable Dates

- Dec 5: Deadline for executive agencies to file bills with Legislative Council
- Jan 7: Session begins
- Jan 13: Deadline for senators to introduce bills
- Jan 20: Deadline for representatives to introduce bills
- Feb 28: Crossover
- May 2: Day 80 (Deadline for session to conclude)

Proposed Legislation

- Unclaimed Property
 - Add authority to liquidate virtual currency
 - Clarify holder voluntary disclosure program
 - Clarify dormancy for tax lien proceeds and abandoned vehicles
 - Clarify Administrator's authority to share information with other states in a multi-state examination § 47-30.2-63
 - Clarify what constitutes enforceable debts § 47-30.2-52
- Clarify administrative rules authority
- Authority for Board to adopt an agency incentive compensation plan

RE: Litigation Update
(No Action Requested)

- **Mandan, Hidatsa, and Arikara Nation v. United States Department of the Interior**
 - **Case Summary:** Missouri riverbed ownership – 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. On July 23, 2024, the Court issued its rulings on these two issues: 1) granting the United States' motion for a quiet title action; and 2) denying our motion to venue the case in North Dakota. A schedule for next steps has been agreed to with expert reports due by November 13, 2024, and a discovery completion deadline of January 10, 2025. On October 17, 2024, MHA Nation filed a Motion for Judgment on the Pleadings (similar to a summary judgment motion) that we will respond to.

Commencement: July 2020

ND Assigned Attorneys: James Auslander, Kathryn Tipple, Peter Schaumberg, and Nessa Coppinger (Beveridge & Diamond, Washington, D.C.)
Matthew Sagsveen, AG Dir. of Natural Resources and Native American Affairs

Counsel for MHA: Steven D. Gordon (Holland & Knight's Washington, D.C.)
Philip Merle Baker-Shenk (Holland & Knight's Washington, D.C.)
Timothy Purdon (Robins Kaplan, Bismarck, ND)
Timothy Billion (Robins Kaplan, Minneapolis, MN)

Counsel for United States
Department of Interior: Reuben S. Schiffman (Washington, D.C.)

Court: United States District Court for the District of Columbia

Judge: Honorable Amy Berman Jackson

Win = North Dakota owns historical Missouri Riverbed (mineral rights) through Fort Berthold 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

- **State of North Dakota, ex. rel. v Virginia Leland, et.al.**
 - **Case Summary:** OHWM river island ownership; trial was held September 12-16, 2022; Judge Schmidt issued a Phase I Memorandum Decision on April 30, 2024, finding 1) the at issue Yellowstone River segment was navigable at statehood; 2) the at issue west bank of the river is owned by the state; 3) the at issue north island is not owned by the state; 4) the at issue south island is owned by the state; and 5)

the state's claim is not barred by laches. The remaining issues of conveyances, mineral acreage calculations, etc. are now being presented in Phase II proceedings. Opposing parties' motion for summary judgment has been fully briefed and a hearing on that motion is scheduled for November 8th. If needed, a bench trial is scheduled for December 17-19, 2024.

Commencement: January 2016

ND Assigned Attorneys: Zachary Pelham (Pearce Durick, Bismarck)
Matthew Sagsveen, AG Dir. of Natural Resources and Native American Affairs
James Wald, DTL General Counsel

Counsel for Whiting Oil and Gas Corp: Paul Forster (Crowley Fleck, PLLP, Bismarck, ND)
Shane Hanson (Crowley Fleck, PLLP, Bismarck, ND)

Counsel for Defendant(s): Kevin Chapman (Chapman Law Firm, P.C., Williston, ND)
Ariston Johnson (Johnson & Sundeen, Watford City, ND)
and Others

Court: State District Court, McKenzie County

Judge: Honorable Robin Schmidt

Win = State owns at issue Yellowstone River islands and related mineral interests

Lose = Plaintiffs owns at issue Yellowstone River islands and related mineral interests

- **Continental Resources, Inc. v. North Dakota Board of University & School Lands and North Dakota Department of Trust Lands**
 - **Case Summary:** Continental Oil Royalty Deductions – Now that the Newfield gas royalty deductions case has been resolved, this has come off stay and the parties have filed a joint scheduling order laying out the discovery and preparation timeline for trial that is currently scheduled for August 4-8, 2025, in McKenzie County.

Commencement: December 2017

ND Assigned Attorney(s): David Garner, Assistant Attorney General

Counsel for Continental Resources, Inc.: Jeffrey King (K&L Gates, Fort Worth, TX)

Court: State District Court, McKenzie County

Judge: Honorable Robin Schmidt

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

- **Continental Resources, Inc., v. North Dakota Board of University and School Lands and the United States of America (Interpleader)**

- **Case Summary:** OHWM fed/state dispute – 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 a cross appeal; 8th Circuit oral arguments on the appeals were held October 22, 2024, and we now await the Court’s decision.

Commencement: December 2016

ND Assigned Attorneys: Philip Axt, ND Solicitor General

Counsel for Continental: Lawrence Bender (Fredrikson & Byron P.A., Bismarck, ND)
Spencer Ptacek (Fredrikson & Byron P.A., Bismarck, ND)

Counsel for USA: Shaun Pettigrew (Environment and Natural Resources
Division (ENRD)) of the U.S. Department of Justice

Court: United States District Court, District of North Dakota

Judge: Magistrate Judge Clare R. Hochhalter

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 net loss of approximately 2,500 mineral acres

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 consultation, to review confidential records, and discuss negotiating strategy regarding:

- **Continental Resources, Inc. v. North Dakota Board of University and School Lands and the United States of America (Royalty Deductions Case)**
- **Royalty Settlements**

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 30 minutes.

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.