State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Real Assets Annual Investment Plan

Resolution 2023-12

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS, the Board has authorized investments in Real Assets for the Public Employees' Retirement System, Teachers' Retirement System, and Judicial Retirement System, including investments for those systems in the State of Alaska Retirement and Benefits Plans Trust; and

WHEREAS, the Board will establish and on an annual basis review an investment plan for Real Assets asset class.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopt the Real Assets Annual Investment Plan for Fiscal Year 2024, attached hereto and made a part hereof.

DATED at Anchorage, Alaska this 15th day of September, 2023.

Bret L. Willms
Chair

ATTEST:

Michael Williams
Secretary

Alaska Retirement Management Board

Real Assets
Fiscal Year 2024 Annual Investment Plan

September 2023

Steve Sikes, CFA, CPA
Director of Real Assets

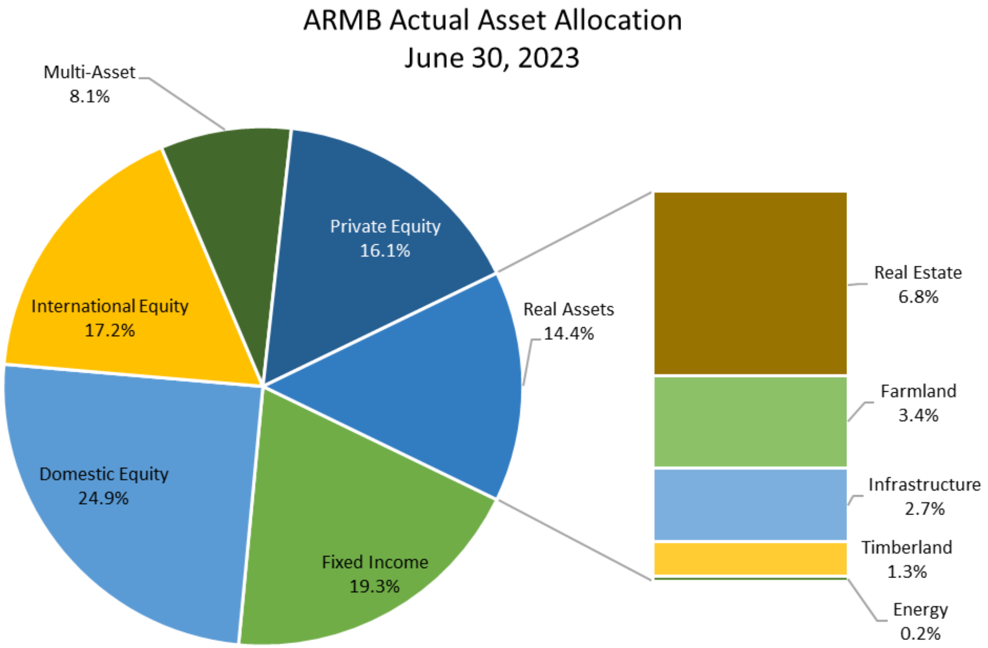
Robyn Mesdag, CFA
State Investment Officer

Agenda

- Review portfolio and performance
- Establish Fiscal Year 2024 target allocations
- Review each portfolio sector:
  - Where can we <u>increase returns</u> without exceeding risk tolerance?
  - Where can we <u>decrease risk</u> without compromising returns?
- Make recommendations to ARMB

The Role of Real Assets Portfolio Role

- Returns between stocks and bonds
- Diversification
- Inflation hedge
- Current income

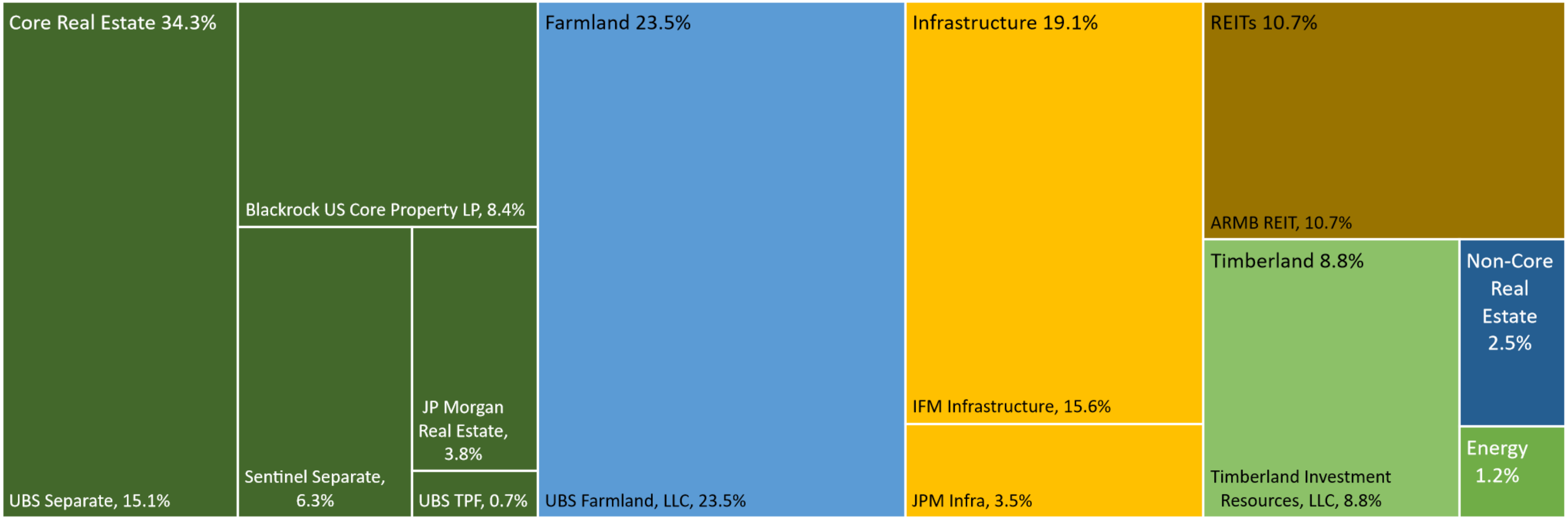


Portfolio Construction

- Real Assets sector exposures approximate current targets

as of June 30, 2023	Actual	Target	Difference
Core Real Estate	34.3%	35%	-0.7%
Non-Core Real Estate	2.5%	0%	2.5%
REITS	10.7%	15%	-4.3%
Farmland	23.5%	25%	-1.5%
Infrastructure	19.1%	15%	4.1%
Timberland	8.8%	10%	-1.2%
Energy	1.2%	0%	1.2%
Total Real Assets	14.4%	14%	0.4%

ARMB Real Assets Porfolio
June 30, 2023, $4.5 billion



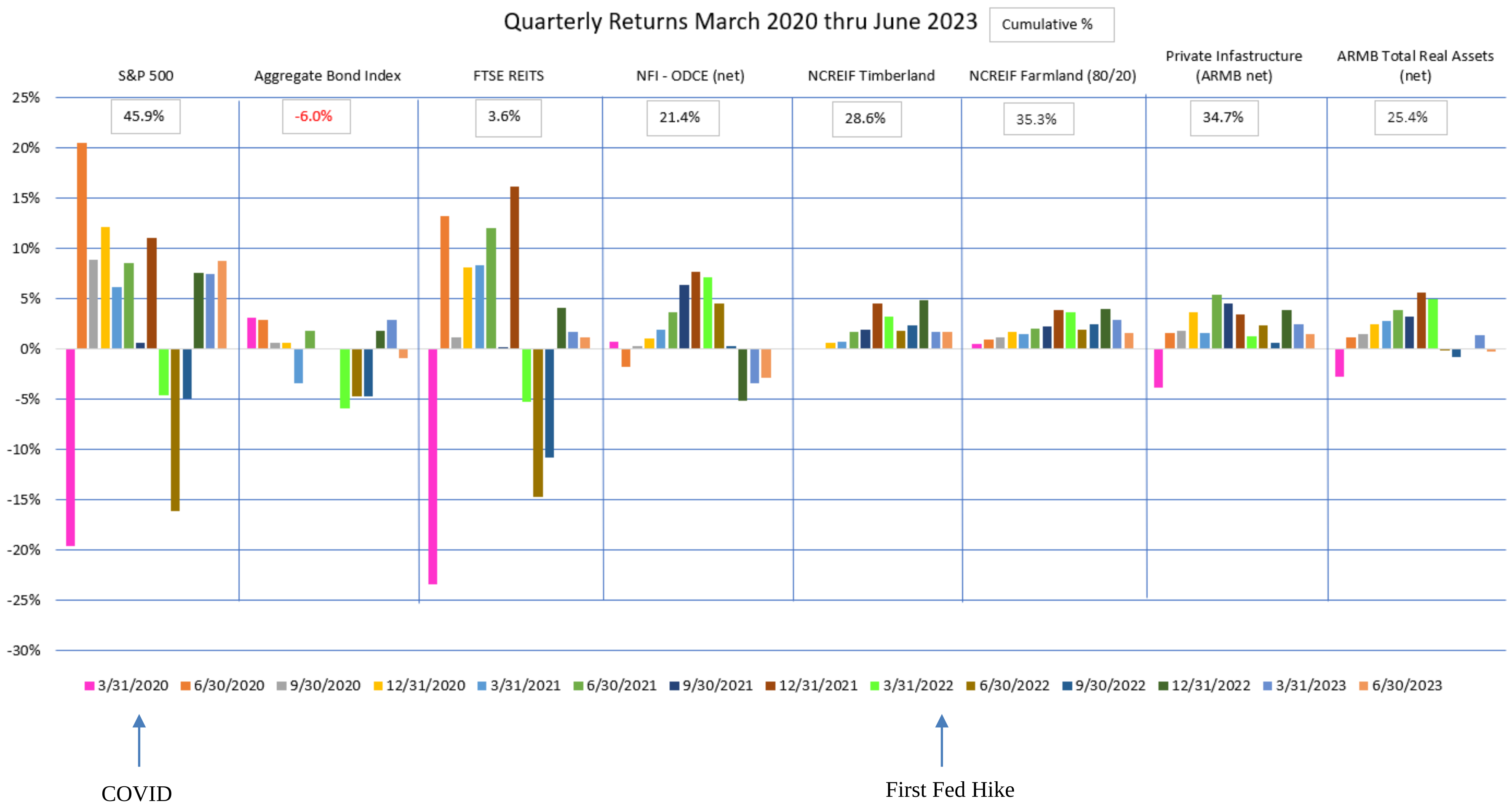
Performance

- The Real Assets portfolio returned 0.41% net in Fiscal Year 2023 compared to the target return of -0.37%.
- Real Estate returns turned negative during the year reflecting higher interest rates and fundamental challenges in some sectors. Longer-term results consistent with objectives.
- Farmland, Timberland, and Infrastructure demonstrated differentiated return drivers posting strong returns for the year.
- Performance has met objectives of providing diversification and producing returns between public equities and fixed income.

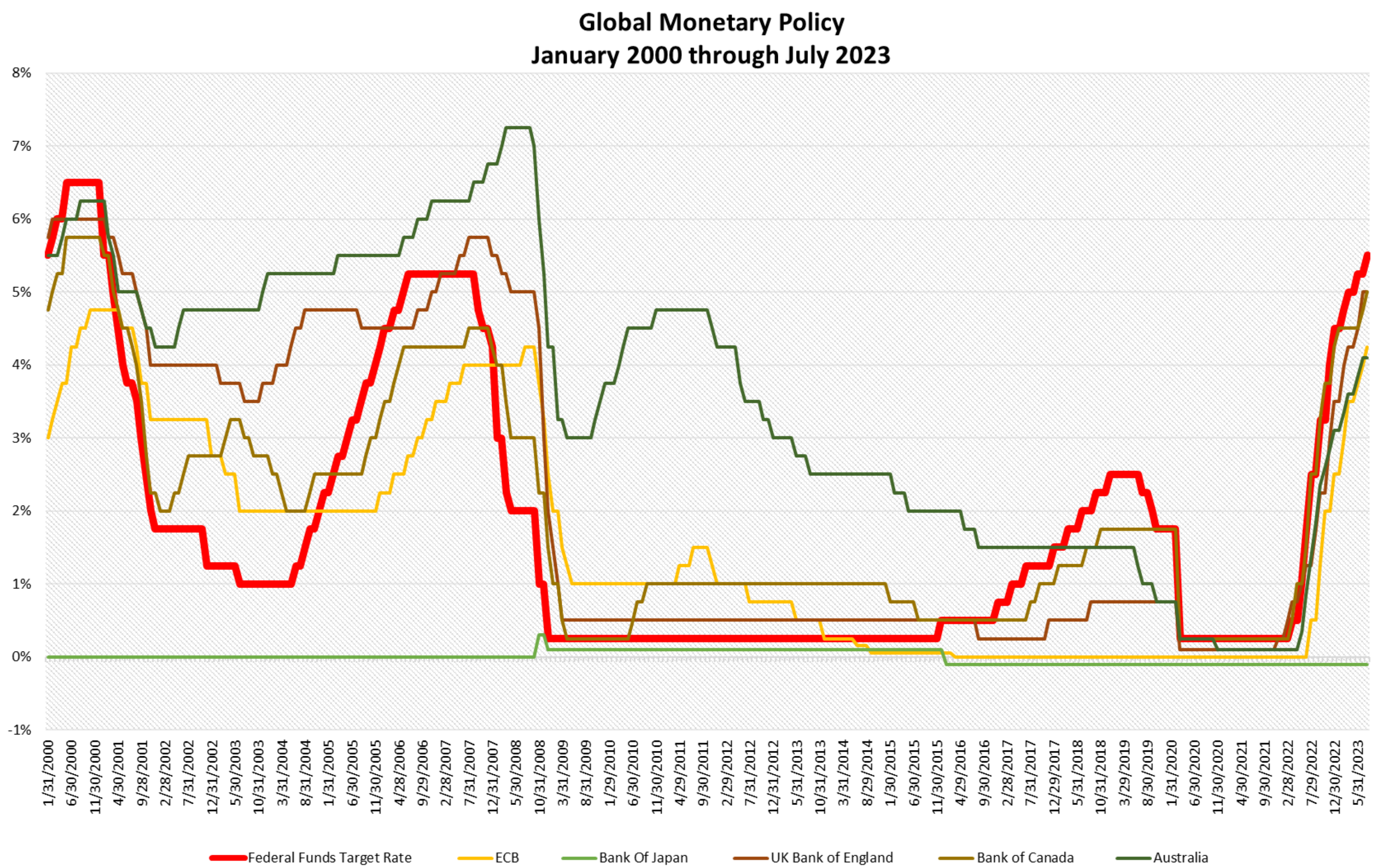
as of June 30, 2023 (net of fees)	**Qtr**	**1yr**	**6yr**	**10yr**
Core	-2.65%	-9.34%	7.20%	8.33%
NCREIF ODCE	-2.88%	-10.73%	5.88%	7.77%
Non-Core	-1.55%	-5.62%	5.31%	8.86%
NCREIF ODCE +1.5%	-2.47%	-9.23%	7.39%	9.28%
REIT	1.19%	-4.32%	4.76%	6.77%
FTSE NAREIT All Equity	1.20%	-4.39%	4.81%	6.81%
Farmland	0.46%	10.88%	6.04%	5.94%
NCREIF Farmland (80/20 Blend)	1.64%	11.36%	7.56%	7.47%
Timberland	0.16%	8.74%	4.96%	4.76%
NCREIF Timberland	1.71%	11.13%	5.43%	5.90%
Infrastructure	2.43%	9.72%	11.28%	-
CPI+4%	2.04%	6.97%	7.73%	-
Energy	-1.83%	-11.04%	0.61%	-3.14%
CPI+4%	2.04%	6.97%	7.73%	7.68%
ARMB Real Assets	-0.29%	0.41%	6.30%	6.60%
ARMB Real Assets Target	-0.15%	-0.37%	5.79%	6.81%
Russell 3000	8.39%	18.95%	11.95%	12.34%
Bloomberg Barclays Aggregate	-0.84%	-0.94%	0.57%	1.52%
CPI	1.08%	2.97%	3.73%	2.71%

Source: Callan Real Assets Quarterly Report June 30, 2023, Callan PEP

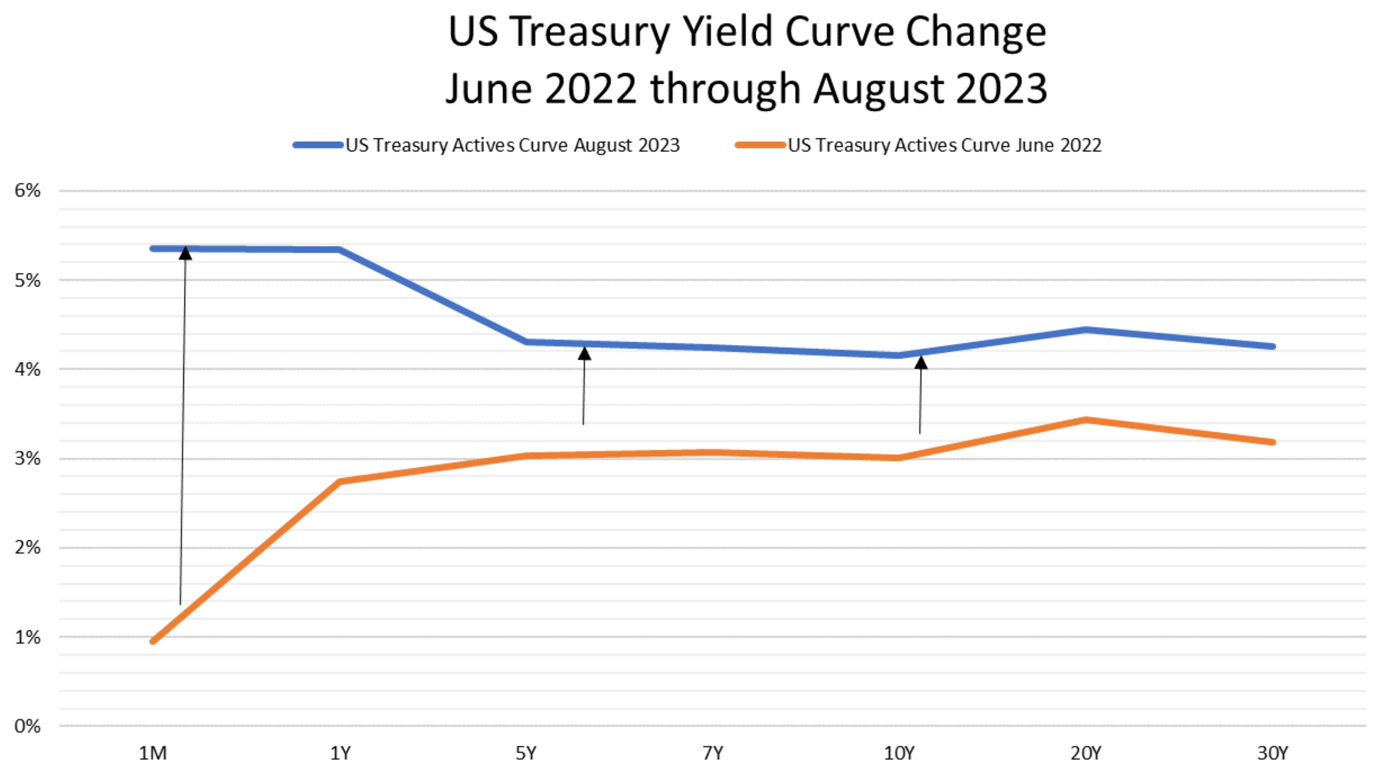
Post COVID Performance by Market



Monetary Policy



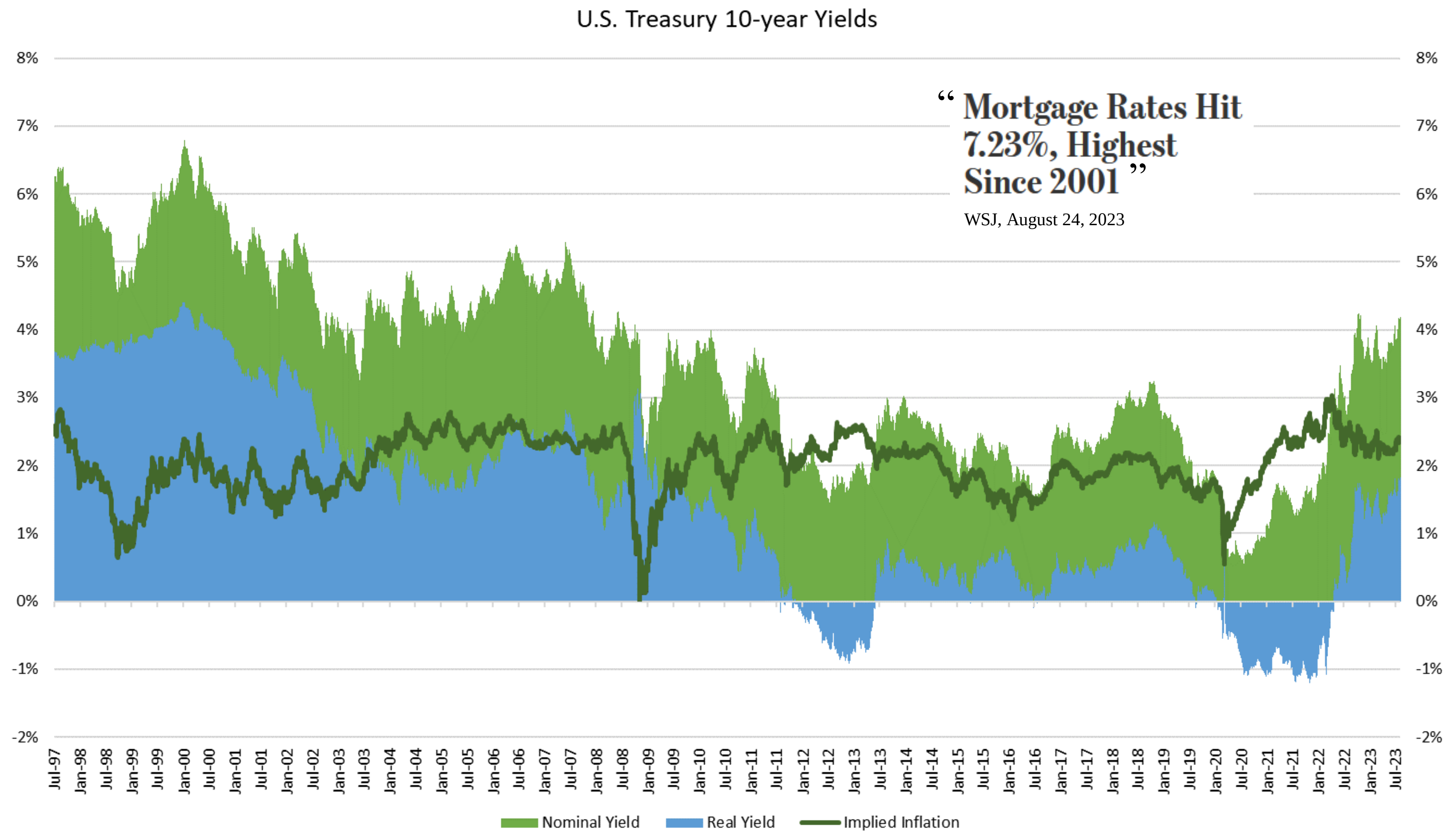
Risk Free Rates are Higher Across the Curve



- The Fed began raising rates in January 2022 from a starting rate of 0% to 0.25%

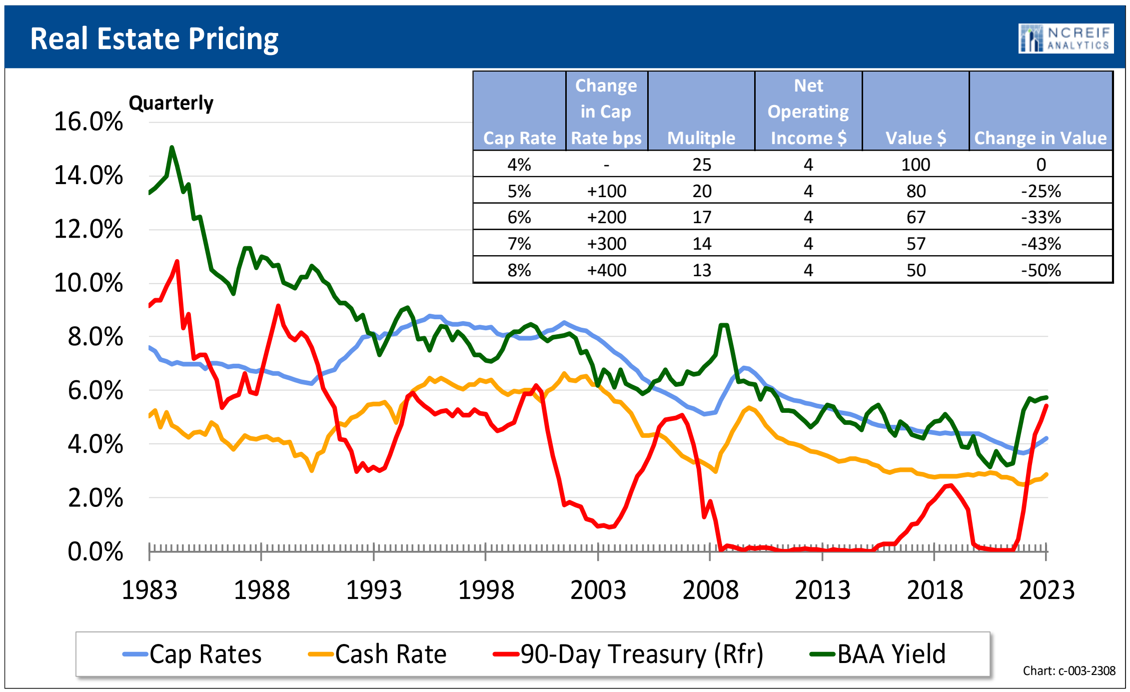
Tenor	US Treasury Actives Curve June 2022	US Treasury Actives Curve August 2023	Change in Yield
1M	0.9%	5.4%	4.4%
1Y	2.7%	5.3%	2.6%
5Y	3.0%	4.3%	1.3%
7Y	3.1%	4.2%	1.2%
10Y	3.0%	4.2%	1.1%
20Y	3.4%	4.4%	1.0%
30Y	3.2%	4.3%	1.1%

Back to "Normal" or Temporary Spike Higher?



Historical Rate Relationships, Sensitivity, Forecast

- Higher rates likely to continue pressuring returns.



Cap Rate	Change in Cap Rate bps	Mulitple	Net Operating Income $	Value $	Change in Value
4%	-	25	4	100	0
5%	+100	20	4	80	-25%
6%	+200	17	4	67	-33%
7%	+300	14	4	57	-43%
8%	+400	13	4	50	-50%

3Yr NPI Total Return Forecast (unlevered)

Sector	Current Cap Rate		Dividend Pay-Out Ratio		Dividend Yield		NOI Growth		Cap Rate Shift Effect		Total Return	Exit Cap Rate
Ind	3.1	x	87.6	=	2.7	+	8.0	+	-10.7	=	0.0	4.4
Apt	3.6	x	83.4	=	3.0	+	3.3	+	-8.1	=	-1.9	4.7
Ret	4.9	x	82.6	=	4.1	+	-0.1	+	-6.6	=	-2.6	6.1
Off	4.4	x	68.4	=	3.1	+	0.3	+	-14.5	=	-11.1	7.3
NPI	3.9	x	81.7	=	3.1	+	4.1	+	-10.3	=	-3.1	5.2

BlackRock, May 2023

Fiscal Year 2024 Target Allocations

Callan Real Asset Capital Market Assumptions

Real Asset Components - 2023 Capital Market Assumptions

Real Assets Only

Asset Class	1-Year Arithmetic	10-Year Geometric Return	Annualized Standard Deviation	Projected Yield	Sharpe Ratio
Real Estate	6.60%	5.75%	14.20%	4.40%	0.21
Non-Core Real Estate	8.35%	7.30%	16.20%	2.95%	0.28
Real Estate Debt	5.80%	5.70%	6.20%	4.85%	0.48
REITs	8.85%	6.90%	20.90%	4.65%	0.20
Timber	6.45%	5.40%	15.60%	3.70%	0.17
Farmland	6.65%	5.55%	15.95%	4.25%	0.18
Private Infrastructure	7.15%	6.15%	15.45%	4.60%	0.22

Projection set includes current ARMB real assets, plus Real Estate Debt and Non-Core Real Estate

Modeling Real Estate Debt and Non-Core Real Estate is more art than science. Neither asset class has meaningful peer groups or benchmarks; projections are based on informed judgement and experience.

Real Estate Debt is modeled to include Securitized Mortgages, Real Estate Equity and Private Credit. Sharpe ratio is substantially higher than other asset classes.

Non-Core Real Estate is modeled to reflect a blend of value-add and opportunistic strategies. The return and risk represent a blend of core real estate and private equity.

Optimal Real Assets Mix

- ARMB Fiscal Year 2024 plan level asset allocation assumes 7.00% arithmetic return, 6.35% 10-year geometric return, and 13.10% standard deviation for Real Assets. Recommended 2024 mix is consistent with plan level calibration.

- Real Estate Debt and Non-Core Real Estate are attractive to the model. Allocations constrained based on risk tolerance and practical limitations.

	Current Real Assets Target	Recommended FY 2024 Real Assets Target	Change
Core Real Estate	35%	30%	-5%
Non-Core Real Estate	0%	5%	5%
Real Estate Debt	0%	5%	5%
REITs	15%	10%	-5%
Timberland	10%	10%	0%
Farmland	25%	20%	-5%
Infrastructure	15%	20%	5%
Energy	0%	0%	0%
Total	100%	100%	0%
Projected Arithmetic Return	7.02%	6.98%	-0.04%
10-year Geometric Mean Return	6.34%	6.34%	0.00%
Projected Standard Deviation	13.10%	12.75%	-0.35%

Source: Callan

Target Allocation Changes and Implementation

(% targets)	Current Target	Proposed FY24 Target	Target Change
Core Real Estate	35%	30%	-5%
Non-Core Real Estate	0%	5%	5%
Real Estate Debt	0%	5%	5%
REITS	15%	10%	-5%
Timber	10%	10%	0%
Farmland	25%	20%	-5%
Private Infrastructure	15%	20%	5%
Energy	0%	0%	0%
Plan level Total	14%	14%	0%

($ millions)	Actual NAV 6/30/2023	Proposed FY24 Target $	Change $
Core Real Estate	1,551	1,323	(228)
Non-Core Real Estate	111	220	110
Real Estate Debt	-	220	220
REITS	483	441	(42)
Timber	400	441	41
Farmland	1,064	882	(182)
Private Infrastructure	863	882	19
Energy	54	-	(54)
Total	4,526	4,410	(116)

- Largest decreases are Core Real Estate and Farmland.
- Largest increases are Real Estate Debt and Non-Core Real Estate.
- Total Real Estate exposure is unchanged at 50% (core + non-core + debt + REIT).
- Infrastructure +5%, and REITs -5%, already close to new targets.
- Implementation will be slow, likely a multi-year transition.

Real Asset Sector Review

- Where can we <u>increase returns</u> without exceeding risk tolerance?
- Where can we <u>decrease risk</u> without compromising returns?

Real Estate Overview

- Two core separate account managers make investments on a discretionary basis within the parameters defined by ARMB's guidelines and annual investment plan up to approved allocations. These investments represent 45% of the real estate portfolio and are currently comprised of 17 assets within the apartment, industrial, office, and retail sectors across the U.S. ARMB owns 100% interest in these assets.

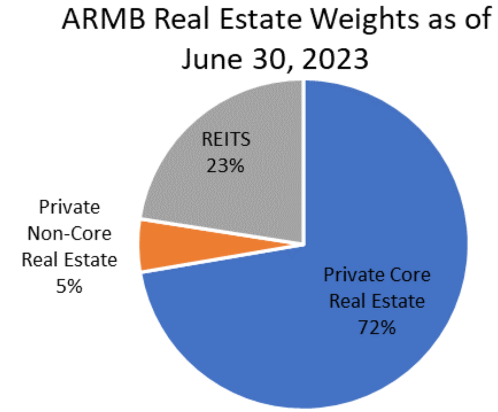
- Three core open-end commingled funds make investments on a discretionary basis according to each fund's strategy. These funds represent 27% of the real estate portfolio and offer well diversified exposure across asset types, markets, and size. ARMB owns units in these funds along with other institutional investors.

- Fund investments with three non-core commingled fund managers represent the majority of non-core real estate strategies. Non-core funds represent 5% of the real estate portfolio.

- The remaining 23% of the real estate portfolio is a passive publicly traded REIT equity portfolio invested internally by staff.

Real Estate Portfolio
June 30, 2023

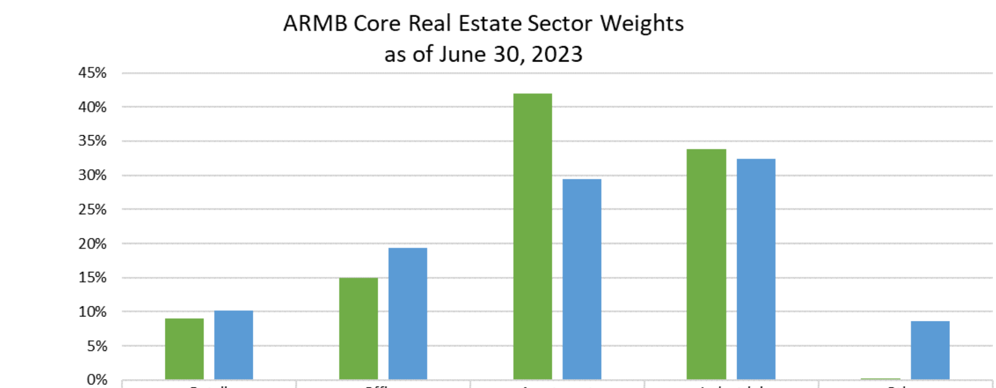
- Net Asset Value: $2.1 billion
- Number of Assets: 17 + commingled fund interests
- Core Structure: 2 separate accounts, 3 open-end funds
- Non-Core Structure: 11 commingled funds
- U.S. Domestic REITs – FTSE NAREIT All Equity



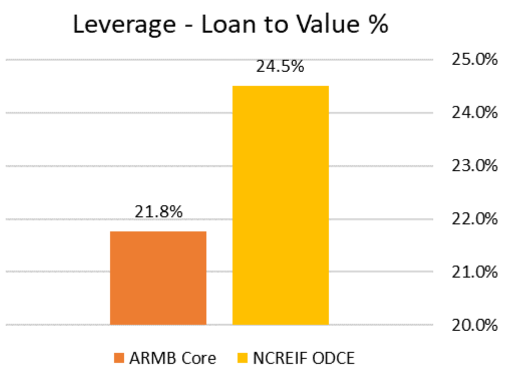
Core Real Estate Performance

as of June 30, 2023	ARMB NAV $millions	Core Weight	1 Year Income	1 Year Total	5 year Income	5 year Total	10 year Income	10 year Total	1 Year (1 year ago) as of June 30, 2022
UBS Separate Account (net)	683	44%	4.32%	-8.52%	4.40%	8.59%	4.42%	10.84%	29.77%
Sentinal Separate Account (net)	284	18%	2.78%	-7.67%	4.29%	9.32%	4.53%	9.81%	36.09%
BlackRock Core Property Fund (net)	379	24%	2.47%	-10.61%	3.29%	5.99%	3.51%	8.19%	26.54%
JPM Strategic Property Fund (net)	172	11%	2.07%	-11.11%	2.57%	4.80%	3.24%	7.31%	27.48%
UBS Trumbull Property Fund (net)	33	2%	2.79%	-15.57%	3.17%	0.45%	3.50%	4.31%	23.50%
ARMB Total Core Real Estate (net)	1,551	100%	3.33%	-9.34%	3.72%	7.02%	3.95%	8.33%	29.40%
NCREIF ODCE Value Wt (net)				-10.73%		5.56%		7.77%	28.31%

Source: Callan and BlackRock (10r BlackRock numbers reflect general fund returns and not ARMB results)

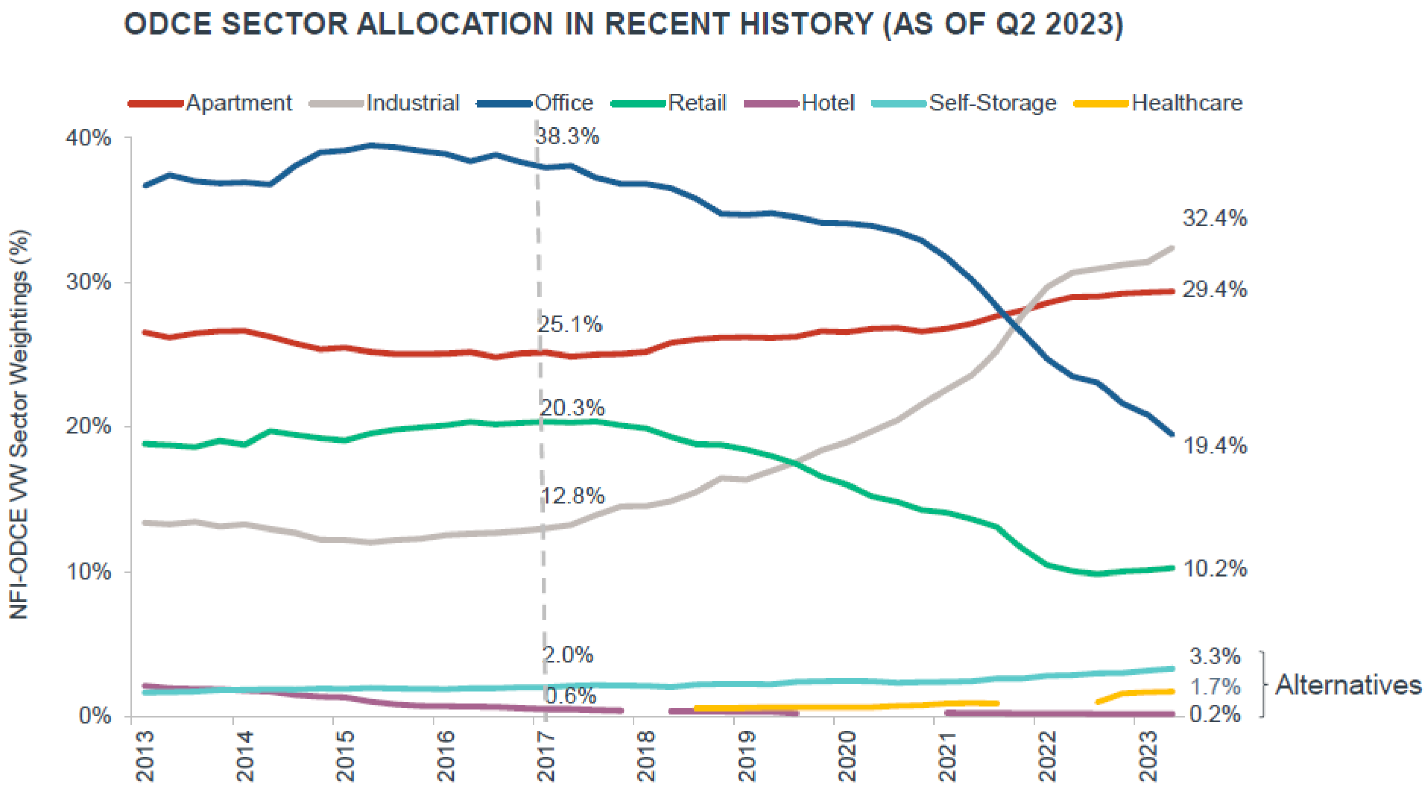


	Retail	Office	Apartment	Industrial	Other
ARMB	9.0%	14.9%	42.0%	33.8%	0.2%
NCREIF ODCE	10.2%	19.4%	29.4%	32.4%	8.6%



Change in NCREIF ODCE weights

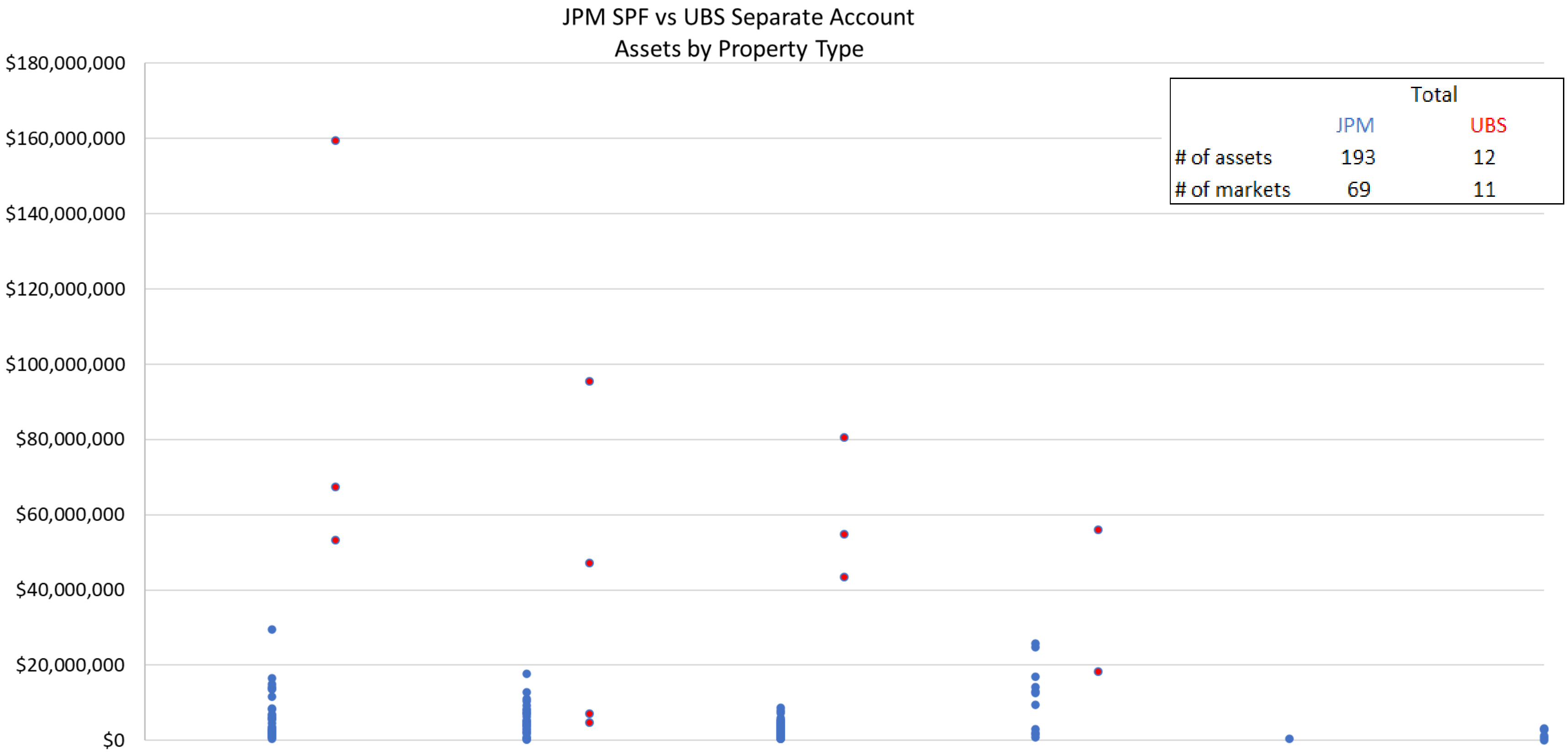
- Technology has had, and will continue to have, an enormous impact on real estate investing. Diversification is critical.



Source: NCREIF, Clarion Partners Investment Research, Q2 2023.
Note: ODCE = NCREIF Open-End Diversified Core Equity Index. Past performance is not indicative of future results. Please see the important disclosures at the end of this presentation.

Core Real Estate

- Asset size concentration and market diversification can be improved by moving assets from separate accounts to open-end funds.

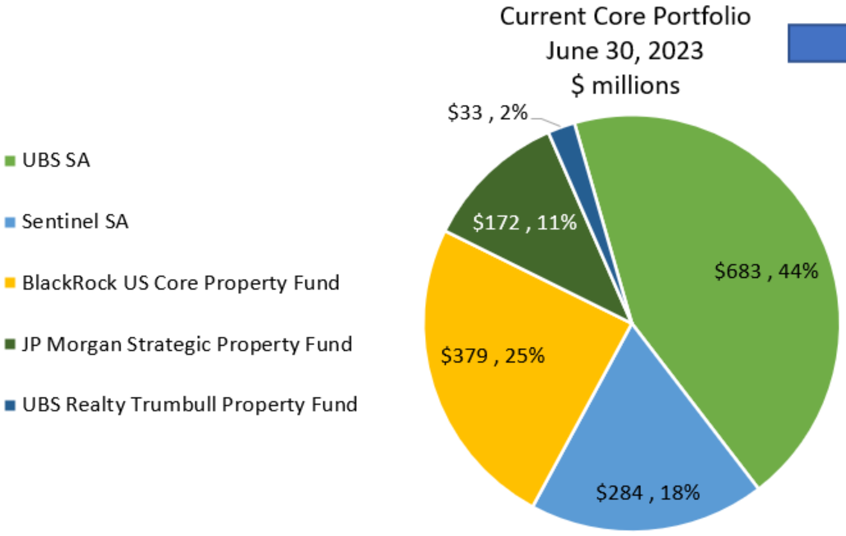


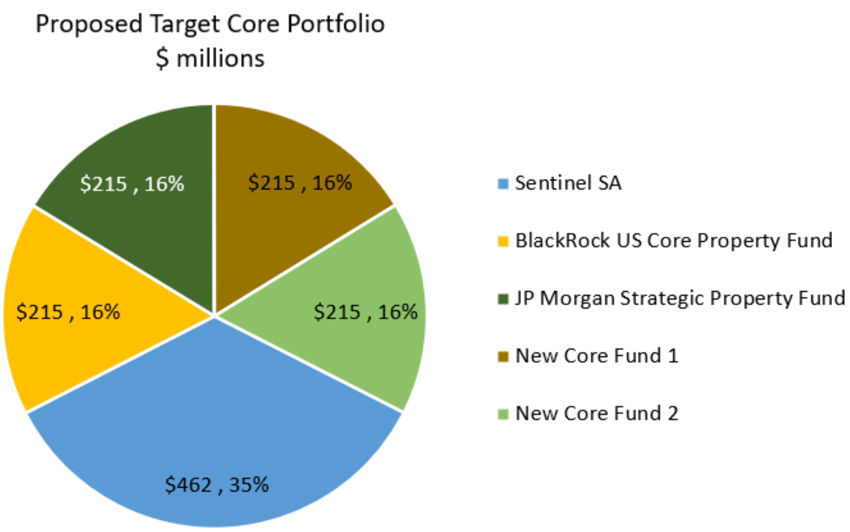
Total	JPM	UBS
# of assets	193	12
# of markets	69	11

	Industrial		Office		Residential		Retail		Self Storgage		Land	
	JPM	UBS	JPM	UBS	JPM	UBS	JPM	UBS	JPM	UBS	JPM	UBS
# of asset	70	3	28	4	77	3	11	2	1	0	6	0
# of markets	28	3	15	4	44	3	11	2	1	0	4	0

Core Real Estate

- Maintain expected returns, reduce risk.
- Wind down UBS separate account and invest in two new core open-end fund mandates.
  - Transfer three UBS apartment properties to the Sentinel separate account. Liquidate remaining UBS holdings if in-kind contributions to new funds are not an option.
  - Engage Callan to perform search to hire two new open-end funds that compliment existing ARMB funds.
  - Rebalance fund positions to optimal mix.





Core Real Estate Structure Considerations

- Open-end fund structure compared to separate account structure.

Factor	Open-end vs. Separate Account	Comment
Diversification	Higher	Funds offer far superior diversification on asset, market, and property type basis.
Strategy Depth and Breadth	Higher	Funds include alternative property types, like self storage and student housing that help improve returns and diversification.
Strategy Evolution	Higher	The size of open-end funds can provide a greater opportunity to maintain exposure to new investments. Funds more actively consider relative value repositioning and ways to enhance returns.
Staff Management Intensity	Lower	Separate accounts require significantly more staff time to manage.
Liquidity	Higher/Lower	Funds are designed to offer quarterly liquidity but can lock up during periods of high redemptions. Separate accounts can buy and sell any time but are exposed to same market liquidity factors as open-end funds.
Strategy Control	Lower	Investment strategy and guidelines are established in the fund documents.
Fees	Higher	Higher than separate account fees but high competition ensures market rates prevail.

Non-Core Real Estate

- Implement formal pacing model to maintain risk/return exposure at target allocation.

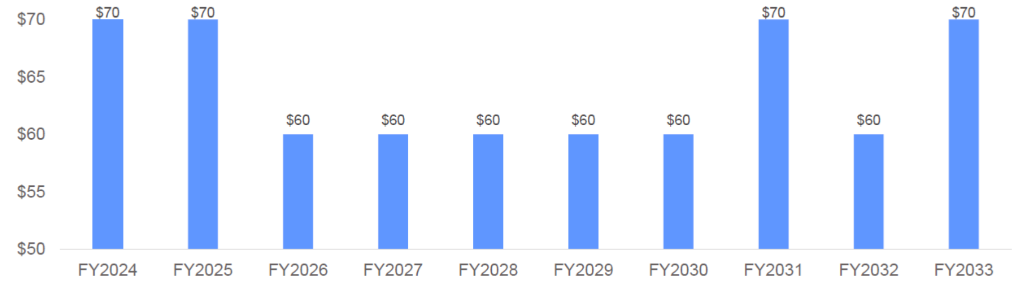
- Proposed Fiscal Year 2024 Real Asset sector allocations establish 5% target weight to non-core real estate strategies. This is an 84/16 ratio between core and non-core strategies.

- ARMB has been investing in non-core strategies for many years, most recently in KKR and Almanac funds. Proposed FY24 target allocation increases weight and establishes formal pacing approach to commitments similar to private equity. While not intended to be a timing call, upcoming vintage years are expected to be good.

ARMB Real Estate Commitment Pacing

- To reach and maintain the 5% target non-core real estate allocation (0.7% Total Plan target), ARMB will need to commit $60 - $70 million per year over the next 10 fiscal years.
- The pacing plan projects annual $70 million allocations in the first two years, followed by several years of $60 million annual allocations.
- Pacing plan to be reviewed annually or periodically as they are projections and subject to change.

Vintage Year	Commitment ($million)	Fund Commitments
FY2024	$70	2-3
FY2025	$70	2-3
FY2026	$60	2-3
FY2027	$60	2-3
FY2028	$60	2-3
FY2029	$60	2-3
FY2030	$60	2-3
FY2031	$70	2-3
FY2032	$60	2-3
FY2033	$70	2-3



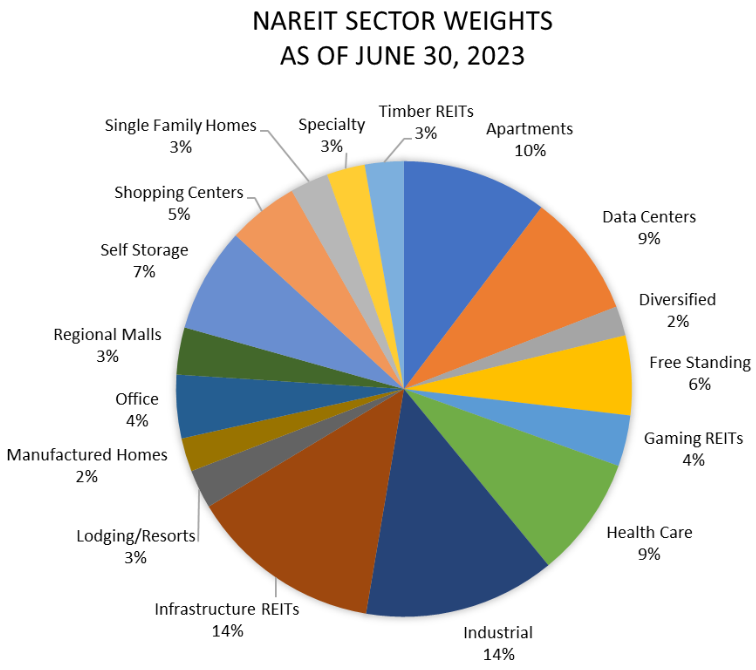
Source: Callan

REITs

- No strategy changes are being recommended.

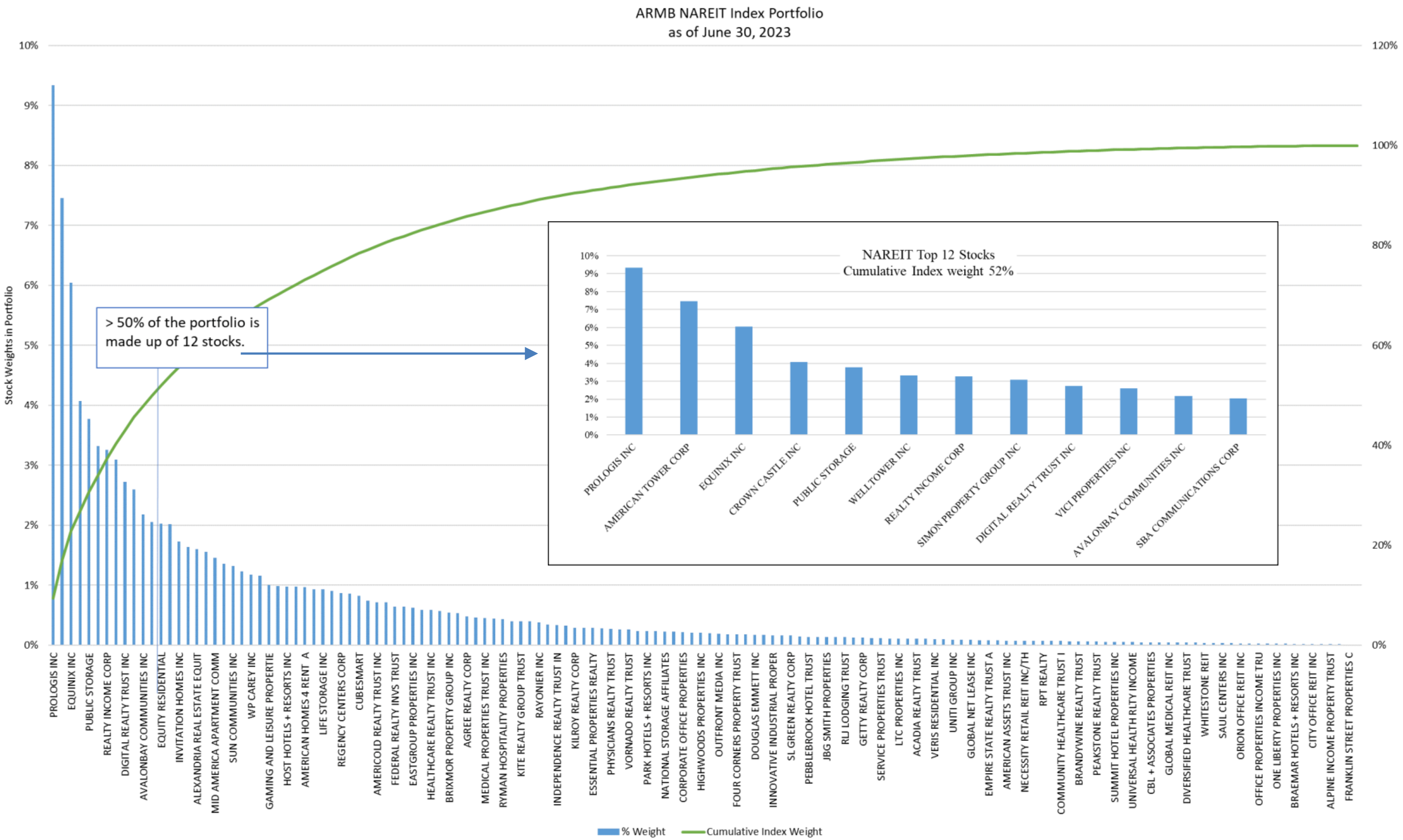
- ARMB currently invests passively in the NAREIT All Equity index. Proposed Fiscal Year 2024 Real Asset sector allocations reduces target weight from 15% to 10%, approximating its current weight of ~$480 million.

- The REIT market provides liquid exposure to some of the best real estate companies in the world and provides diversification through alternative sectors like data centers, self storage, and single family home rentals.



REITs

- The NAREIT All Equity Index holds ~150 stocks with a market cap of $1.2 trillion, but is concentrated.



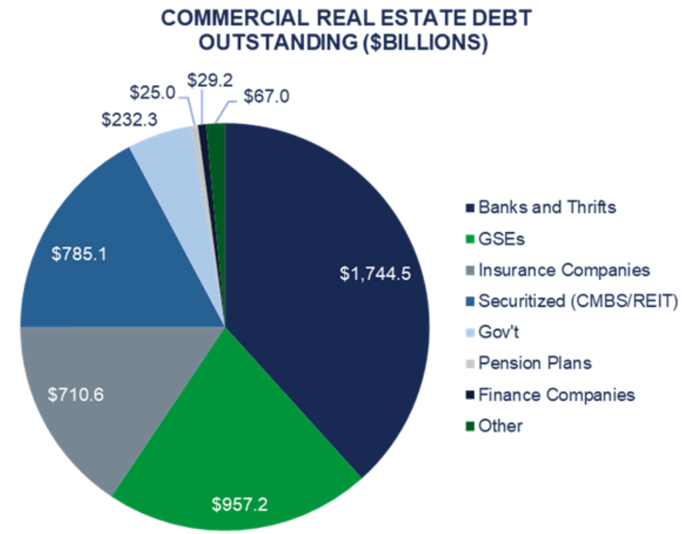
Real Estate Debt

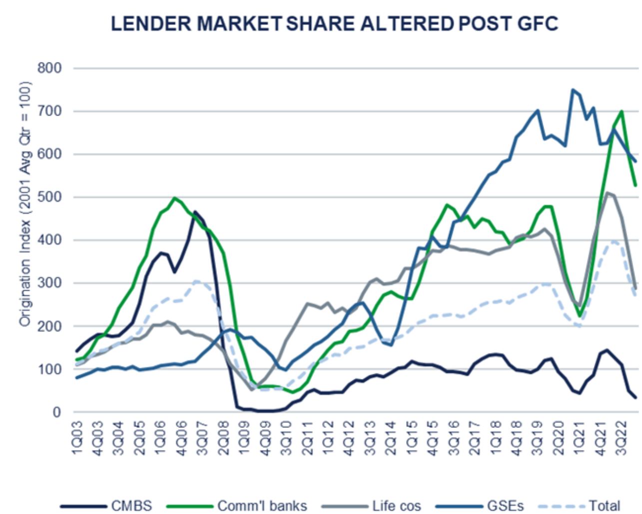
- Add Real Estate Debt to the Real Assets portfolio to increase diversity.

- Proposed Fiscal Year 2024 Real Asset sector allocations establish 5% target weight to real estate debt strategies. Callan's model suggests it offers the highest Sharpe Ratio among Real Asset sectors. Staff has a good fixed income background which will facilitate implementation.

- Initially, fund strategy by transferring the Fidelity Real Estate High Income strategy from fixed income to Real Assets which will approximate the new 5% target. This sector focused strategy has not been a perfect fit in fixed income since it is less liquid and has a lower duration compared to the benchmark. Its higher yields and real asset base make it a good fit for the Real Assets asset class.

- Engage Callan to perform search for one to two private debt strategies. Rebalance portfolio over time as private strategies are funded.





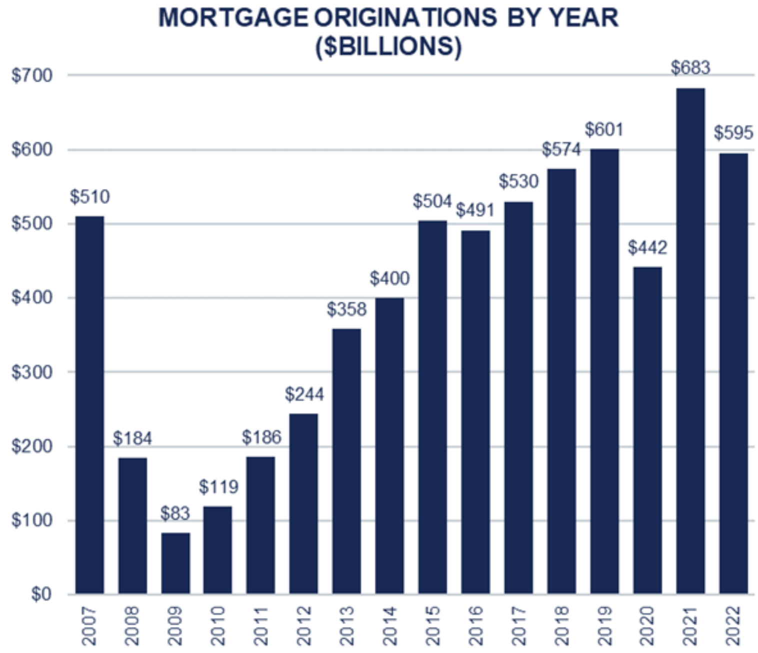
Source: Barings Real Estate Research, Mortgage Bankers Association, Federal Reserve, Trepp. As of March 31, 2023.

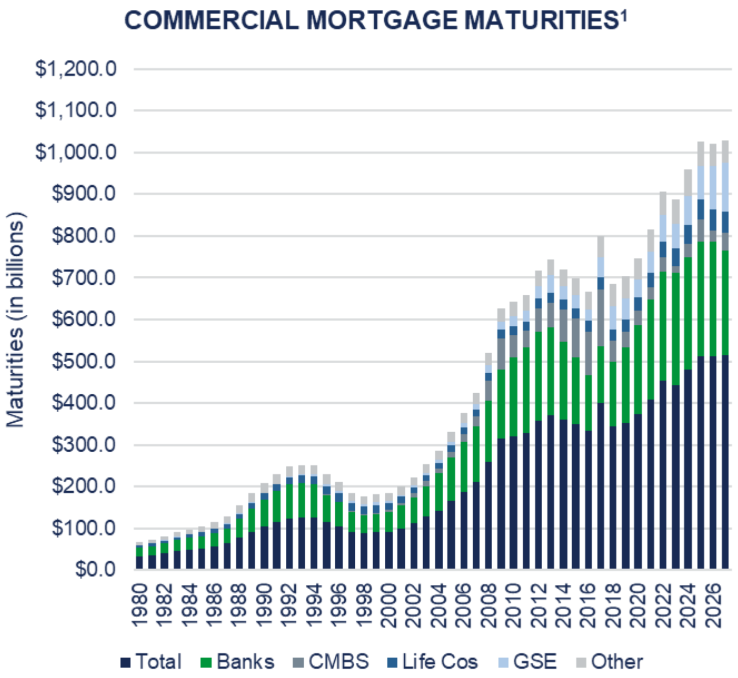
Real Estate Debt

- Banks have been the dominant real estate lender. Regional banks are under liquidity and balance sheet pressure that will likely constrain future lending activity.

- The combination of higher base rates, spreads, and more constrained lending creates a good entry point into the sector which generates high current income which is an objective of the Real Assets portfolio.

- The addition of private investment funds will expand the portfolio opportunity set beyond CMBS.





Source: Barings Real Estate Research, Mortgage Bankers Association, Federal Reserve, Trepp. As of March 31, 2023.

1. As of March 31, 2022.

Farmland Overview

- Investment manager makes investments on a discretionary basis within the parameters defined by the ARMB's guidelines and annual investment plan up to approved allocations.
- Portfolio is composed of U.S. farmland. Strategy is a leased-based approach targeting both row crops and permanent crops. ARMB owns 100% of the assets.
- The farmland portfolio target benchmark is the NCREIF Farmland Index reweighted to reflect 80% row crops and 20% permanent crops.

Farmland Portfolio
June 30, 2023

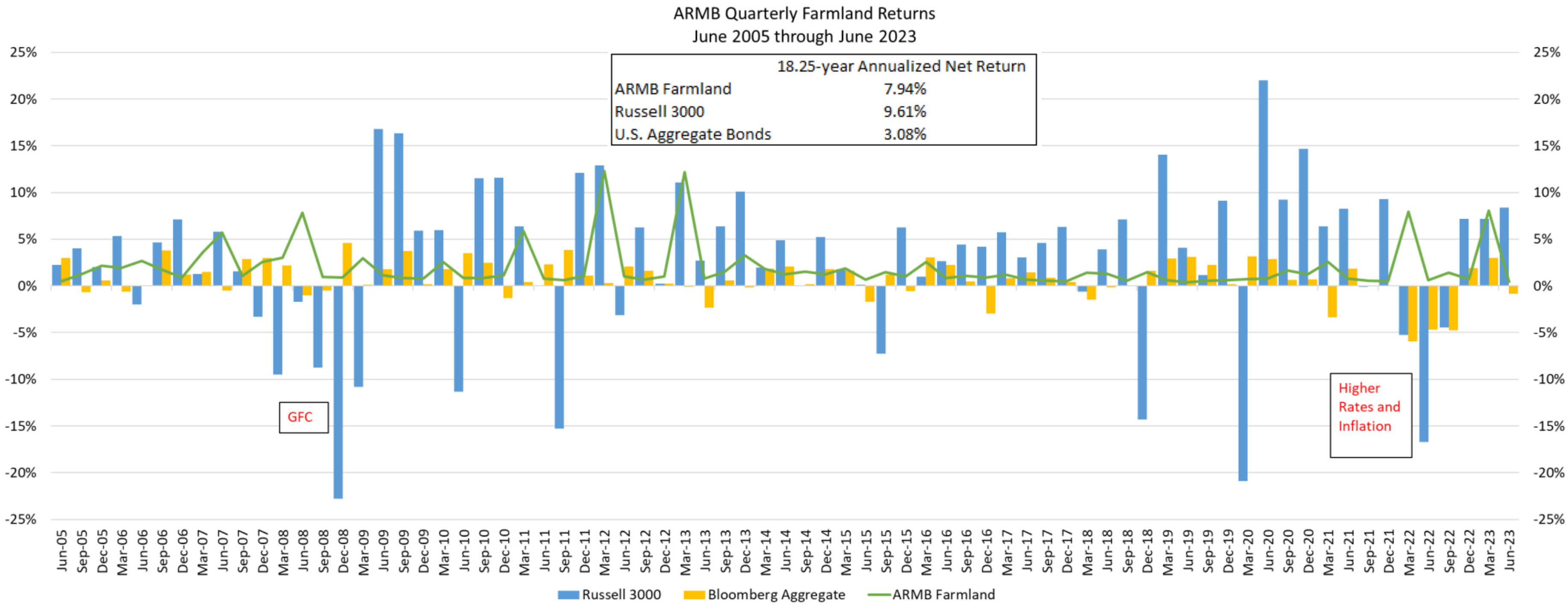
- Total Net Asset Value: $1.1 billion
- Number of Assets: 89
- Total acres: 145,417
- Number of states where investments are located: 16
- Row/Permanent Crop Distribution by MV: 88%/12%


Apples, Washington


Corn, Illinois

Farmland Performance

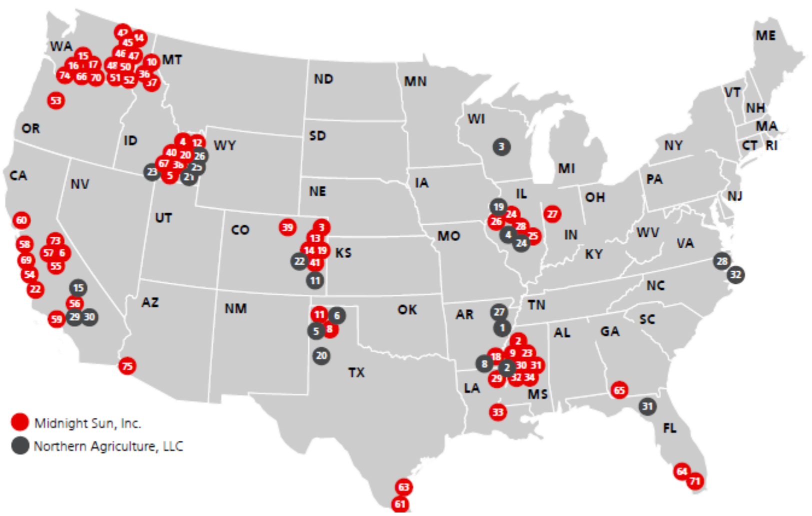
- Historical returns have been remarkably stable. No negative quarters over 18 years.
- No leverage is used in portfolio construction.



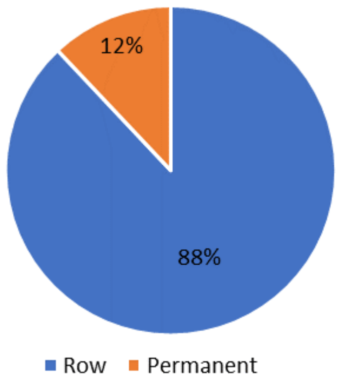
Farmland Portfolio

- No strategy changes are being recommended.
- Portfolio is performing well and is diversified.
- Lower target allocation represents opportunity to optimize portfolio holdings and bring closer to 80%/20% target.

Midnight Sun property location map
(Unaudited)



ARMB Portfolio by Crop Type
as of June 30, 2023



Timberland Overview

- Investment managers makes investments on a discretionary basis within the parameters defined by ARMB's guidelines and annual investment plan up to approved allocations.

- ARMB allocation is fully invested at current size.

- Portfolios are composed of U.S. timberland. ARMB owns 100% of the assets.

- ARMB portfolio is diversified and well positioned to benefit from building product demand with 68% of portfolio in the U.S. South.

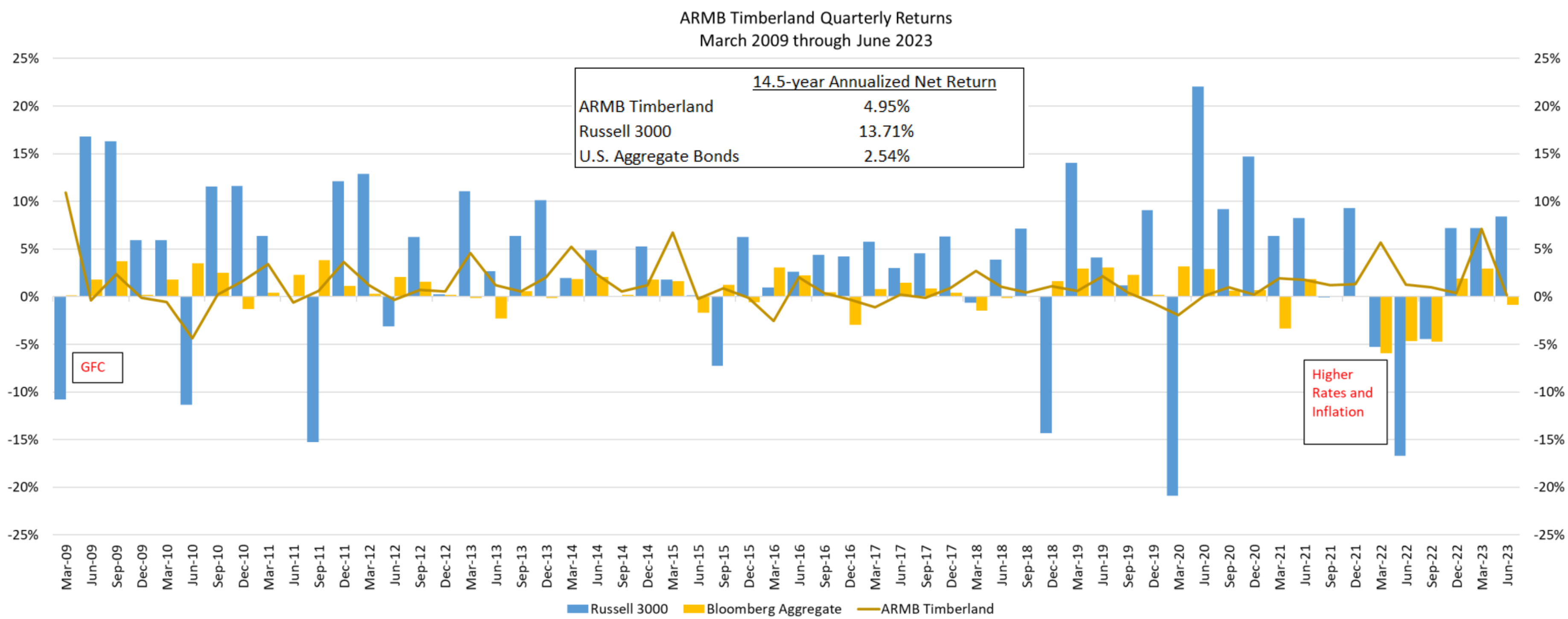
Timberland Portfolio
June 30, 2023

- Total Net Asset Value: $399 million
- Number of Assets: 17
- Total acres: 152,153
- Number of States where investments are located: 11

Timberland Performance

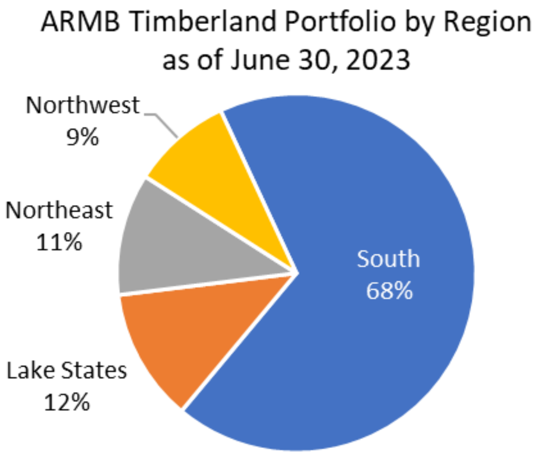
- Historical returns have been lower than expected but generally positive and different that stocks and bonds. More recently demonstrated unique inflation hedge properties and benefits from optionality. Shallow drawdown experience.

- No leverage is used in portfolio construction.



Timberland Portfolio

- No strategy changes are being recommended.
- Portfolio is performing well and is diversified.



Infrastructure Overview

- ARMB is invested in two open-end private investment funds, sponsored by J.P. Morgan and Industry Funds Management (IFM).

- Investments are focused on essential core public infrastructure that are both regulated and unregulated. Assets include regulated water, regulated electricity, airports, pipelines, toll roads, and ports. Target return is 8 – 12% net with a high cash yield.

- Portfolio is well diversified with a mix of GDP sensitive assets and regulated or contractually based assets which often include inflation pass-through features.

Infrastructure Portfolio Profile
June 30, 2023

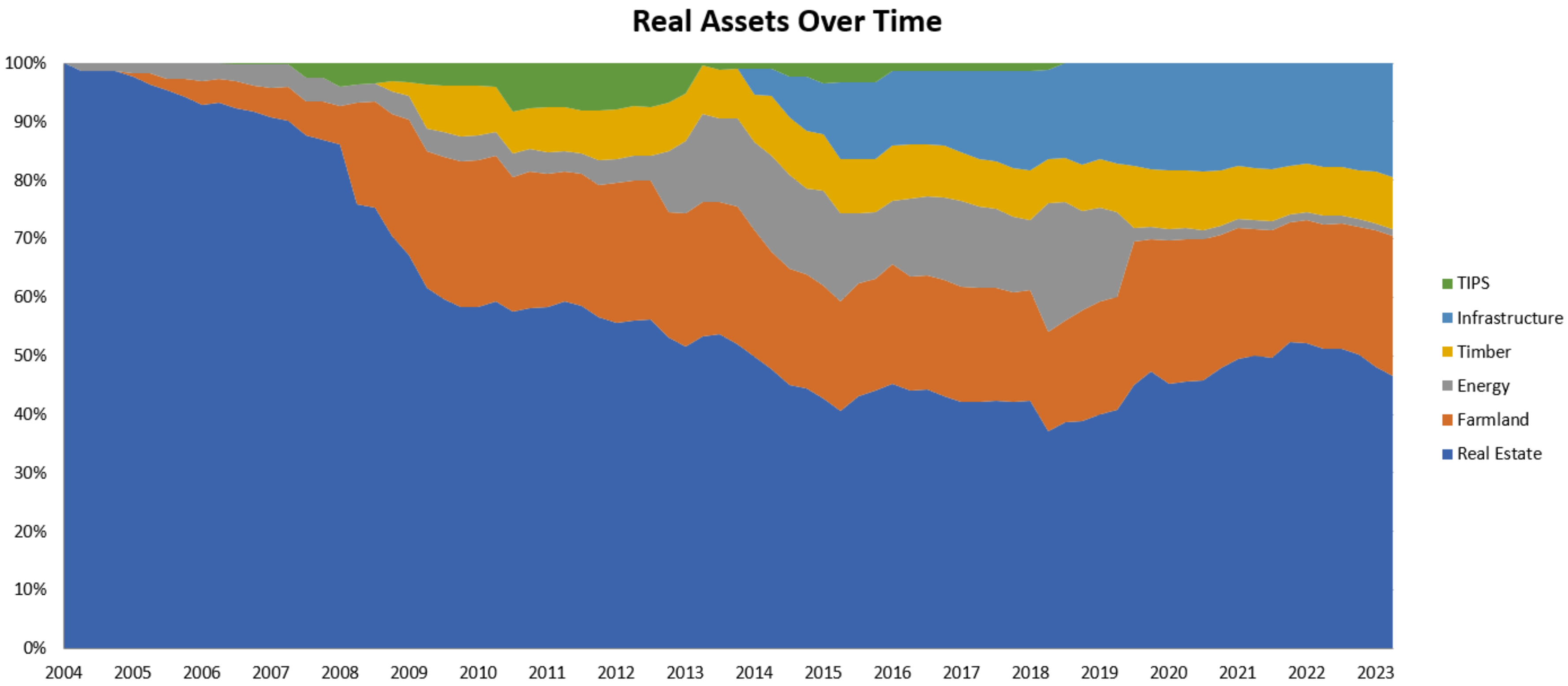
- Total Net Asset Value: $863.4 million
- Number of Company Investments: 45
- Total Combined Fund NAV (all investors): $88.8 billion

Switch, Inc., IFM


Indiana Toll Road, IFM


Nieuport Aviation, JPM

Real Asset Portfolio Evolution



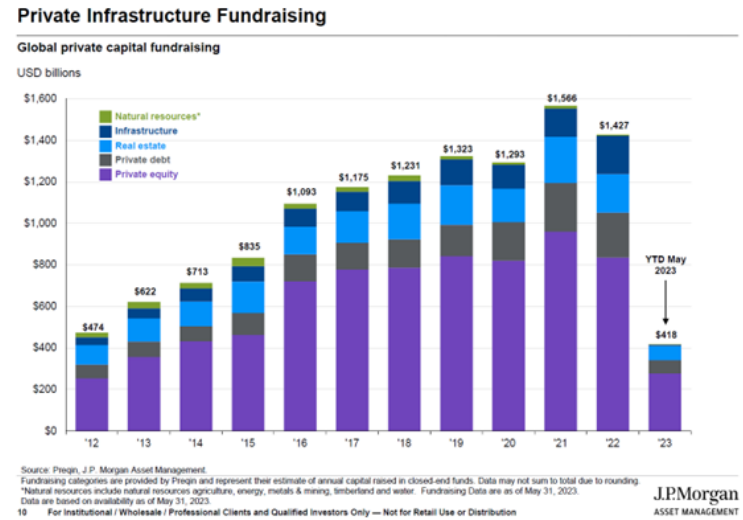
- Infrastructure was added to the portfolio in 2014.
- Managers were identified through a Callan search process.

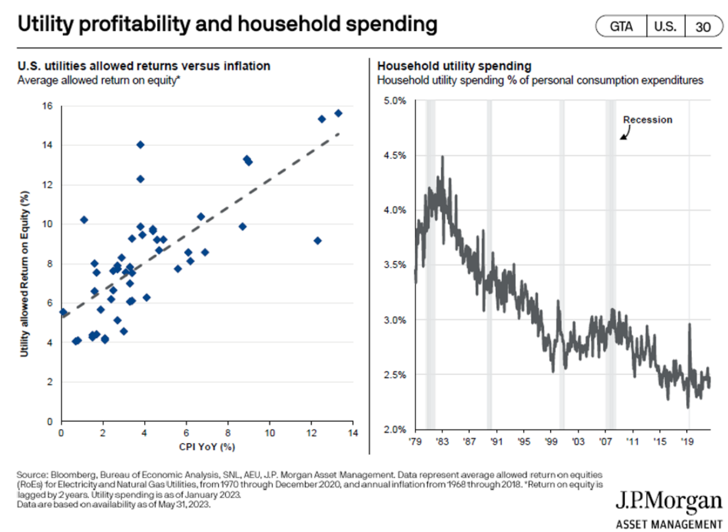
What is Infrastructure?

- Infrastructure investing offers access to long-lived assets which are hard to replicate. ARMB would probably not be able to invest in these assets privately if it were not for commingled vehicles as the single asset size would be too big from a diversification standpoint.

- Infrastructure investments include essential services that often operate on a monopolistic basis and provide diversification, inflation and yield benefits.

- Infrastructure return profile includes a growing income component and appreciation.





Sydney Airport, IFM

Infrastructure Portfolio Structure

- ARMB is invested in two open-end private investment funds, sponsored by J.P. Morgan and Industry Funds Management (IFM).

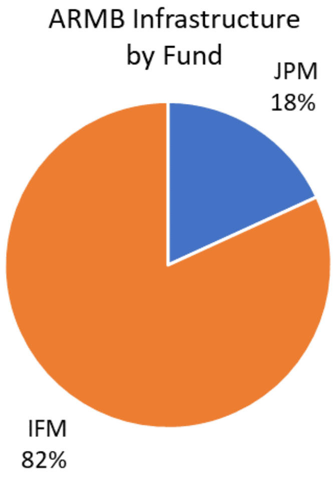
- Liquidity:
  - JPM - semi-annual
  - IFM - quarterly

- ARMB receives cash distributions.

- Both funds currency hedge to USD.

- Benchmarked to CPI + 4%.

- Both funds have experienced large growth:
  - J.P. Morgan fund size in 2014: $3.3 billion.
    In 2023: $34.3 billion.
  - IFM fund size in 2014: $5.4 billion.
    In 2023: $52.0 billion

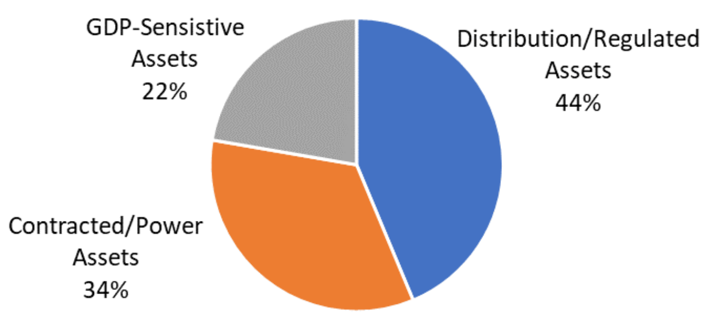


ARMB Investment as of June 30, 2023, $ millions	
J.P. Morgan	$156.8
IFM	$706.6
Total	$863.4

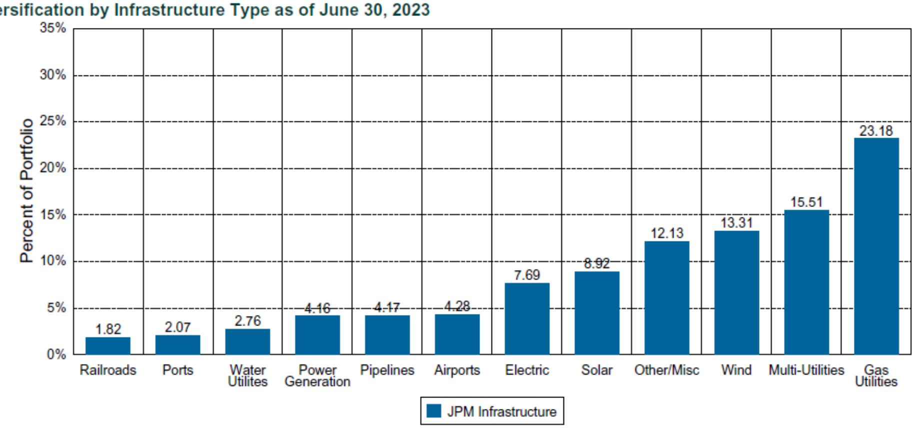
Infrastructure Fund Comparison

- J.P. Morgan and IFM have different risk and return profiles due to the underlying assets.

J.P. Morgan

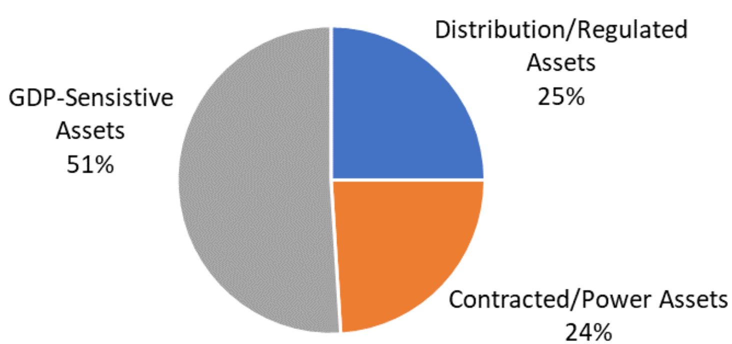


Diversification by Infrastructure Type as of June 30, 2023

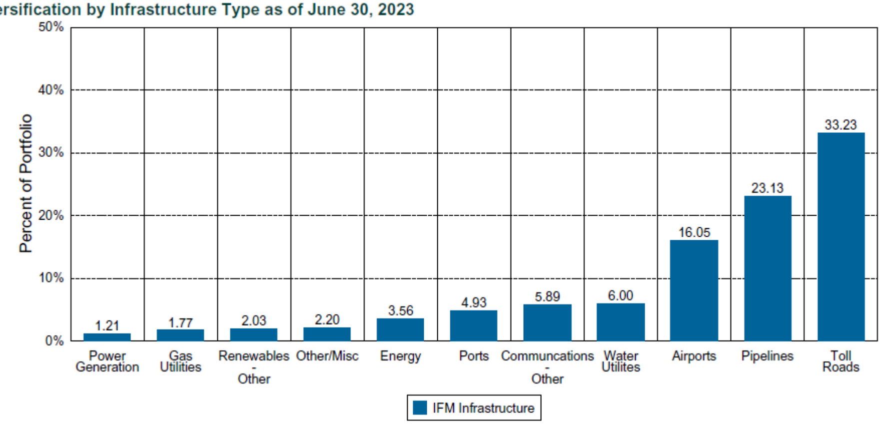


JPM Infrastructure	**1.82%**	**2.07%**	**2.76%**	**4.16%**	**4.17%**	**4.28%**	**7.69%**	**8.92%**	**12.13%**	**13.31%**	**15.51%**	**23.18%**

IFM



Diversification by Infrastructure Type as of June 30, 2023



IFM Infrastructure	**1.21%**	**1.77%**	**2.03%**	**2.20%**	**3.56%**	**4.93%**	**5.89%**	**6.00%**	**16.05%**	**23.13%**	**33.23%**

Source: Callan

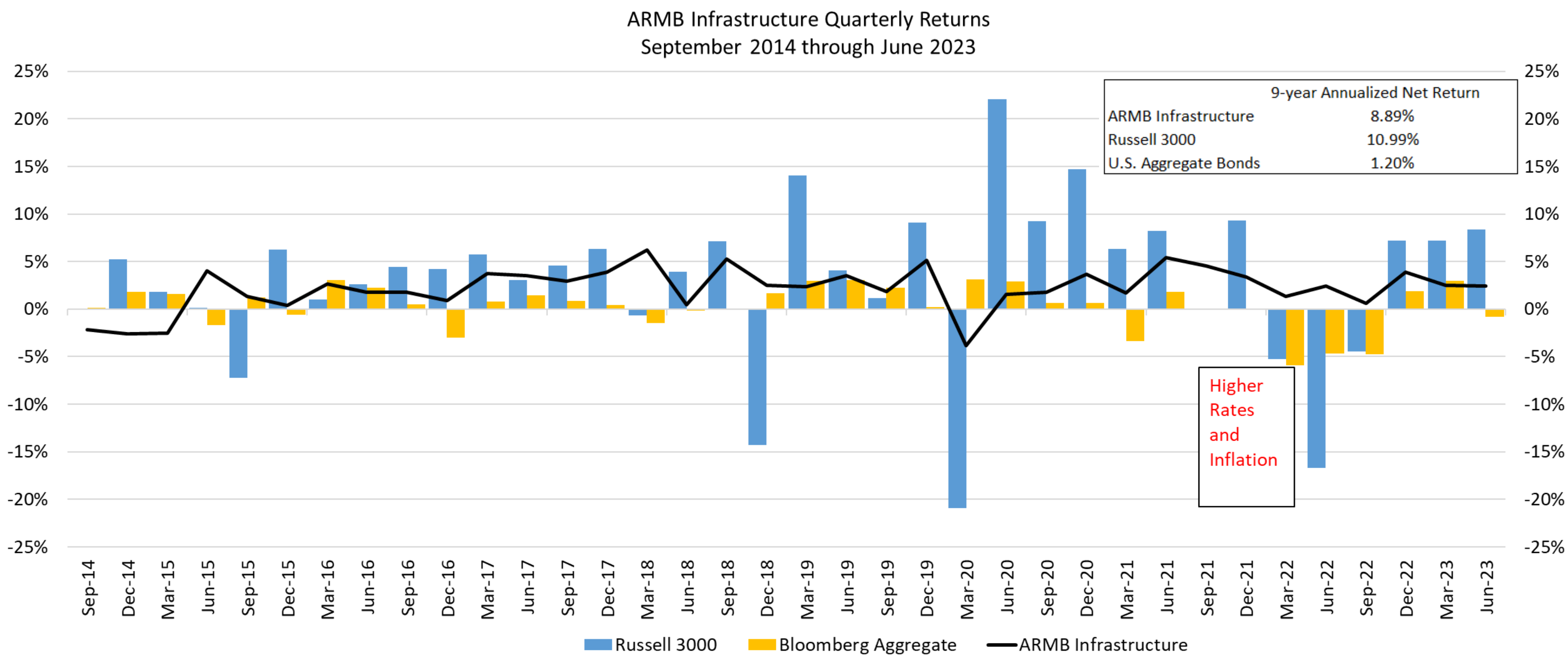
Infrastructure Performance

- Infrastructure has produced steady, generally positive returns.

Returns for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 6 Years	ITD 9 Years	IFM ITD 8.25 Years	JPM ITD 9 Years
IFM (net)	2.52%	9.58%	12.38%	12.21%	-	11.52%	-
J.P. Morgan (net)	2.01%	10.34%	8.54%	7.71%	-	-	5.68%
ARMB Infrastructure (net)	2.43%	9.72%	11.65%	11.28%	8.89%	-	-
CPI+4%	2.04%	6.97%	9.78%	7.73%	6.79%	7.16%	6.79%

Source: Callan PEP
Annualized returns for periods longer than Last Quarter



Infrastructure Summary

- Reduce risk and increase return by rebalancing current positions and adding complimentary, higher return strategies.

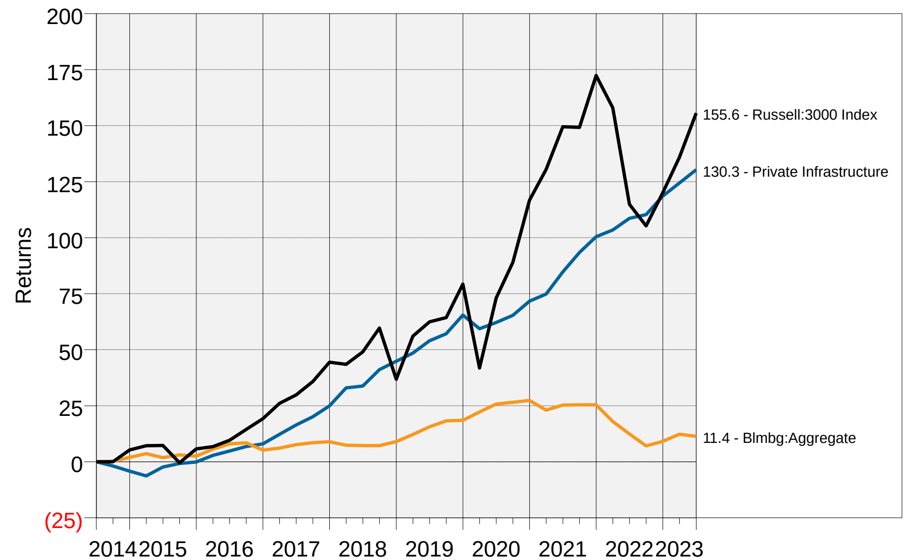
- Infrastructure has been a good investment for the ARMB. Portfolio performance has met expectations. Both funds have benefitted from focus on cash yield and organic growth opportunities from existing companies in the portfolio.

- Current portfolio discount rates are attractive compared to risk free rates. They have not compressed like other asset sectors. The current weighted average discount rate for assets in the portfolios is approximately 10%.

- Diversification can be improved by moving toward a more balanced exposure across existing open-end funds.

- Infrastructure has exceeded expectations which provides confidence in adding higher risk/return strategies to the portfolio.

Cumulative Returns
for 9 Years Ended June 30, 2023



Source: Callan

Real Assets Fiscal Year 2024 Investment Plan

<table>
<tr><td>Asset Class</td><td>• Adopt new sector target allocations:
Core Real Estate 30%-----------
Non-core Real Estate 5%
Real Estate Debt 5%
US REITs 10% ------------------
Timberland 10% -----------------
Farmland 20% -------------------
Infrastructure 20% --------------</td><td><u>Policy Benchmark:</u>
40% NCREIF ODCE Index

10% NAREIT All Equity Index
10% NCREIF Timberland Index
20% NCREIF Farmland (80/20)
20% CPI+4%</td><td><u>Implementation:</u>
Effective Date: 10/1/23

Supersedes Real Assets policy established in Resolutions 2023-02 and 2023-03, relating to plan level asset allocation, on effective date.</td></tr>
<tr><td>Real Estate</td><td colspan="3">• Wind down UBS Separate Account. Transfer apartment assets to Sentinel. Utilize Callan search process to fund two new core ODCE fund managers with complementary strategies to existing ARMB real estate investments.

• Rebalance core fund exposures over time to optimal weights consistent with total core target.

• Implement non-core pacing model and raise exposure to target level consistent with new sector targets.

• Add debt investments to portfolio initially by transferring Fidelity REHI strategy from fixed income to Real Assets. Utilize Callan search to identify one to two private debt investment funds to compliment existing CMBS portfolio.</td></tr>
<tr><td>Farmland</td><td colspan="3">• No strategy changes recommended.</td></tr>
<tr><td>Timberland</td><td colspan="3">• No strategy changes recommended.</td></tr>
<tr><td>Infrastructure</td><td colspan="3">• Gradually rebalance existing open-end exposures to optimal weights over time.

• Add best-in-class higher return strategies as opportunities present.</td></tr>
</table>