



ALASKA RETIREMENT MANAGEMENT BOARD

Strategic Review and Action
Committee Meeting

October 23, 2026

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
STRATEGIC REVIEW AND ACTION COMMITTEE MEETING
October 23, 2026 – 9:30 AM

Videoconference: Click here to join the meeting Meeting ID: 210 382 135 425 980 8 Passcode: bo94KM9n	Teleconference: Call-In #: 1-907-202-7104 Code: 740 283 428#
---	--

- 9:30 AM**
- Call to Order**
 - Roll Call**
 - Public Meeting Notice**
 - Approval of Agenda**
 - Approval of Minutes – September 14, 2026**
 - Public / Member Participation, Communications and Appearances**
*(Callers: Select *5 to raise your hand & *6 to unmute. Limit three minutes.)*
 - Division of Retirement & Benefits Update on HB 14 Implementation**
 - Part-Time Employee Service in Defined Contribution Plan**
 - Draft Investment, Actuarial, and Governance Reference Guide**
 - Executive Session: Review of Distribution Counseling Calls**
In accordance with Open Meetings Act, AS 44.62.310(c)(2)
 - Future Meetings**
 - 1. Agenda Items**
 - 2. Requests / Follow-Ups**
 - Other Matters to Properly Come Before the Committee**
- 12:00 PM**
- Adjournment**

State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
STRATEGIC REVIEW and ACTION COMMITTEE MEETING
September 14, 2026

Committee Members

Bob Williams, Chair
Lorne Bretz
Dr. William Jennings, IAC Member
Dennis Moen

Other ARMB Trustees

Sandi Ryan

Investment Advisory Council

Josh Rabuck
Ruth Traylor

Department of Law

Ben Hofmeister, Senior Assistant Attorney General, ARMB Legal Counsel
Kevin Dilg, Senior Assistant Attorney General
Allison Baldock, Assistant Attorney General

Department of Revenue – Treasury Division

Zach Hanna, Chief Investment Officer
Pam Leary, Director
Shane Carson
Grant Ficek
Chris Madsen
Mariell Mendoza
Robyn Mesdag
Teresa Rose
Alysia Jones, ARMB Liaison

Department of Administration – Division of Retirement & Benefits

Kathy Lea, Director
Christopher Novell, Chief Financial Officer
Mindy Voigt, Chief Pension Officer
Christina Maiquis
Traci Walther

Public

Rhonda McLeod
Wendy Woolf, RPEA

PROCEEDINGS

CALL TO ORDER

CHAIR BOB WILLIAMS called the meeting of the Alaska Retirement Management Board's Strategic Review and Action Committee (SRAC) to order at 8:31 a.m.

ROLL CALL

TRUSTEE DENNIS MOEN, DR. WILLIAM JENNINGS, and CHAIR BOB WILLIAMS were present at roll call, establishing a quorum. TRUSTEE LORNE BRETZ joined at 8:37 a.m.

PUBLIC MEETING NOTICE

ALYSIA JONES confirmed that public meeting notice requirements had been met.

APPROVAL OF AGENDA

CHAIR WILLIAMS asked if there were any changes or corrections to the agenda. Hearing none, the agenda was approved without objection.

APPROVAL OF MINUTES

TRUSTEE MOEN moved to approve the minutes of the August 3, 2026, meeting as presented. DR. JENNINGS seconded.

A roll call vote was taken, and the minutes were approved, unanimously.

PUBLIC / MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES – None.

HB 14 & OCCUPATIONAL DISABILITY

KATHY LEA, Director of the Division of Retirement and Benefits, reported that the Division completed recalculating all disability benefits under HB 14 in time for the August payroll, the first payroll under the new law. A manual process is in place to report participants' health eligibility while permanent programming is developed.

CHAIR WILLIAMS asked for information regarding number of participants affected. K. LEA responded that Chief Pension Officer MINDY VOIGT would be able to provide that information after the meeting.

PART-TIME EMPLOYEE SERVICE IN DEFINED CONTRIBUTION PLAN

K. LEA reported that the Department of Law and Ice Miller are reviewing whether eligibility for the HRA can be changed for part-time employees. Because the same service terms apply to HRA eligibility and vesting, a change may require a statutory amendment; the review also covers service requirements for vesting employer contributions.

UPDATE ON DISTRIBUTION COUNSELING

CHAIR WILLIAMS stated that the committee reviewed distribution-counseling calls involving rollovers to Empower from 2025 and early 2026 and noted that additional calls from 2025 had been uploaded. K. LEA commented that call dates were added to the records to clarify when each call occurred. Rollover records for the four largest rollovers from the second quarter of 2026 are expected by the end of September.

CHAIR WILLIAMS noted that the committee will share its analysis to date with the Board during Wednesday's executive session.

DRAFT INVESTMENT, ACTUARIAL, AND GOVERNANCE REFERENCE GUIDE

CHAIR WILLIAMS reported that work on the draft investment, actuarial, and governance reference guide has slowed as the committee reviews and reconciles differing feedback from the Department of Law, the Department of Revenue, and other stakeholders. The committee is working toward a more streamlined document that balances these concerns, while remaining manageable to update.

FUTURE MEETINGS – No comments.

OTHER ITEMS TO PROPERLY COME BEFORE THE COMMITTEE – None.

PUBLIC / MEMBER PARTICIPATION, COMMUNICATIONS AND APPEARANCES – None.

ADJOURNMENT

TRUSTEE MOEN made a motion to adjourn, DR. JENNINGS seconded. There being no objection, the meeting adjourned at 8:41 a.m.

Risk, Proration, and Why DB and DC Differ

A framework for thinking about part-time service in the Alaska PERS and TRS plans

Risk is what justifies prorating

Prorating time is a tool for managing risk. It makes sense when a plan carries a promise that grows with each year of service and that someone else must fund. The test for any proration rule is whether it protects a liability that is still being earned.

Defined benefit: the plan carries the risk

In a defined benefit (DB) plan, the system promises a lifetime benefit and takes on the investment, longevity and healthcare-cost risk. A Tier 2 TRS member with 8 years of service has healthcare covered at age 60, and the system pays for that for decades. Each year of service adds to a liability the pooled fund must cover. Requiring real service before that promise attaches is reasonable, and a half-time year does earn about half the claim.

Defined contribution: the risk moves to the member

In a defined contribution (DC) plan, the employer's obligation for each year of service is completed when it makes the contribution. The employer sees that contribution as covering a cost of employing the teacher, part of what it pays for the work done that year. Once it is paid, the employer has no further obligation tied to that service. Investment risk and longevity risk belong to the member from that point on.

Nothing further accrues that someone must fund, so there is no liability for a waiting period to protect. Pay already scales the amount, because the contribution is a percentage of a smaller paycheck. What proration still changes is how long the member waits.

Two examples

Tier 3 TRS retiree health. A Tier 3 teacher can work 29 years, with the employer funding the plan every year. If the teacher leaves before 65, there is no access to a plan where the teacher pays the full premium until Medicare begins. After 65, the plan is a subsidized premium that is secondary to Medicare, so the plan's exposure is small. The 30-year test is a DB rule that marks when the State starts paying. Before 65 the State pays nothing, so the test blocks purchase of coverage without protecting any liability.

The health reimbursement arrangement (HRA). The HRA is funded, earns interest, and has no large guaranteed liability behind it. It carries a higher risk of forfeiture than the DB benefit, and a longer clock does not reduce risk to the plan. It raises the odds that the people least able to meet a long service test lose what has already been deposited. A retention incentive such as 10 years can be reasonable. Counting those years in prorated units is the part that does not fit.

A question to ask of each rule

- **What risk does it manage?** If it protects a pooled, guaranteed promise, as in DB, prorating is defensible.
- **Does that risk exist in a DC plan?** If the employer's obligation is already satisfied, prorating the time protects no one and increases forfeiture.

This is a question about design, not about anyone's past decisions. The statutes were written when the DB plans were the model, and they are now being applied to a plan with a different risk structure. Asking each rule what it is for is a way to carry forward what still serves a purpose and revisit what does not.

ALASKA RETIREMENT MANAGEMENT BOARD

Investment, Actuarial, and Governance Reference Guide

How This Document Fits With Other Resources

Policies and Procedures Manual (2025) is the governance reference. Covers statutes, roles, ethics, investment policy, and the Glossary of Investment Terms (Appendix E). The governance and procedural reference for trustees, staff, and anyone seeking the full legal framework.

This document is the ARMB Investment, Actuarial, and Governance Reference Guide.

This document explains the investment concepts, asset classes, actuarial framework, and terminology appearing in quarterly board packets.

DISCLAIMERS

- This reference guide was developed primarily by trustees for trustees. It intentionally explains complex concepts in plain language, which may omit nuance, qualifications, or exceptions. It is intended as a general educational resource and should not be relied upon as a definitive or comprehensive authority on the subjects addressed.
- The guide summarizes certain ARMB policies, procedures, and practices, but does not establish, amend, or define them. In the event of any inconsistency, applicable statutes, regulations, formally adopted policies, and official procedures control.
- This guide does not provide investment, legal, tax, or other professional advice and should not be relied upon as the basis for any investment or other financial decision.

DRAFT

Table of Contents

Section 1 Who We Are and What We Do	4
1.1 The Board in Brief.....	4
1.2 The Retirement Designs	4
1.3 The Two Departments: A Critical Distinction.....	6
1.4 Board Composition and Key Personnel	6
1.5 Board Committees.....	7
Section 2 The Fiduciary Foundation	9
2.1 What Fiduciary Duty Is Not	9
Section 3 Asset Classes: What We Own and Why	10
3.1 Public Equity: Stocks	10
3.2 Fixed Income: Bonds	12
3.3 Real Assets: Farmland, Timber, and Infrastructure.....	13
3.4 Real Estate.....	16
3.5 Private Equity and Private Credit	18
3.6 Multi-Asset Strategies.....	21
Section 4 Portfolio Construction and Diversification	23
4.1 Why Diversification Is Both Required and Smart.....	23
4.2 Strategic Asset Allocation	23
Section 5 Benchmarking and Performance Measurement.....	25
5.1 What a Benchmark Is	25
5.2 Key Benchmarks Used in ARMB Reporting.....	25
5.3 Key Performance Terms.....	27
Section 6 Manager Oversight and the Watch List.....	29
6.1 Manager Selection: How It Works.....	29
6.2 The Watch List.....	29
6.3 Passive vs. Active Management.....	30
Section 7 Actuarial Concepts and Alaska's Oversight Structure	31
7.1 Core Actuarial Concepts.....	31
7.2 Alaska's Dual-Actuary Structure	34
7.3 Additional Actuarial Terms	35
Section 8 Defined Contribution Plan Concepts.....	37
8.1 Health Reimbursement Arrangement.....	38
8.2 Target Date Funds: The Default Investment	39
Section 9 How to Read a Callan Performance Report.....	42

DRAFT

9.1 What the Report Is.....	43
9.2 The Total Fund Page: Start Here.....	43
9.3 Asset Class and Manager Pages.....	43
9.4 Private Markets Pages.....	44
9.5 The Conversation to Have in the Meeting.....	44
Section 10 ARMB Acronym Quick Reference.....	45
Section 11 Practical Guidance	48
11.1 Reading a Board Packet.....	48
11.2 Key Questions for Board Meetings	48
11.3 Governance vs. Management.....	48
11.4 Resources and Where to Go for More	49

Section 1 | Who We Are and What We Do

1.1 The Board in Brief

The Alaska Retirement Management Board (ARMB) is a nine-member body established under state law to serve as the investment fiduciary for the State of Alaska's public retirement systems. ARMB oversees over \$45 billion in assets held in trust for 130,000+ current members, retirees, and beneficiaries: state and municipal employees, firefighters, peace officers, educators, judges, and their families. This total includes over \$35 billion in non-participant-directed plans — primarily the defined benefit pension and healthcare trusts — and over \$10 billion in participant-directed accounts where individual members direct their own investments from the board-approved lineup.

The ARMB does not manage money day-to-day. That is the job of the Treasury Division's investment officers and the external managers they hire. The ARMB sets policy, works to ensure the right managers are hired and monitored, and ensures the overall portfolio is positioned to meet long-term obligations.

1.2 The Retirement Designs

Alaska's Two Retirement Designs: How They Differ

Defined Benefit (DB) Plan	Defined Contribution (DC) Plan
<i>PERS/TRS members hired before July 1, 2006; all JRS judges.</i>	<i>PERS/TRS members hired after July 1, 2006.</i>
 Key facts: Benefit = Years of service × salary × multiplier formula. The benefit is guaranteed and doesn't depend on investment returns. The State and employers bear investment risk.	 Key facts: Benefit = account balance at retirement. Depends entirely on contribution amounts and investment returns. The member bears investment risk.
 Healthcare: Retiree medical integrated with pension eligibility.	 Healthcare: Requires 30 years of service (25 for peace officers/firefighters) OR age 65 with 10+ years. Coverage gap for members retiring between service threshold and Medicare age.
 Disability: Covers both occupational AND non-occupational disability.	 Disability: Occupational disability covered. NON-OCCUPATIONAL disability is NOT covered — a gap the ARMB has recommended addressing through legislation.
	 Special DC benefit: Health Reimbursement Arrangement (HRA): employer-funded account that vests after 10 years of service, accessible at Medicare age (65).
 ARMB oversees both systems as investment fiduciary. Day-to-day administration is handled by the Division of Retirement & Benefits.	

DRAFT

Term	Plain-Language Explanation
PERS	Public Employees' Retirement System (PERS): covers state and municipal employees, firefighters, and peace officers.
TRS	Teachers' Retirement System (TRS): covers certificated teachers in Alaska public schools, employees of the Department of Education and Early Development, and eligible faculty at the University of Alaska. University of Alaska faculty choose between TRS and the University's Optional Retirement Plan (ORP) within 30 days of hire; that election is irrevocable. University staff are covered under PERS, not TRS.
JRS	Judicial Retirement System (JRS): covers Alaska judges.
NGNMRS	National Guard and Naval Militia Retirement System (NGNMRS), covers eligible members of the Alaska National Guard and the Alaska Naval Militia.
DB Plan	Defined Benefit: a traditional pension. The benefit is defined by formula (years of service x salary x multiplier). The State of Alaska bears the investment risk. Employees in JRS are in a DB plan. PERS and TRS employees hired before July 2006 are in DB plans.
DC Plan	Defined Contribution (DC): The employee's retirement income depends on account growth. The employee bears the investment risk. Alaska moved new hires in PERS and TRS to DC in 2006.
Longevity Risk	A key difference between the two designs is who bears longevity risk, the risk of outliving one's savings. In the DB plan, the system bears this risk: benefits are paid for life. In the DC plan, the member bears it: the account balance must last through a retirement that may span 20–30 years or more.

1.3 The Two Departments: A Critical Distinction

Two state departments share responsibility for Alaska's retirement systems but have distinct roles. This distinction matters because it affects who contracts with whom, including the actuaries.

Term	Plain-Language Explanation
Department of Revenue (DOR): Treasury Division	Staffs the ARMB. The Treasury Division Director, CIO, investment officers, and board liaison all sit within DOR and are responsible for implementing board investment decisions as well as managing external manager relationships.
Department of Administration (DOA): Division of Retirement and Benefits (DRB)	Administers the retirement systems: processes benefits, manages member records, communicates with plan participants, and manages the primary actuary contract and the recordkeeper contract.

1.4 Board Composition and Key Personnel

The following individuals appear regularly in board materials and meetings. This list reflects current personnel as of June 2026 and is updated with each annual revision of this document.

Board of Trustees

The Alaska Retirement Management Board has nine members. Two seats are held by the Commissioner of Revenue and the Commissioner of Administration. The remaining seven seats are appointed by the governor and must include two public members, one trustee employed as a finance officer for a political subdivision participating in PERS or TRS, two PERS members, and two TRS members. The Chair, Vice Chair, and Secretary are elected by the board from among its members. *Trustees other than commissioners serve four-year terms and may be reappointed.*

Investment Advisory Council

The Investment Advisory Council consists of at least three and not more than five members appointed by the board who collectively bring expertise in public pension fund management, active institutional portfolio management, and academic investment research. Members serve at the pleasure of the board for staggered three-year terms and may be reappointed (AS 37.10.270).

Staff and Administrative Roles

Title / Role	Relevance to ARMB
Treasury Division Director, DOR	Directs the Treasury Division, which acts as staff to ARMB and manages investment operations.
Chief Investment Officer, DOR	ARMB's investment staff lead. Develops and implements investment strategy; presents CIO report to the board.
Board Liaison, DOR	Coordinates all board administrative functions: meeting materials, logistics, trustee communications, and packet preparation.
Assistant Attorney General; ARMB Legal Counsel, DOL	Provides legal advice and fiduciary training to the board. Reviews resolutions and governance documents.
Director, Division of Retirement and Benefits, DOA	Administers PERS/TRS benefits and participant services and presents the DRB Director's report to the board. DRB is a separate department from DOR.
Chief Financial Officer, Division of Retirement and Benefits, DOA	Financial oversight for DRB; presents financial data to actuarial and DC Plan committees.
Chief Pension Officer, Division of Retirement and Benefits, DOA	Presents the Chief Pension Officer's Report at each DC Plan Committee meeting. Oversees PERS/TRS/SBS and Deferred Compensation administration, disability benefit operations, and employer compliance.

1.5 Board Committees

The full board meets quarterly. The day before each full board meeting, standing committees meet to do the substantive work that full board action is based on.

- **Actuarial Committee:** annual actuarial valuation acceptance, review actuary feedback, actuarial assumption review and adoption recommendations, contribution rate-setting recommendations, experience study oversight, and funding policy analysis.
- **Audit Committee:** annual financial statement review (GASB 67/68/74/75 compliance), employer audit oversight, internal controls review, compliance program monitoring, and annual audit firm relationship management.
- **Defined Contribution Plan Committee (DC):** DC plan investment lineup, recordkeeper communication and processes review, DC Healthcare system, target date fund performance, and participant education outreach oversight.
- **Operations Committee:** annual budget development, procurement and consultant contract renewals, meeting calendar, and travel policy.

DRAFT

- **Strategic Review and Action Committee (SRAC):** serves as a task force that investigates complex or emerging topics requiring deeper examination in support of informed Board decision-making. The Committee develops recommendations on new or revised policies and procedures, reviews and refines draft resolutions before they are brought to the full Board.

Section 2 | The Fiduciary Foundation

The ARMB Policy & Procedures Manual provides the full legal treatment of fiduciary duty. What follows is the essential framing for understanding how ARMB approaches its obligations.

The Prudent Investor Standard (AS 37.10.071)

Under AS 37.10.071(c), ARMB trustees must act with the care, skill, and diligence that a prudent person familiar with institutional investment would use in the conduct of an enterprise of like character and aims.

The fiduciary of a state fund shall apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the fund entrusted to the fiduciary.

Three things follow from this:

- **PROCESS:** Investment decisions are evaluated on the quality of the decision-making process and on long-run outcomes. A prudent process that produces a difficult short-term result is defensible in ways that a careless process is not, even if that careless process happened to produce a good result.
- **DIVERSIFY:** Spreading risk across asset classes is not optional; it is required.
- **LOYALTY, PRUDENCE, and IMPARTIALITY:** Loyalty runs to the trusts and all of its beneficiaries — current retirees and active members alike. Prudence requires sound process in every decision. Impartiality requires an understanding that trusts exist to serve retirees across generations. The fund's long-term sustainability depends on prudent long-term stewardship, not optimization for any single moment in time.

2.1 What Fiduciary Duty Is Not

- It is not a prohibition on investment losses. Even sound, well-reasoned decisions sometimes lose money in a given period. Fiduciaries are responsible for the quality of their decisions, not for guaranteeing a positive result.
- It is not a requirement to choose the least expensive option; it requires the best value for beneficiaries considering risk and return.
- It is not a prohibition on alternative investments which can be consistent with the prudent investor standard when the process is sound.
- It is not political. Legislative preferences, employer interests, and public pressure do not override fiduciary judgment.

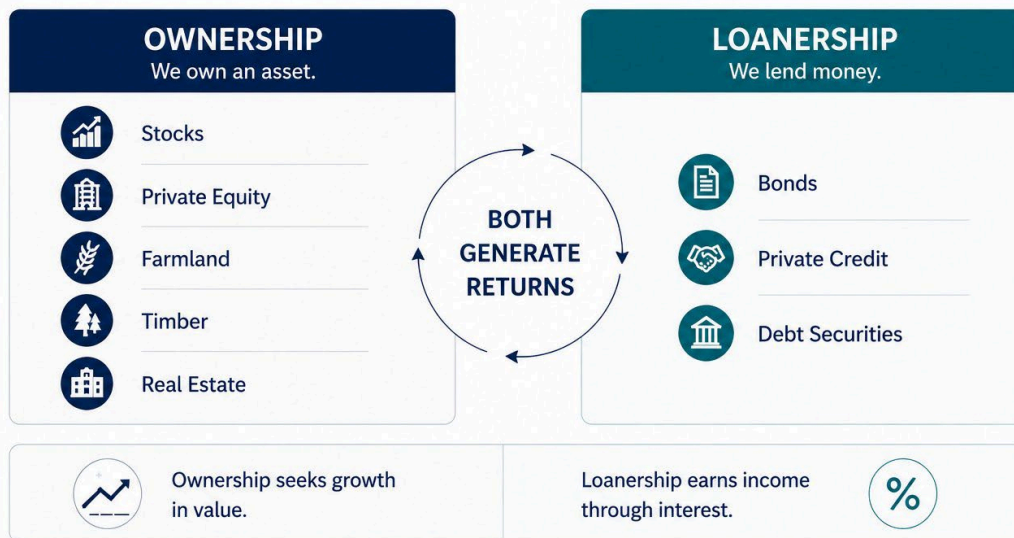
Section 3 | Asset Classes: What We Own and Why

An asset class is a group of investments that share similar characteristics: how they generate returns, how they behave in different economic conditions, and how they relate to other asset classes. ARMB holds a diversified mix of asset classes because no single asset class performs best in all environments, and holding a mix that does not all move in the same direction at the same time reduces the overall volatility of the fund.

Before diving into individual asset classes, a simple organizing principle: every investment ARMB makes is either ownership or loanership. When you buy stock in a company or invest in a private equity fund, you own something — a share of future profits and growth. When you buy a bond or make a private credit loan, you are lending money in exchange for interest and repayment — you own a contractual promise, not a piece of the enterprise. Equities are ownership. Fixed income is loanership. Real assets are primarily ownership. Private credit is loanership. Most of what makes any investment complex is a variation on those two ideas. Lending is the standard industry term, but the ownership/loanership pairing is used because it makes the distinction memorable.

OWNERSHIP vs. LOANERSHIP

All investments fall into one of two categories.



A diversified portfolio combines both to balance growth and stability.



ARMB

ALASKA RETIREMENT
MANAGEMENT BOARD

Investment, Actuarial, and
Governance Reference Guide

3.1 Public Equity: Stocks

Equity involves ownership. When you buy stock, you own a small piece of a company. Equities are the primary engine of long-term portfolio growth, but are also the most volatile part of the portfolio. In a severe market downturn, global equities can fall dramatically. ARMB holds domestic equity, international developed equity, and emerging market equity as separate

DRAFT

allocations because each often behaves differently and responds to different economic conditions around the world.

Term	Plain-Language Explanation
Domestic Equity	Stocks of U.S. companies. The domestic equity allocation is typically structured across multiple market segments. Large cap covers the biggest U.S. companies, generally benchmarked against the Russell 1000 or S&P 500. Small cap references smaller companies typically with expected higher growth potential and higher volatility, generally benchmarked against the Russell 2000 or S&P 600. Mid cap falls in between. Managers are also categorized by investment style (see Growth, Value, and Core/Blend below). ARMB holds both active and passive managers across these segments, using passive strategies where markets are most efficient and active management where the evidence supports a reasonable chance of adding value above benchmark.
Growth	An investment style that favors stocks with above-average earnings or revenue growth prospects relative to the broader market. Growth managers typically invest at higher price-to-earnings multiples, accepting the premium because projected future earnings are expected to justify it. Technology, healthcare innovation, and consumer discretionary sectors are common in growth-oriented portfolios. Growth strategies tend to outperform during periods of economic expansion and low interest rates, and underperform when rates rise or economic growth decelerates.
Value	An investment style that favors stocks trading below their perceived intrinsic worth, as measured by metrics such as price-to-earnings, price-to-book, or dividend yield. Value managers believe the market has temporarily mispriced these companies and that the gap between price and intrinsic value will close over time. Financials, energy, industrials, and materials companies tend to have a stronger value representation.
Core / Blend	A style that combines growth and value characteristics without a strong tilt toward either. Core or blend managers may hold companies across both categories or focus on businesses with reasonable valuations alongside solid growth prospects. Many passive index funds are core by definition, since they hold the full market spectrum.
International Equity	Stocks of companies headquartered outside the United States. The international equity allocation is divided into developed markets and emerging markets. International equity provides geographic diversification: because different markets do not all expand and contract in lockstep with the U.S., holding international stocks can reduce overall portfolio volatility.

DRAFT

	Currency movements add an additional layer of both risk and return opportunity that does not exist in domestic equity, and can add diversification versus the U.S. dollar.
Developed Markets	Countries with mature, stable financial markets: the United Kingdom, Germany, Japan, Australia, and similar economies. Benchmarked against either the MSCI Europe, Australasia, and Far East Index (MSCI EAFE), which covers developed markets only, or the MSCI All Country World Index excluding the United States (MSCI ACWI ex-U.S.), which adds emerging markets exposure. The specific benchmark depends on the mandate.
Emerging Markets (EM)	Countries with growing but less mature financial markets: China, India, Brazil, South Korea, and others. Investors may expect higher potential returns, higher risk, and less liquidity than developed markets. Benchmarked against the MSCI Emerging Markets Index (MSCI EM). Managers with a combined developed and emerging markets mandate may instead be benchmarked against the MSCI ACWI ex-U.S.
Market Capitalization	Total market value of a company's outstanding shares. Large cap (above \$10 billion), mid cap, small cap (below \$2 billion). ARMB holds managers across the cap spectrum. Indices designated Investible Market Index (IMI) from MSCI will include large cap, mid cap, and small cap stocks.
Excess Returns	Return generated above what the benchmark index returned. A manager returning 12% when the benchmark returned 10% generated 2% of excess returns. Excess returns are what you pay active managers to produce. Alpha is a similar concept adjusted for other risk factors.

3.2 Fixed Income: Bonds

Fixed Income ~ Bonds ~ Debt Securities. These terms are often used interchangeably.

When a company or government needs to borrow money, it may issue a bond. The buyer lends the money and often receives regular interest payments (the coupon) plus return of principal at maturity, absent any default by the borrowing entity. Because the payments can be fixed and predictable, this asset class is often called fixed income. If someone in a board meeting says bonds, fixed income, or debt securities, they are talking about the same category of investment.

Term	Plain-Language Explanation
Bond / Fixed Income	A debt security, often a loan made by an investor to a borrower (government, corporation) in exchange for regular interest payments and return of principal at maturity.

DRAFT

Coupon	The interest rate paid to the bondholder, expressed as a percentage of face value.
Duration	A measure of a bond's sensitivity to interest rate changes. When interest rates rise, bond prices fall. When rates fall, bond prices rise. Higher duration means more price sensitivity.
Investment Grade	Bonds generally rated BBB- or above by credit rating agencies. Relatively low default risk.
High Yield	Bonds rated below BBB- (sometimes called junk bonds). Higher default risk, higher yield and expected return.
Core Fixed Income	A broad, investment-grade bond portfolio, typically government bonds, investment-grade corporates, and mortgage-backed securities. Benchmarked against the Bloomberg U.S. Aggregate Bond Index (the Agg).
Core Plus Fixed Income	Core bonds plus a modest allocation to higher-risk sectors (high yield, emerging market debt). More return potential; more risk than pure core.
Basis Point (BPS)	One one-hundredth of a percentage point. 100 BPS = 1%. Used in fee, spread, and performance discussions.
Spread	The difference in yield between a non-government bond and a comparable government bond. Compensates for credit risk. Wider spread means more perceived risk.
TIPS	Treasury Inflation-Protected Securities. Principal adjusts with inflation, thereby generating more income as inflation rises. Can protect against purchasing-power erosion in a rising-price environment.

3.3 Real Assets: Farmland, Timber, and Infrastructure

Real assets are physical, tangible investments. They tend to provide inflation protection (their value typically rises with prices), stable income, and low correlation with financial markets, meaning when stocks fall sharply, real asset values do not necessarily move in the same direction or magnitude. This can make them valuable diversifiers for a fund with decades-long obligations. Real Estate is also part of the Real Assets Asset Class but due to its size is given its own section below.

Farmland

Why ARMB owns farmland: Farmland produces income through crop sales or lease payments from agricultural operators. Land values tend to rise with inflation over time. Historically, farmland returns have had low correlation with stocks and bonds. When equities fall sharply, farmland values tend to hold up. For ARMB, with benefit obligations stretching decades into the future, the stability and inflation linkage are strategically valuable.

DRAFT

Term	Plain-Language Explanation
Row Crop Farmland	Land used to grow annual crops such as corn, soybeans, cotton. Most liquid category of farmland investment.
Permanent Crop Farmland	Includes orchards, vineyards, nut groves. Higher income potential, requires specialized management, longer investment horizon.
Leased Farmland	Land leased to a farming operator. Income comes from lease payments. Lower management complexity than operating farmland and generally less risk tied to crop prices.
NCREIF Farmland Index	The National Council of Real Estate Investment Fiduciaries (NCREIF) Farmland Index measures the performance of institutional-grade farmland properties held in a fiduciary capacity across the United States. Returns are reported quarterly and are based on appraisals rather than daily market prices, since farmland properties do not trade on a public exchange. The index captures both income return, which reflects cash from crop sales, lease payments, and other agricultural operating activities, and appreciation return, which reflects changes in the appraised value of the land itself. The index covers both row crop and permanent crop farmland across major agricultural regions including the Corn Belt, Delta States, Southeast, and Pacific West. Managers are measured against this index to assess whether their farmland portfolio is generating returns consistent with the broader institutional farmland market.

Timberland

Why ARMB owns timberland: Timber is a unique asset because it grows in value biologically each year regardless of financial market conditions. Trees continue growing and increasing in volume whether equities are up or down. The owner also has operational flexibility: harvest when lumber prices are favorable, let trees grow when prices are low. Like farmland, timberland has historically shown low correlation with traditional financial markets and can provide an inflation hedge over long time periods.

Term	Plain-Language Explanation
NCREIF Timberland Index	The National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Index measures the performance of institutional-grade timberland properties held in a fiduciary capacity across the United States. Returns are reported quarterly and are based on appraisals rather than daily market prices, since timberland properties do not trade on a public exchange. The index captures both income return, which reflects cash generated from timber harvests and other operating activities,

DRAFT

	and appreciation return, which reflects changes in the appraised value of the land and standing timber. Together these produce a total return figure. Managers are measured against this index to assess whether their timberland portfolio is generating returns consistent with the broader institutional timberland market.
--	--

Infrastructure

Why ARMB owns infrastructure: Infrastructure includes toll roads, airports, seaports, pipelines, electricity transmission lines, water treatment plants, cell towers, and renewable energy facilities. These assets often share monopoly or near-monopoly characteristics. These characteristics make infrastructure income streams relatively predictable.

Term	Plain-Language Explanation
Core Infrastructure	Mature, regulated assets with stable, predictable cash flows. Examples include water and sewer utilities, regulated electricity transmission lines, and natural gas distribution networks. These assets typically operate under long-term regulatory frameworks or contracts that set allowable returns, making their revenue streams relatively predictable year to year. Generally low risk, steady income, and can be a natural inflation hedge since regulated returns are often linked to price indices.
Value-Add Infrastructure	Assets with growth potential that require capital investment or operational improvement to reach their full earning potential. Examples include an airport that needs terminal expansion to accommodate growing passenger volume, or a renewable energy facility that requires upgrades to increase generating capacity. Higher risk than core, but may have meaningful upside if the improvement thesis plays out.
Greenfield	Building a new infrastructure asset from scratch. A new toll bridge or a wind farm built on undeveloped land are typical examples. Carries the highest risk of the three categories: construction costs can overrun, demand projections can prove wrong, and regulatory approvals can be delayed or denied.
Brownfield	Acquiring and improving an existing infrastructure asset that is already operating. Buying a regional airport and modernizing its terminals is a classic brownfield investment. The asset already has a history of revenue, and operating costs, which reduces uncertainty compared to greenfield while still potentially offering upside from the improvement program.
Concession	A contract granting a private investor the right to operate an infrastructure asset for a defined period, after which the asset reverts to the government. A common example is a toll road

	concession, where the investor collects tolls for 30 or 40 years in exchange for maintaining the road and often making agreed upon capital improvements. The concession structure defines the revenue rights, the obligations, and the end date, giving investors a framework for projecting returns.
--	---

3.4 Real Estate

Note: Real estate is included within the Real Assets allocation in ARMB's Strategic Asset Allocation. Real estate is given its own section here because of its size and complexity within that category, but it appears as part of Real Assets in the Strategic Asset Allocation and in all Board financial reports.

Why ARMB owns real estate: Commercial real estate generates income primarily through tenant rents. A fully leased industrial warehouse, office building, or apartment complex can produce predictable cash flows in a form that pension funds need to meet ongoing benefit obligations. Beyond current income, well-located properties **can** appreciate over time as lease rates and replacement construction costs rise with inflation. Unlike stocks and bonds, real estate values are driven by physical supply and demand in local markets, giving the asset class relatively low correlation with financial markets. When equity prices fall sharply, real estate values, anchored to physical property and lease income, do not necessarily move in the same direction or magnitude. For ARMB, with benefit obligations stretching decades into the future, the combination of current income, inflation linkage, and portfolio diversification makes real estate a core strategic allocation.

ARMB's real estate allocation is invested primarily through private institutional funds in commercial properties: industrial warehouses, apartment complexes, office buildings, retail, hotels, and data centers.

Term	Plain-Language Explanation
Core Real Estate	Stabilized, high-quality properties in major markets with strong, long-term leases and creditworthy tenants. A fully-leased Class A industrial park near a major distribution hub, a well-occupied apartment complex in a growing metro area, or a grocery-anchored retail center with a long-term anchor lease are typical examples. These properties generate reliable rental income with minimal management intensity. Low risk, steady income, modest appreciation.
Core Plus Real Estate	Properties that need modest lease-up or improvement to reach their full income potential. A well-located office building that is 80% occupied and needs a modest renovation to attract the remaining tenants is a good example. The property has a solid foundation but requires some active management to close the gap. More upside than pure core; as well as more risk.
Value-Add Real Estate	Properties with significant vacancy, needed renovation, or a repositioning opportunity that requires hands-on management. An

DRAFT

	older industrial property in a strong market that needs substantial upgrades to attract modern logistics tenants, or a hotel conversion to apartments, would fall in this category. The returns depend heavily on execution: getting the renovation done on budget, leasing up the space, and selling at an attractive price.
Opportunistic Real Estate	The highest risk and return category. Includes distressed assets, ground-up development projects, and complex transactions where the path to value creation is uncertain. A developer building a new mixed-use project in an emerging neighborhood, or a fund acquiring a distressed portfolio of properties from a failed lender, would be opportunistic investments. Returns are equity-like in both potential upside and downside.
ODCE Fund	Open-End Diversified Core Equity: The most common investment vehicle for institutional core real estate. Rather than a fixed-term fund with a defined end date, an ODCE fund accepts new capital on an ongoing basis and allows investors to redeem units over time, making it more flexible than a traditional closed-end private fund. Liquidity is limited and redemption queues can develop in stressed markets, but the structure can suit long-term institutional investors who want steady core real estate exposure without committing to a fixed fund life.
NCREIF ODCE Index	The NCREIF Open-End Diversified Core Equity (ODCE) Index measures the performance of large institutional real estate funds that primarily invest in high-quality, income-producing commercial properties across the United States, including apartments, office buildings, industrial warehouses, and retail centers. The index is designed to represent the core private real estate market and includes both income return (primarily rental income) and appreciation return (changes in appraised property values). Because ODCE funds are open-end vehicles that accept ongoing investor capital and process redemption requests, the index reflects actual fund-level returns experienced by investors, including the impact of cash drag from uninvested contributions. The NCREIF ODCE Index is the standard benchmark for ARMB's core real estate fund investments and one of the most frequently referenced benchmarks in ARMB real estate discussions.
Cap Rate	Capitalization Rate: Net Operating Income divided by property value. This rate indicates the amount of income a property generates relative to its price. A property generating \$5 million in net operating income valued at \$100 million has a 5% cap rate. When market-demanded cap rates rise, property values fall for the same income stream, and vice versa. Watching cap rate movements across markets is one of the primary ways real estate investors assess whether properties are getting more or less expensive relative to the income they produce.

DRAFT

NOI	Net Operating Income (NOI): Rental revenue minus operating expenses such as property taxes, insurance, maintenance, and management fees, but before debt service and capital expenditures. NOI a measure of a property's income-producing capacity.
NCREIF NPI	Published by the National Council of Real Estate Investment Fiduciaries (NCREIF), the NPI (Property Index) is a widely used benchmark for core institutional real estate in the United States. Returns are calculated quarterly based on appraisals rather than market trading prices, and the index captures both income and appreciation components. It covers office, industrial, retail, apartment, and hotel properties held by institutional investors in a fiduciary capacity.

3.5 Private Equity and Private Credit

Private Equity and Private Credit are illiquid, non-publicly-traded components of the portfolio. Private Equity involves ownership stakes in companies not listed on public exchanges, acquired through buyout funds, venture funds, or growth equity vehicles. Private Credit is debt financing held outside the traditional banking system and public bond markets, where loans are privately negotiated. They are presented together here because they share the same fundamental characteristics: illiquidity, direct origination, and an illiquidity premium — because investors cannot easily sell their position, both earn higher expected long-run returns than comparable public market instruments.

A note on where these appear in ARMB's Strategic Asset Allocation: Private Equity is a standalone allocation. Private Credit is not — ARMB's private credit exposure is held within the Multi-Asset allocation (see Section 3.6), not within the Fixed Income asset class due to illiquidity.

Term	Plain-Language Explanation
Private Equity (PE)	Investment in companies that are not publicly traded on a stock exchange. Rather than buying shares in Apple or ExxonMobil through a public market, private equity investors own stakes in privately held companies that have no daily quoted price. These investments are made through limited partnership funds with typical 10-year lives, during which investors commit capital that is drawn down gradually as the manager finds opportunities. Expected returns are higher than public equity over the long run, compensating investors for complexity and illiquidity.
Buyout Fund	The most common private equity strategy. The fund acquires a controlling stake in a company, works to improve its operations, profitability, or growth trajectory over several years, and then sells it, typically within 4-7 years, either to another buyer or through a public offering. Leverage, meaning borrowed money, is commonly used alongside the equity investment to amplify returns when the

DRAFT

	strategy works. A fund might acquire a regional manufacturing company for \$200 million using \$120 million of debt and \$80 million of equity, improve its margins and revenue over five years, and sell it for \$350 million, generating a substantial return on the original equity invested.
Venture Capital (VC)	A form of private equity focused on early-stage or growth-stage companies, typically in technology, life sciences, and other innovation-driven sectors. Venture capital differs from buyout investing in fundamental ways: Buyout funds acquire established companies, use significant debt to amplify returns, target fewer larger deals, and create value through operational improvement. Risk is a combination of execution, leverage, and valuation. Venture capital funds young companies with little or no debt and create value by backing innovation and enabling rapid scale. Risk is mostly business, technology, and market failure. Returns in both strategies are highly concentrated. Research suggests roughly 8% of VC investments generate all the gains across a portfolio, and about 27% of buyout investments generate all the gains. This is why manager selection in private equity matters more than in public equity: the difference between a top-quartile and bottom-quartile private equity manager dwarfs the equivalent spread in public markets. It also explains why top-quartile managers tend to stay top-quartile — access to the best deal flow compounds over time.
Secondary Investments	Purchases of existing private equity fund interests from other investors rather than committing to a new fund at inception. An investor wishing to exit a private equity fund before its scheduled end can sell their interest in the secondary market. Secondary buyers acquire that stake, typically at a discount to the fund's reported net asset value. Secondary investments acquire interests in funds already several years into deployment, capital begins returning sooner, reducing the J-curve drag. They also provide immediate exposure to a diversified portfolio of underlying companies. Secondary funds are particularly useful for managing vintage year diversification and the overall pacing of a private markets portfolio.
Commitment Pacing	The deliberate schedule by which ARMB commits capital to private market funds across successive years and vintage years. Because closed-end, private market funds draw down capital over several years and return it over several more, a single large commitment in one year is not sufficient to maintain a target allocation over time. Consistent annual commitments build a

DRAFT

	diversified portfolio of vintage years, smoothing exposure across different market environments. If ARMB targets a 14% allocation to private equity, for example, the staff develop a pacing plan that determines how much to commit each year to keep the actual invested amount close to that target as older funds mature and distribute capital back.
J-Curve	The typical return pattern of a private equity fund plotted over time. In the early years, reported returns are negative because management fees are being charged against committed capital while investments are still being identified and made, and the portfolio companies have not yet had time to grow in value. As the fund matures and portfolio companies are sold at a profit, returns turn positive and climb. When you draw this pattern on a chart, the line dips down before rising, tracing the shape of the letter J. Early negative returns on a PE fund are normal and expected, not a sign of underperformance.
Vintage Year	The year a private market fund makes its first investment. This matters enormously for benchmarking because the economic and market environment during the investment phase impacts performance outcomes. . Comparing funds of different vintage years against each other without accounting for this would be misleading.
IRR	The annualized return of a private equity investment that accounts for the timing of every cash flow in and out of the fund. Unlike a simple percentage return, IRR reflects when capital was contributed and when distributions were received, so an investor who received distributions earlier is credited with a better outcome than one who received the same total dollars later. IRR is the most widely used performance metric for private markets.
Total Value to Paid-In (TVPI) and Distributed to Paid-In (DPI)	Two multiples used alongside IRR to describe private equity performance. TVPI measures total value created: the sum of all distributions already paid out plus the current estimated value of remaining holdings, divided by the total capital invested. A TVPI of 1.8x means the fund has generated \$1.80 in total value for every \$1.00 invested. DPI measures only what has actually been returned to investors in cash, divided by capital invested. A DPI of 1.0x means investors have received back exactly what they put in. DPI is sometimes called the realizations multiple because it reflects money actually in hand rather than estimated value still sitting in the portfolio. Private equity performance is typically reported as both IRR and TVPI/DPI together because each tells a different part of the story.
Private Credit	Private credit is debt financing held outside the traditional banking system and public bond markets, where loans are privately negotiated.

	As banks pulled back from certain types of lending following the 2008 financial crisis and subsequent regulatory changes, private credit funds stepped in to fill the gap, offering direct loans to mid-sized companies that might not have access to public bond markets. These loans are often floating-rate, meaning the interest rate adjusts with market rates. Typical categories of private credit may include but is not limited to: Direct Lending, Mezzanine, Distressed, Venture Debt, Real Assets lending, Asset-Based lending, Structured Credit, and Fund Finance. Note that private credit strategies appear within ARMB's Multi-Asset allocation as Alternative Fixed Income; see Section 3.6.
Illiquidity Premium	The extra return investors expect to receive in exchange for committing capital to investments they cannot easily sell. A farmland parcel may take months to sell and may involve significant transaction costs. Investors rationally demand higher expected returns to compensate for giving up that flexibility. Patient, long-horizon investors like pension funds are well positioned to capture this premium, since they do not need to liquidate holdings on short notice to meet unexpected obligations.

3.6 Multi-Asset Strategies

Multi-Asset is the sixth component of ARMB's strategic asset allocation. Unlike the other five asset classes, which draw clear lines around a specific type of investment, Multi-Asset is defined by what it does for the portfolio rather than what it is: these strategies are designed to generate returns to the overall portfolio through differentiated investments. These may include specialized or diversifying sources of return, a single-asset class or multi-asset investments, and can be public or private.

ARMB's Multi-Asset allocation currently includes three types of strategies. **Alternative Risk Premia** seeks to capture well-documented return premiums — such as value, momentum, carry, and trend — across multiple asset classes simultaneously, including equities, fixed income, currencies, and commodities. Alternative Risk Premia seeks to exploit persistent patterns across markets by using rules-based investing. **Tactical Allocation Strategies** use systematic or quantitative approaches to shift exposures across asset classes in response to changing market conditions rather than holding a fixed portfolio. **Alternative Fixed Income** includes private credit strategies with characteristics — complexity, structure, or illiquidity — that distinguish them from the core fixed income allocation. These are the same instrument types described as standalone strategies in Section 3.5; their appearance here reflects how they are packaged and reported within Multi-Asset fund structures rather than as a separate asset class allocation.

The strategic rationale for Multi-Asset is portfolio construction diversification, and exposure to strategies that do not fit well into more traditional asset classes. The intent is not return maximization in isolation.

Anyone who reviews ARMB financial reports may encounter sub-category labels within Multi-Asset — Alternative Equity, Alternative Fixed Income, Alternative Beta, and Tactical Allocation Strategies. These are internal sub-buckets used for reporting and monitoring purposes, not

DRAFT

separate asset classes in the Strategic Asset Allocation. The specific managers within each sub-category change over time as investment relationships are initiated, reviewed, and exited.

Section 4 | Portfolio Construction and Diversification

4.1 Why Diversification Is Both Required and Smart

Modern portfolio theory shows that combining assets that do not move in perfect lockstep can reduce overall portfolio risk without necessarily reducing expected return. This is the intellectual foundation of the prudent investor rule's diversification mandate.

The Core Concept: Correlation

Correlation measures how closely two assets move together. A correlation of +1.0 means they always move in the same direction. A correlation of -1.0 means they always move in opposite directions. Zero means no relationship.

When ARMB combines U.S. stocks (highly correlated with each other) with farmland (historically low correlation with stocks) and bonds (historically negative to slightly positive correlation with stocks), the combined portfolio is less volatile than holding stocks alone. This is the part of the rationale for holding real assets alongside equities and fixed income.

4.2 Strategic Asset Allocation

The board's most consequential investment decision is the strategic asset allocation: the target percentage of the portfolio committed to each asset class. Research consistently shows that asset allocation explains the large majority of long-run investment return variation, far more than individual manager selection or market timing. Callan LLC, the Board's investment consultant, assists ARMB with periodic asset allocation studies that model expected returns, volatility, and correlations across asset classes.

Term	Plain-Language Explanation
Strategic Asset Allocation (SAA)	The board-approved target percentage of the total portfolio committed to each asset class: Broad Domestic Equity, Global Equity Ex-US, Fixed Income, Real Assets, Private Equity, and Multi-Asset. The SAA is the single most consequential investment decision the board makes. Academic research consistently shows that the choice of how to divide assets among broad categories explains the large majority of long-run investment return variation, far more than individual manager selection or market timing. Callan LLC conducts periodic asset allocation studies for the board, modeling expected returns, volatility, and correlations across asset classes to help evaluate alternative allocations against ARMB's liability profile and risk tolerance.
Policy Benchmark	The total fund benchmark constructed by weighting the benchmark index for each asset class by its SAA target allocation. Callan LLC uses this as the primary comparison for

DRAFT

	total fund performance. Because each asset class benchmark reflects actual market returns for that period, the Policy Benchmark can change every year and represents what the total fund would have returned if every asset class had simply matched its benchmark at the target weight. When ARMB's total fund return exceeds this figure, the portfolio added value above a passive baseline. This measure is referred to as the Policy Benchmark in ARMB's Investment Policy Statement.
Rebalancing	Buying and selling to return the portfolio to its SAA target weights after market movements cause drift. If domestic equities increase in value and grow from 30% to 35% of the portfolio, they have become overweight relative to the SAA target. Rebalancing involves trimming equities and directing the proceeds toward underweight asset classes. This enforces a disciplined buy-low, sell-high pattern over time. Rebalancing is managed by the Chief Investment Officer and investment staff within ranges approved by ARMB; significant reallocations are reported to the Board at each quarterly meeting.
Portfolio Risk	How much total portfolio volatility the Board is willing to accept in pursuit of the long-run return needed to meet benefit obligations and the assumed rate of return. Allocating more to equities and less to bonds increases the risk budget; adding diversifying assets may add differing sources of return while diversifying risk. ARMB formally approves the Strategic Asset Allocation, which implicitly defines the risk posture. Changes that materially shift the overall risk profile require Board approval rather than staff discretion.
Liquidity	How quickly and easily an investment can be converted to cash without a significant loss in value. Publicly traded stocks are highly liquid. A private market fund may take years to fully return invested cash. ARMB must maintain sufficient liquid assets to meet ongoing benefit payments, support rebalancing, fund capital calls from private market managers, and unexpected cash needs, while still committing enough capital to illiquid strategies to capture the illiquidity premium. Managing this balance is an ongoing responsibility of the CIO.

Section 5 | Benchmarking and Performance Measurement

Why This Matters Evaluating investment performance often involves measuring performance against a credible benchmark — and benchmark quality matters as much as the result, particularly in private equity where meaningful benchmarks are harder to establish.

5.1 What a Benchmark Is

A benchmark is the measuring stick against which a manager's or the fund's performance is evaluated. A good benchmark is investable (you could replicate it by buying an index fund), specified in advance, and appropriate to the strategy being managed.

The Core Logic

If you hire an active manager for U.S. large-cap stocks, you want to know: did the manager add value above what you could have gotten from a passive index fund at a lower fee? The benchmark (e.g., Russell 1000) represents the passive alternative. If the manager returns 11% net of fees and the benchmark returns 10%, the manager added 1% of excess return, which is what you paid active fees to get. If the manager returns 9%, they underperformed by 1% and you paid active fees for a below-passive result.

5.2 Key Benchmarks Used in ARMB Reporting

Term	Plain-Language Explanation
Russell 1000	The 1,000 largest U.S. public companies by market capitalization. Common benchmark for large-cap domestic equity.
Russell 2000	The next 2,000 U.S. companies by size. Common benchmark for small-cap equity. An alternative small-cap benchmark, the S&P SmallCap 600, is described below.
Russell 3000	The 3,000 largest U.S. companies, essentially the entire U.S. equity market. The Russell 1000 and Russell 2000 combined.
S&P 500	The 500 largest U.S. publicly traded companies by market capitalization, maintained by S&P Dow Jones Indices. One of the most widely cited equity benchmarks in the world and the dominant measure of U.S. large-cap equity market performance. While not ARMB's primary domestic equity benchmark for all mandates, the S&P 500 appears frequently in market commentary, performance attribution, and public media coverage of U.S. markets.
S&P 600 (S&P SmallCap 600)	An index of 600 U.S. small-cap companies maintained by S&P Dow Jones Indices. A distinguishing feature is its inclusion criteria, which require that candidate companies meet minimum financial viability thresholds including earnings requirements. This screening tends to produce a somewhat higher-quality small-cap universe than the Russell 2000, with fewer unprofitable

DRAFT

	companies. ARMB uses the S&P 600 as the benchmark for one of its domestic small-cap equity mandates.
S&P 400	An index of 400 U.S. mid-cap companies maintained by S&P Dow Jones Indices.
S&P 900	The combination of the S&P 500 (large-cap) and the S&P MidCap 400, covering approximately 900 U.S. companies across the large- and mid-cap segments. The S&P 900 serves as a benchmark for managers with combined large and mid-cap domestic equity mandates and can appear in ARMB performance reports where a manager's mandate spans both size segments.
MSCI ACWI ex-U.S.	All Country World Index excluding the United States: covers both developed and emerging markets outside the U.S. Benchmark for international equity with combined developed and emerging markets exposure.
MSCI ACWI ex-U.S. IMI	The Investable Market Index extension of the MSCI ACWI ex-U.S. that broadens coverage to include small-cap companies alongside large- and mid-cap stocks in developed and emerging markets outside the United States. The IMI designation indicates the index captures approximately 99% of the investable opportunity set in each country covered. Managers with broad international mandates including small-cap exposure may be benchmarked against this index.
MSCI EAFE	Europe, Australasia, and Far East: covers developed international markets only. No U.S., no emerging markets.
MSCI EAFE Small Cap	Covers small-cap companies in developed markets outside the United States and Canada. Generally the benchmark for international small-cap equity mandates. Smaller international companies typically offer higher growth potential and less liquidity than their large-cap counterparts, as well as greater sensitivity to local economic conditions.
MSCI EM	MSCI Emerging Markets Index: measures the performance of equity markets in countries with growing but less mature financial markets, including China, India, Brazil, South Korea, Taiwan, and others. Benchmark for dedicated emerging markets equity mandates.
Bloomberg U.S. Aggregate ("the Agg")	The most widely used U.S. bond benchmark, covering investment-grade Treasuries, corporates, and mortgage-backed securities.
NCREIF Property Index (NPI)	Benchmark for core real estate. Updated quarterly based on appraisals.
NCREIF ODCE Index	Benchmark for open-end core real estate fund investments. Reflects actual fund-level returns including the cash drag from uninvested capital contributions. More directly comparable to ARMB's ODCE fund holdings than the NPI, which measures

DRAFT

	individual property returns before fund-level fees and cash effects.
NCREIF Timberland Index	Benchmark for timberland investments.
NCREIF Farmland Index	Benchmark for farmland investments.
Policy Benchmark	The total fund benchmark: a blend of all individual asset class benchmarks weighted by their SAA target allocations. See Section 4.2 for a full explanation.
Peer Universe	ARMB is also compared against a universe of peer public pension funds (Callan's database). This shows where ARMB's returns fall among comparable investors. Some asset class composites and active managers are also compared against appropriate peer groups.

5.3 Key Performance Terms

Term	Plain-Language Explanation
Excess Return	The return a manager generates above or below their benchmark over a given period. Also called active return. Similar to alpha. If a manager returns 11% and their benchmark returned 9%, they generated 2% of excess return. If they returned 8% against a 9% benchmark, they produced negative excess return of 1%.
Trailing Returns	Annualized returns calculated over a period ending at a certain date: 1-year, 3-year, 5-year, and 10-year are the standard intervals. A single quarter or even a single year generally tells you relatively little about manager skill . Three to five years can be more meaningful. Ten years can capture at least one full market cycle.
Time-Weighted Return (TWR)	The standard method for calculating investment manager performance. It measures the growth of one dollar invested over a period, eliminating the distorting effect of cash flowing in and out of the portfolio at different times. Time-weighted returns isolate the manager's actual decision-making from the timing of cash flows that the manager did not control. All Callan performance figures for ARMB use time-weighted returns. IRR is also used for private markets strategies.
Tracking Error	A statistical measure of how much a manager's returns deviate from their benchmark over time. A manager with low tracking error is investing in a portfolio that closely resembles the benchmark. A manager with high tracking error has larger

DRAFT

	deviations from the benchmark. For passive index managers, low tracking error is appropriate. For active managers, neither high nor low tracking error is inherently good or bad; what matters is whether the active risk taken is being rewarded with a commensurate amount of excess return.
Information Ratio (IR)	Excess return divided by tracking error. It answers the question: how much excess return is the manager generating per unit of active risk taken? A manager producing 2% of excess return with 4% tracking error has an IR of 0.5, which is generally considered strong. An IR above 0.5 sustained over multiple years is a meaningful signal of skill rather than luck. The information ratio is more useful than excess return alone because it accounts for how much risk the manager took to generate that return.
Sharpe Ratio	The portfolio's return above the risk-free rate divided by the total standard deviation of returns. Where the information ratio measures risk-adjusted performance relative to a benchmark, the Sharpe ratio measures it relative to holding cash. A higher Sharpe ratio means more absolute return per unit of total volatility. It can be used to compare strategies across different asset classes or for evaluating the total fund's risk-adjusted return relative to peer funds.
Quartile Ranking	Where a manager's performance falls within a universe of peers . First quartile means the manager ranked in the top 25% of comparable managers. Second quartile is between the 25th and 50th percentile. Third and fourth quartile indicate below-median performance relative to peers. A manager who underperformed their benchmark in a difficult style environment but ranked in the first quartile of peers may simply have been in a headwind that affected all similar managers, which is a different situation from one who underperformed both their benchmark and their peers.

Section 6 | Manager Oversight and the Watch List

Why This Matters The Watch List is an early-intervention tool designed to surface manager concerns before they become permanent losses.

6.1 Manager Selection: How It Works

The board selects investment managers, not individual securities. Manager selection is not a single rigid process; it varies depending on the type of investment opportunity, the asset class, and whether ARMB has delegated authority to the CIO for certain decisions. What is consistent across all approaches is the expectation of sound process, appropriate input, and clear documentation.

The most common path for a new manager relationship begins with need identification, where staff, Callan, or both recognize a portfolio gap or opportunity worth pursuing. Staff conducts due diligence on the manager and strategy, often including site visits and direct engagement with candidates. Callan assists with screening and evaluation, assessing quantitative criteria such as returns, risk metrics, and fees alongside qualitative factors such as team stability, investment philosophy and process, and organizational integrity. The Investment Advisory Council also provides input. The focus throughout is on process quality and organizational soundness rather than recent short-term returns — one reason being that top-quartile managers, particularly in private equity, show meaningful persistence: a fund that ranked in the first quartile is significantly more likely to produce a first-quartile successor fund than a manager without that track record. Chasing recent performance, by contrast, is one of the most consistently documented ways to destroy value in manager selection. ARMB then votes to approve or decline.

Not every selection follows this path. Some investments arise from co-investment opportunities alongside existing managers, where speed and existing relationships drive the process differently. In other cases, ARMB has delegated authority to the CIO to make certain investment decisions within defined parameters, and Callan may not be part of the search at all. In those situations staff judgment, consultant input where available, and IAC perspective inform the decision before ARMB approves the investment or delegates authority to the CIO.

What does not change regardless of path: ongoing monitoring. Callan reviews performance quarterly. Investment staff maintain day-to-day oversight. The Watch List process applies to any manager relationship, however it originated.

6.2 The Watch List

What the Watch List Is and Is Not

The Watch List is a formal governance tool for flagging managers for heightened attention. Being placed on the Watch List does not mean a manager is being terminated; it means the Board has identified concerns that require monitoring and may require action if they are not resolved. Importantly, watch listing is not required for manager termination.

Common reasons for Watch List placement:

- **Sustained underperformance vs. benchmark:** Net of fees over the trailing six-year performance period, as defined in the formal Watch List criteria.

DRAFT

- **Key personnel departure:** The lead portfolio manager or key personnel leaves.
- **Style drift:** The manager is investing differently than their mandate.
- **Violation of investment guidelines.**
- **Ownership changes:** The firm is acquired, merging, or experiencing business disruption.
- **Compliance or legal issues at the firm.**

Process after placement: The CIO and Callan monitor closely. Each quarter, ARMB decides: continue monitoring, terminate, or remove from the Watch List. The Board has a formal Watch List Resolution that governs this process.

6.3 Passive vs. Active Management

Term	Plain-Language Explanation
Passive Management	The manager replicates a benchmark index. Very low fees. No chance to outperform, but no chance to meaningfully underperform either. ARMB uses passive management in highly efficient markets (such as U.S. large-cap equity) where active managers rarely beat the index after fees.
Active Management	The manager deviates deliberately from the benchmark in an attempt to outperform. Costs more and requires careful monitoring. ARMB uses active management where evidence supports a reasonable chance of adding value (e.g., small-cap equity, international equity, fixed income).
Fees / Expense Ratio	The annual cost charged by the manager as a percentage of assets. Fee scrutiny has been a significant ARMB focus: paying active fees for passive-like results destroys value over time, and ensuring fees are commensurate with performance is a core trustee responsibility.

Section 7 | Actuarial Concepts and Alaska's Oversight Structure

The actuarial side of the Board's work is distinct from investment management but deeply intertwined with it, since the investment return assumption is the single most consequential actuarial variable. Understanding both the concepts and Alaska's specific oversight structure helps explain why certain governance safeguards are designed the way they are.

7.1 Core Actuarial Concepts

Term	Plain-Language Explanation
Actuarial Valuation	An annual mathematical snapshot of each pension system's financial health, prepared by the primary actuary and independently reviewed by the review actuary). The valuation measures the present value of all future promised benefits, compares that figure to current assets, calculates the resulting funded ratio and unfunded liability, and informs the ARMB decision on setting the contribution rate employers must pay in the coming fiscal year. The valuation date is June 30 each year. Contribution rates are determined by the Board in September, with rates taking effect the following July 1.
Unfunded Actuarial Accrued Liability (UAAL / UAL)	The gap between the present value of all accrued future benefits and the assets currently held to pay them. If the fund owes \$60 billion in present value but holds \$50 billion, the UAAL is \$10 billion. The UAAL is not a bill due immediately; it is paid down over time through the amortization component of the contribution rate. The UAAL changes every year as investment returns, salary experience, mortality, and other factors vary from the actuarial assumptions, generating gains or losses that add or subtract from the total. Reducing the UAAL to zero by the target date is the long-term funding mission of the Board.
Funded Ratio	Total assets divided by total actuarial accrued liabilities. A plan with an 80% funded ratio holds assets equal to 80% of what it is projected to owe. A plan at 100% is fully funded.
Assumed Rate of Return (ARR)	The annual investment return set by the Board that the actuary assumes the fund will earn over the long run, used to discount future benefit obligations to their present value. The ARR is one of the most consequential assumptions the Board adopts because small changes produce large changes in the stated liability and required contributions. The Board works with its CIO, IAC, and Callan to evaluate whether the Assumed Rate of Return remains reasonable based on Callan's long-run capital market assumptions and the fund's actual asset allocation. Changes to the ARR are among the most

DRAFT

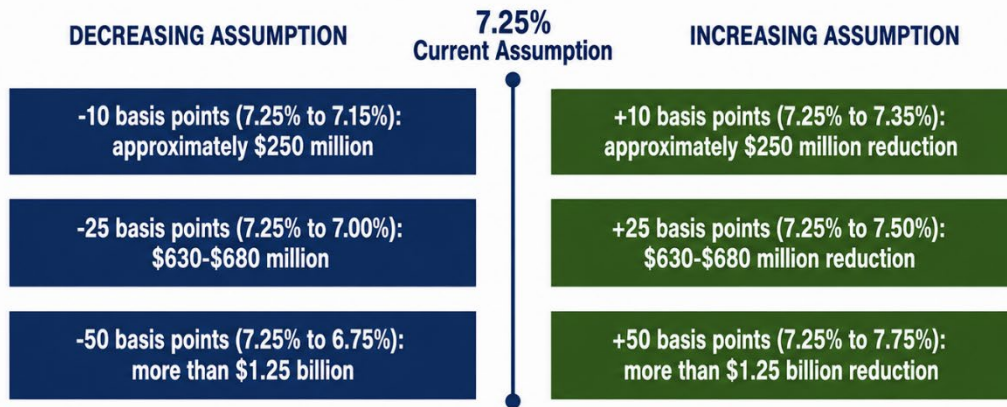
	consequential decisions the board makes and are made carefully with actuarial modeling of the contribution rate impact.
Normal Cost	The present value of benefits earned by active employees during the current year alone. It represents what the system would cost if it were already fully funded and contributions simply kept pace with new benefit accruals. The total employer contribution rate has two components: the normal cost rate (covering current-year benefit accruals) and the amortization rate (paying down the UAAL). As the UAAL declines toward zero, the amortization component shrinks and the contribution rate approaches the normal cost rate. A fully funded plan that continues accruing benefits still requires contributions to cover the normal cost of ongoing benefit accruals.
Amortization	The process of paying down the UAAL over time through scheduled payments built into the contribution rate, similar in concept to making mortgage payments on a loan. The size of the annual payment, the length of the payoff period, and the payment method all significantly affect both the year-to-year contribution burden on employers and the total long-run cost to the system. Shorter amortization periods mean higher contributions in the near term but lower total cost and faster full funding. Longer periods spread the burden but allow interest to compound on unpaid balances, increasing total cost over time.
Layered Amortization	An approach where each year's actuarial gain or loss creates its own separate amortization layer with its own payment schedule and end date, rather than rolling everything into a single perpetually re-extended base or a single closed base with an end date. The concept is sound, but the length of the layer and the payment method matter enormously.
Payroll Growth Assumption	The annual rate at which covered payroll is projected to grow, used in calculating the dollar amounts of level-percent-of-payroll amortization payments over the life of an amortization schedule. Because contributions are expressed as a constant percentage of payroll, larger future payrolls produce larger dollar payments — but if actual payroll growth consistently falls short of the assumption, those larger payments never materialize, effectively pushing a portion of the paydown schedule into the future without raising the stated contribution rate. ARMB reviews and revises the assumption periodically.

DRAFT

Level Percent of Pay	The payment structure Alaska statute requires for amortizing the past service liability. Annual dollar payments grow each year in proportion to covered payroll, keeping the contribution constant as a percentage of payroll rather than a fixed dollar amount. The method carries two vulnerabilities: • Even when everything goes exactly as planned, the unfunded liability may increase in the early years of a new layer. Depending on the underlying assumptions used, early payments may be set below the interest accruing on the outstanding balance, meaning the system goes further into debt before it begins coming back out. • If actual payroll growth falls below assumption, dollar payments are smaller than projected and the UAAL can grow even while contributions are faithfully being made. An overly optimistic payroll growth assumption quietly erodes the effectiveness of every payment made over the life of the schedule.
Contribution Rate	The percentage of covered payroll that employers must contribute each year, adopted by the Board and taking effect July 1 of the following fiscal year. The rate combines the normal cost and the amortization component. For PERS and TRS, the State of Alaska serves as both an employer in its own right and as the backstop contributor of last resort, covering the gap between the statutory employer cap and the full actuarially required contribution. Employer rates are expressed as a uniform percentage of payroll across all participating employers for PERS, so all municipalities pay the same rate.
Experience Study	A comprehensive review, conducted roughly every four years, that compares what actually happened to plan participants against what the actuarial assumptions predicted. It examines mortality rates, retirement rates, salary growth, disability rates, turnover, healthcare utilization, and other assumptions. When actual experience diverges from assumptions over time, the study provides the basis for updating those assumptions, which then changes the calculated liability and required contributions

The Fiscal Consequence of the Earnings Assumption Decision

Impact on present value of projected obligations — PERS and TRS combined.



Source: ARMB analysis based on Gallagher actuarial calculations. Based on 2025 valuation baseline projections as of June 30, 2025.



ALASKA RETIREMENT
MANAGEMENT BOARD

Investment, Actuarial, and Governance Reference Guide

7.2 Alaska's Dual-Actuary Structure

Alaska's actuarial governance uses a deliberately layered structure with two separate actuarial relationships: a primary consulting actuary and an independent review actuary. The separation of contracting authority between them is intentional and structurally important.

	Primary / Consulting Actuary	Review Actuary
Contracting Authority	Department of Administration, not ARMB directly	Alaska Retirement Management Board, directly. This independence is structural and intentional.
Primary Role	Annual valuations of PERS/TRS DB and DC plans; contribution rate recommendations; experience studies; legislative cost analysis	Test life review; methodology verification; assumption reasonableness review; independent reporting to ARMB Actuarial Committee
Reports To	DRB / ARMB Actuarial Committee	ARMB Actuarial Committee and Board, independently of the primary actuary

The State of Alaska's dual-actuary structure was established following a significant actuarial event in the 2000s, when errors in the primary actuary's assumptions and methodology contributed to a substantial understatement of the systems' unfunded liability. The episode illustrated a structural risk inherent in any single-actuary relationship.

7.3 Additional Actuarial Terms

Term	Plain-Language Explanation
EGWP	Employer Group Waiver Plan: A federal Medicare Part D subsidy mechanism that allows pension plans covering Medicare-eligible retirees to receive federal drug benefit subsidies in lieu of standard retiree drug coverage. For ARMB, the EGWP has been one of the most significant sources of healthcare liability reduction in recent years, generating over \$100 million annually in federal subsidies for PERS and TRS healthcare trusts. The PERS and TRS healthcare trusts are now substantially overfunded relative to their projected obligations, which is why the Board has in recent years declined to contribute the healthcare normal cost to those trusts. The EGWP subsidy is subject to federal policy and cannot be assumed permanent.
Asset Smoothing	A technique that averages or phases in the recognition of investment gains and losses over multiple years rather than reflecting them immediately in the actuarial valuation. The purpose is to reduce year-to-year volatility in contribution rates: without smoothing, a sharp market decline in one year would immediately spike required contributions. Alaska's PERS and TRS funding valuations currently use a five-year smoothing method.
Actuarial Loss / Gain	The difference between what observed results and what the actuarial assumptions predicted. Any time actual experience deviates from an assumption, it generates either a gain (experience was better than assumed, reducing the liability) or a loss (experience was worse than assumed, increasing it). Investment returns are the largest single source of actuarial gains and losses, but non-investment sources also matter: retirees living longer than the mortality table predicted, salaries growing faster than the salary assumption, more members retiring early than expected, or healthcare claims running ahead of projections.
ASOP	Actuarial Standard of Practice: Professional standards issued by the Actuarial Standards Board that define what constitutes competent and ethical actuarial practice. ASOPs cover a wide range of actuarial work including the selection of assumptions for measuring pension obligations (ASOP 27), asset valuation methods (ASOP 44), pension funding (ASOP 4), measuring retiree group benefits obligations and determining retiree group benefits program periodic costs or actuarially determined contributions (ASOP 6), actuarial communications (ASOP 41), risk disclosures (ASOP 51), and modeling (ASOP 56). When an actuary's work is reviewed for potential malpractice or professional negligence, compliance with the applicable ASOPs

DRAFT

	is the primary standard of care. This is why ASOPs are central to any actuarial malpractice analysis. If the review actuary flags a methodology concern, it is typically framed in terms of whether the primary actuary's approach is consistent with applicable ASOP requirements.
--	---

Section 8 | Defined Contribution Plan Concepts

Why This Matters ARMB's fiduciary responsibility extends to the DC plan's investment lineup, fees, defaults, and distribution practices — and those decisions affect every DC member's retirement savings, not only those who rely on plan defaults.

Not all Defined Contribution (DC) members accumulate retirement savings at the same rate. The Defined Contribution (DC) contribution percentage differs between members based on whether they participate in PERS and TRS, if they are a part of the Supplemental Benefits System Annuity Plan (SBS-AP), or if they work for an employer covered by Social Security. All of these factors determine a member's total mandatory retirement savings rate. Most Alaska public employees covered under PERS and TRS are not covered by Social Security.

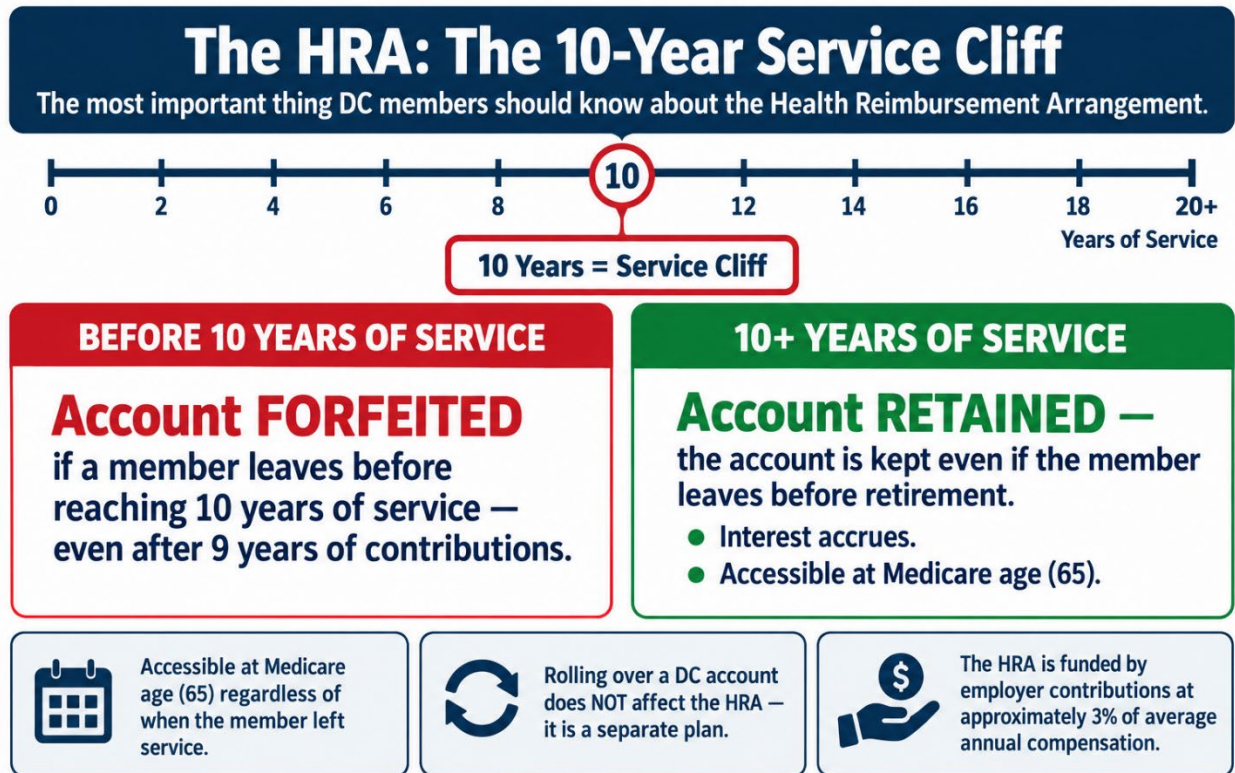
Employer Type	DC Contribution	SBS-AP	Social Security	Total Mandatory
State of Alaska employees (PERS DC)	13.0% (employee 8%, employer 5%)	12.26% (employee 6.13%, employer 6.13%)	Not covered	25.26%
Select municipalities / political subdivisions participating in SBS-AP (PERS DC)	13.0% (employee 8%, employer 5%)	12.26% (employee 6.13%, employer 6.13%)	Not covered	25.26%
Municipalities not participating in SBS-AP (PERS DC)	13.0% (employee 8%, employer 5%)	None	Varies by employer	13.0% + Social Security where applicable
All TRS employers — school districts and other TRS-covered employers	15.0% (employee 8%, employer 7%)	None	Not covered	15.0%

Sources: Division of Retirement and Benefits, drb.alaska.gov (contribution rates)

For TRS specifically, Alaska's teachers accumulate mandatory retirement savings at 15.0% of salary. They have no SBS-AP and are not covered by Social Security. For most educators, the TRS DC plan constitutes the entirety of their retirement savings structure.

Each quarter, DRB provides the DC Plan Committee with a report showing which specific school districts, municipalities, and political subdivisions participate in which plans. That report is included in each DC Plan Committee packet and is available at treasury.dor.alaska.gov/armb. Reviewing it alongside the table above shows which member populations are most dependent on the DC plan alone.

8.1 Health Reimbursement Arrangement



Source: AS 39.30.300–495; DOL/DOA Legal Memo May 2025, amended September 2025.

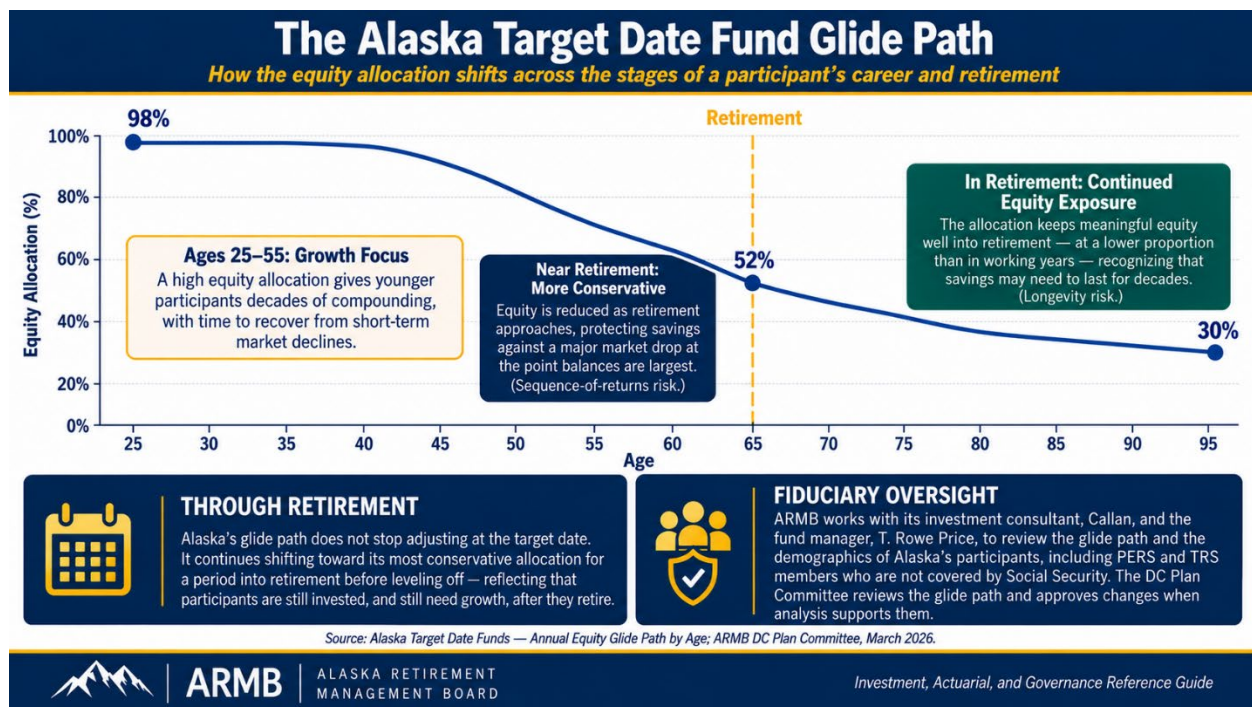
Alaska moved new public employees and teachers to a Defined Contribution (DC) plan in 2006. ARMB oversees the DC plan investment lineup and exercises fiduciary responsibility over investment policy for those plans. A recordkeeper is contracted to administer the investment choices made by individual members. The Department of Administration, through the Division of Retirement and Benefits, oversees the recordkeeping contract. ARMB can and does make recommendations related to recordkeeping when issues arise including on participant outcomes, rollover practices, fee structures, and distribution counseling. Understanding DC plan dynamics is increasingly important as the DC participant population grows relative to the DB population.

The range of investment options approved by the Board for the DC plan also serves participants in two additional savings programs managed by the ARMB. The State of Alaska Deferred Compensation Plan is a 457(b) program available to state employees and participating employers, allowing them to voluntarily defer a portion of their salary into tax-advantaged retirement savings on top of their primary retirement benefit. The Supplemental Benefits System (SBS) is a social security replacement program for state employees and employees of participating PERS employers, in which employees contribute 6.13% of wages, matched by an equal employer contribution. SBS contributions are mandatory for employees of participating employers. Because all three programs provide the same set of investment options, decisions the Board makes about fund options, target date funds, and fee structures affect a broad population of participants across multiple plan types simultaneously.

Key DC Plan Service Providers

Role	Provider	Contracting Authority
Recordkeeper	Empower Retirement	Department of Administration through DRB. ARMB exercises fiduciary oversight over the investment options and plan design.
Target Date Fund Manager	T. Rowe Price	Selected by ARMB as part of the DC investment lineup approval process.

8.2 Target Date Funds: The Default Investment



Target Date Funds are the default investment option for Alaska DC participants and the sole investment for roughly two-thirds of them — making them the most consequential single investment decision in the plan.

A Target Date Fund is built around a single idea: the right mix of investments changes as a person moves through their career. A participant decades from retirement can hold a large majority in stocks, accepting short-term volatility in exchange for long-term growth. As retirement approaches, that same participant generally benefits from shifting toward a more balanced mix that includes more bonds and stable holdings, protecting what has been

DRAFT

accumulated while still maintaining meaningful growth exposure. A Target Date Fund makes that shift automatically. Each fund is dated to an approximate retirement year, and its allocation moves gradually toward a more conservative mix over time. The path that allocation follows as the participant ages is called the glide path. Alaska's glide path continues to adjust beyond the target retirement date and retains continued exposure to equities well into retirement — at a lower proportion than in a participant's working years — recognizing that a participant's savings may need to last for decades after they stop working.

The automatic nature of the glide path is what makes these funds well suited to serve as the plan's default investment. A participant does not need to monitor markets, rebalance, or decide when to become more conservative; the fund does it for them. Alaska's Target Date Funds combine low-cost index exposure with active management in areas where it adds value, drawing on the manager's particular strengths. ARMB and its investment consultant, Callan, review the performance of each Target Date Fund on a regular basis, evaluating returns over time and against peer funds. This ongoing oversight keeps the plan's default aligned with sound allocation practice over time. For a participant who does not want to construct and manage their own portfolio, a Target Date Fund provides a diversified, professionally designed, age-appropriate allocation in a single investment.

The plan also carries two legacy fixed-allocation funds that predate the availability of Target Date Funds. The **Alaska Conservative Balanced Fund** holds approximately 35% stocks and 65% bonds: an allocation equivalent to roughly where the Alaska glide path places a member around age 80. The **Alaska Moderate Growth Balanced Fund** holds approximately 60% stocks and 40% bonds: equivalent to around age 63 on the glide path. Neither fund adjusts over time.

The **Alaska Stable Value Fund** carries no equity: it is effectively 100% fixed income wrapped in insurance contracts designed to protect principal and outperform a money market account in the short term. At no point on the Alaska Target Date Fund glide path does a recommended allocation reach 0% equity, even for members well into retirement. Stable Value does not correspond to any age on the glide path.

DC Plan Key Concepts

Term	Plain-Language Explanation
Recordkeeper	The vendor that tracks participant account balances, processes contributions and withdrawals, and provides online account access and participant communications. Think of the recordkeeper as the scoreboard: it shows participants what is in their accounts and records every transaction, but it does not select or manage the investments. DRB manages the recordkeeper contract.
Investment Lineup	The menu of investment options available to participants across the DC plans, the Deferred Compensation Plan, and SBS. The board approves the lineup, which is designed to cover major asset classes across a range of risk levels, giving participants the tools to build appropriately diversified portfolios for their individual circumstances and time horizons.

DRAFT

Target Date Fund (TDF)	A diversified fund that automatically shifts from aggressive (equity-heavy) to conservative (bond-heavy) as the participant approaches and moves through their retirement years. This gradual and systematic change in risk level is called a glide path. Roughly two-thirds of ARMB DC participants hold only Target Date Funds, making them central to participant outcomes. Because so many participants rely on TDFs as their sole investment, the Board scrutinizes Target Date Fund structure, glide path design, and underlying fund costs carefully.
QDIA	Qualified Default Investment Alternative: the investment option participants are defaulted into if they make no active choice. Target Date Funds serve as ARMB's QDIA. Federal law provides fiduciary protection for plans using an appropriate QDIA.
Rollover	Moving retirement savings from one plan to another — for example, when a participant leaves state employment, the participant may keep their funds within the State of Alaska plans or move their balance to an IRA outside the State plans. Fee structures, investment options, and plan protections can change significantly when assets leave the State plans, and comparisons are not always straightforward. The Board has an ongoing interest in ensuring participants receive objective information at the time of separation, at retirement, and when making Required Minimum Distribution decisions, so they can make informed choices about their savings.
Managed Account	A service where the recordkeeper manages a participant's investments for an additional fee, typically a percentage of assets on top of underlying fund expenses. The plan offered this as an opt-in service alongside Alaska's standard Target Date Funds. ARMB recommended closing the program in March 2024 following a multi-year analysis with Callan; it was formally discontinued on November 15, 2024.
Health Reimbursement Arrangement (HRA)	An employer-funded account available to DC participants that can be used to reimburse eligible medical care expenses in retirement, including premiums, deductibles, and qualified medical costs for the member, their spouse, surviving spouse, or dependent children. The HRA Plan was created as part of the 2005 pension reform legislation that established Alaska's defined contribution system. Employers contribute to each member's individual HRA account at a rate set by statute based on average annual compensation across the PERS and TRS systems. ARMB is the fiduciary of the HRA trust fund and sets the interest rate applied annually to member account balances. The most important thing DC members should understand about the HRA: members are eligible after 10 years of membership service. A member who leaves PERS or TRS employment after accumulating at least 10 years of service

DRAFT

	retains their HRA account even if they do not retire directly from the system and even if they leave well before retirement age. Interest continues to accrue on the account balance, and the member can access the funds when they reach normal retirement age. A member who leaves with fewer than 10 years of service forfeits the account. Participation in the State's retiree medical insurance plan is not required to access HRA reimbursements. Rolling over a DC account to another provider does not eliminate HRA eligibility — the HRA is a separate plan; eligibility is based on years of membership service, not on whether the member keeps DC savings within the State plan.
DC Healthcare (Retiree Major Medical)	A retiree health insurance program available to eligible DC members. Eligibility requires either age 65 with at least 10 years of membership service, or 30 years of service at any age (25 years for peace officers and firefighters), and the member must retire directly from covered service.
ARMB's Recommendation Authority	ARMB's role is not limited to investment oversight. Under AS 37.10.220(a)(4), ARMB is authorized to prescribe policies for the proper operation of the retirement systems and take other actions necessary to carry out their intent and purpose.
WEP / GPO Repeal	Windfall Elimination Provision and Government Pension Offset: federal rules that reduced Social Security benefits for public employees receiving government pensions. Congress repealed these rules, significantly increasing projected Social Security income for many members who have met the Social Security eligibility thresholds.

Section 9 | How to Read a Callan Performance Report

9.1 What the Report Is

Each quarter, Callan measures how every ARMB investment manager, the various asset class composites, and the overall fund performed against their respective benchmarks and peer groups. The report covers the most recent quarter plus trailing 1, 3, 5, and 10-year periods. Longer periods are more meaningful for assessing skill. One quarter of underperformance tells you almost nothing; three to five years of consistent underperformance can be significant. Note that ARMB's formal Watch List criteria also reference a six-year trailing period for net-of-fees performance evaluation; that specific period appears in Watch List assessments rather than in the standard quarterly performance tables.

9.2 The Total Fund Page: Start Here

The report opens with total fund performance. Look for three numbers:

- **Total fund return vs. Policy Benchmark:** Did the portfolio as a whole beat its blended benchmark? Over 1, 3, 5, and 10 years?
- **Total fund return vs. peer universe:** Where does ARMB rank among comparable public pension funds? First and second quartile rankings are positive. Third and fourth quartile over sustained periods warrant discussion.
- **Attribution analysis:** How much of the total fund's excess return (or deficit) came from asset allocation decisions vs. individual manager performance, and where?

9.3 Asset Class and Manager Pages

Each asset class has its own section with an analysis of how the asset class composite as a whole has done versus its benchmark and peer group if applicable. Individual manager analysis is nested within each asset class section. For each manager, Callan reports:

- **Manager return vs. manager benchmark** (e.g., a small-cap manager vs. the Russell 2000 or S&P 600). This is the primary performance question.
- **Peer group ranking:** How does this manager compare to other managers running a similar type of strategy?
- **Risk statistics:** Tracking error, Sharpe ratio, information ratio. These tell you whether good returns came from skill or from taking on excessive risk.
- **Style analysis:** Is the manager investing consistently with their stated mandate? Style drift shows up here.
- **Holdings analysis** for public equity managers: How has the portfolio composition compared to the benchmark and to managers running a similar type of strategy?

What to Look For and Ask About

- A manager who underperforms their benchmark but ranks in the top quartile of peers may be in a difficult style environment, not necessarily a failure of skill.
- A manager with high tracking error and top-quartile performance took big bets that paid off. Worth asking: would we be comfortable if those same bets had gone the other way?

9.4 Private Markets Pages

Private equity, real assets, and real estate are reported differently from public markets; quarterly returns are based on appraisals and capital account valuations, not daily market prices. Use IRR, TVPI, and DPI rather than time-weighted returns for these. Vintage year matters: compare a fund's performance against funds of the same vintage, not against funds that started in different market environments. Each private market asset class is covered in detail annually by staff and Callan and receives less focus quarterly.

9.5 The Conversation to Have in the Meeting

Callan walks through the report in each Board meeting. The most productive contributions are questions about process and trends, not reactions to a single quarter's numbers. Useful questions:

- Which managers are trending in the wrong direction over 3-5 years, even if the most recent quarter was positive?
- Where is the fund's total fee burden concentrated, and is there a passive alternative that would deliver similar risk-adjusted returns at lower cost?
- Are any managers approaching Watch List criteria even if not yet formally placed there?
- What does attribution analysis tell us about whether asset allocation decisions or manager selection decisions are driving total fund results? In which areas of the total fund is value being added or subtracted versus the total Policy Benchmark?

Section 10 | ARMB Acronym Quick Reference

Acronym	Stands For	Quick Note
ACWI	All Country World Index	MSCI benchmark covering global equity markets; used with various suffixes: ACWI ex-US, ACWI ex-US IMI
ARR	Assumed Rate of Return	Currently 7.25%; the discount rate for DB plan liabilities
ARMB	Alaska Retirement Management Board	The Board
AS	Alaska Statutes	AS 37.10.210 establishes ARMB; AS 39.35 governs PERS; AS 14.25 governs TRS
ASOP	Actuarial Standard of Practice	Professional standards for actuaries; primary standard in malpractice analyses
AUM	Assets Under Management	Total assets being managed
BPS	Basis Points	1/100th of 1%; 100 BPS = 1%
CIO	Chief Investment Officer	Leads DOR investment staff
DB	Defined Benefit	Traditional pension; employer bears risk
DC	Defined Contribution	Employee bears investment risk; new PERS/TRS hires since 2006
DOA	Department of Administration	DRB administers plans; holds primary actuary and recordkeeper contracts
DOR	Department of Revenue	Treasury Division staffs ARMB
DRB	Division of Retirement and Benefits	Administers PERS/TRS benefits and participant services
EAFE	Europe, Australasia, and Far East	Component of MSCI EAFE index; covers developed international markets
EGWP	Employer Group Waiver Plan	Federal Medicare Part D subsidy; generates significant PERS/TRS healthcare savings
HRA	Health Reimbursement Arrangement	Employer-funded account for DC participant healthcare expenses in retirement

DRAFT

IAC	Investment Advisory Council	Three-member external advisory body
IR	Information Ratio	Excess return divided by tracking error; measures consistency of outperformance
IRR	Internal Rate of Return	Standard performance metric for private markets
JRS	Judicial Retirement System	Alaska judges
MSCI	Morgan Stanley Capital International	Index provider; standard prefix for international equity benchmarks including MSCI EAFE, MSCI EM, MSCI ACWI
Multi-Asset	Multi-Asset (SAA category)	Asset class t that is expected to provide accretive returns to the overall portfolio through differentiated investments returns; see Section 3.6
NCREIF	National Council of Real Estate Investment Fiduciaries	Provides real asset benchmarks (NPI, ODCE, Farmland, Timberland)
NGNMRS	National Guard & Naval Militia Retirement System	Smaller system overseen by ARMB
NPI	NCREIF Property Index	Core real estate benchmark
ODCE	Open-End Diversified Core Equity (real estate)	Pooled open-end core real estate fund vehicle; NCREIF ODCE Index is the standard benchmark
PE	Private Equity	Investment in non-publicly traded companies
PERS	Public Employees' Retirement System	State/municipal employees
QDIA	Qualified Default Investment Alternative	Default DC fund option; federal law provides fiduciary protection
RFI	Request for Information	Market survey before a formal RFP
RFP	Request for Proposal	Formal competitive bidding process
SAA	Strategic Asset Allocation	Target portfolio mix by asset class
SBS	Supplemental Benefits System	Voluntary DC savings plan for state employees and participating PERS employers

DRAFT

S&P	Standard & Poor's (S&P Dow Jones Indices)	Index provider; standard prefix for S&P equity benchmarks including S&P 500, S&P 600, S&P 900
SRAC	Strategic Review and Action Committee	Task force for complex policy topics; recommends new or revised policies
TDF	Target Date Fund	Auto-glide-path retirement fund; ARMB's QDIA
TIPS	Treasury Inflation-Protected Securities	Inflation-linked U.S. bonds
TRS	Teachers' Retirement System	Certificated educators; includes Dept. of Education and Early Development and eligible UA faculty
TWR	Time-Weighted Return	Standard performance calculation; eliminates cash flow distortion
UAL / UAAL	Unfunded Actuarial (Accrued) Liability	The pension funding gap
VC	Venture Capital	Early-stage private equity; high return dispersion; manager selection is critical
WEP / GPO	Windfall Elimination Provision / Gov't Pension Offset	Repealed federal rules that reduced Social Security for public employees

Section 11 | Practical Guidance

11.1 Reading a Board Packet

- **Start with the executive summary and action items** on the first few pages of each committee packet. Know what decisions are being requested before reading the supporting materials.
- **Performance reports come from Callan.** The key number is excess return vs. benchmark, not absolute return. See Section 9 for how to read these.
- **Actuarial reports** come from the primary actuary and the review actuary. Focus on funded ratio trends, contribution rate projections, and any flags the review actuary raised in its independent review.
- **Watch List discussions** appear in the ARMB board packet. Watch List discussions include which managers are currently under review, whether any additions or removals are being proposed, and how those managers have been performing against their benchmarks in the most recent Callan report.
- **Proposed resolutions** include both the resolution language and a staff memo with rationale. Read both.

11.2 Key Questions for Board Meetings

- What is the benchmark for this manager, and how have they performed against it over 1, 3, 5 and 10 years?
- What are the fees? How does that compare to a passive alternative in the same asset class?
- If the portfolio manager who pitched us this strategy left the firm tomorrow, would the strategy continue the same way?
- What is the current funded ratio for PERS and TRS, and how has it changed over the past three years?
- What is the contribution rate impact if actual returns run 1% below the Assumed Rate of Return for one year? For three consecutive years?
- Are there any managers approaching the Watch List? What is the concern?
- What did the review actuary test life review find this year? Were there any discrepancies between the primary actuary model output and the review actuary's independent calculation?

11.3 Governance vs. Management

Boards Govern. Staff Manages.

As a trustee, the role is to set policy, approve strategy, hire and oversee managers, and hold staff accountable. It is not to direct individual security purchases, negotiate directly with managers, or second-guess day-to-day operational decisions.

The most effective trustees ask probing process questions, ensure decisions are well-documented, and hold fiduciary standards consistently, without micromanaging the professionals who work for the board. The question 'what process did you use to reach that conclusion?' is almost always more productive than 'why didn't you buy X instead of Y?'

DRAFT

For outside observers, understanding this distinction also helps interpret board discussions. When a trustee asks about process rather than second-guessing specific trades, that reflects sound governance practice, not evasion of the harder question.

11.4 Resources and Where to Go for More

- **ARMB website:** treasury.dor.alaska.gov/armb. All meeting packets, minutes, resolutions, investment policies, and the Policy & Procedures Manual are archived there.
- **Callan LLC:** Prepares educational presentations on market conditions, asset classes, and portfolio strategy for each quarterly meeting. Callan's written materials in board packets are publicly available at treasury.dor.alaska.gov/armb and worth reading in full.

DRAFT

Charter of the Strategic Review and Action Committee
of the Board of Trustees of the Alaska Retirement Management Board

I. Committee Purpose.

The purpose of the Strategic Review and Action Committee (the “Committee”) is to serve as a task force that investigates complex or emerging topics requiring deeper examination in support of informed Board decision-making. The Committee is charged with developing educational materials, analyses, and recommendations on such topics to assist the Board in its oversight of the retirement systems.

The Committee works in collaboration with ARMB staff and external experts as needed. It may request assistance from Department of Revenue or other state staff and, through the Board Chair, may consult with other subject-matter experts to support its work. However, Committee members take primary responsibility for researching issues and preparing the Committee’s work products (i.e. the Committee does not rely solely on staff for document production).

The Committee’s work products may include summary reports of findings, educational briefings, proposed Board resolutions, or recommended actions. Such work products may be brought directly to the Board or routed through any other relevant standing committees of the Board for review and input. The Committee makes recommendations to the Board but does not have authority to act on behalf of the Board.

II. Committee Members.

The Committee consists of at least three Trustees of the Board, who have expressed a willingness to serve on the Committee and have been duly appointed by the Chair of the Board. Membership is not restricted to Trustees; the Board Chair may also appoint additional participants, including members of the Investment Advisory Council or other individuals with relevant expertise.

III. Committee Meetings.

The Committee shall meet as frequently as circumstances dictate. The Committee Chair, with the assistance of staff as needed, shall prepare and approve an agenda in advance of each meeting. The Committee shall maintain summaries of its meetings and periodically report to the Board on the significant results of the Committee’s activities, or as appropriate, make recommendations to the Board.

IV. Committee Responsibilities and Duties.

The Committee shall carry out the following responsibilities:

1. **Review Charter:** Review and assess the adequacy of this Charter at least annually and submit any recommended changes to the Board of Trustees for approval.
2. **Investigate Topics:** Investigate and analyze complex or emerging topics assigned to the Committee or identified by the Committee that may impact the Board's decision-making. This includes performing research and summarizing the Committee's findings on issues under study.
3. **Collaborate on Education:** In consultation with ARMB staff, legal counsel, and other experts, collaborate to develop a deeper understanding of key issues the Board is examining. Committee members shall be actively involved in the preparation of these work products, rather than relying solely on staff, to ensure a thorough understanding of the subject matter.
4. **Coordinate with Other Committees:** For any issue under review that overlaps with the scope of another standing committee, coordinate with that committee and refer the matter for its review or joint consideration. Unless otherwise directed by the Board, issues with overlapping scope should be routed through the relevant standing committee(s) for input before final presentation to the Board.
5. **Present Findings:** Develop and present the Committee's findings, reports, proposed resolutions, or recommended actions to the Board of Trustees. In general, such findings or proposals will be presented to the Board after appropriate review by any relevant standing committee, except in special circumstances when the Board or Board Chair directs the Committee to report directly to the full Board.
6. **Meeting Records and Reporting:** Maintain a written record of Committee meetings (meeting summaries) and ensure that the Committee periodically reports on its activities and significant findings to the Board of Trustees.
7. **Self-Assessment:** Periodically perform a self-assessment of the Committee's performance and effectiveness and discuss the results with the Board as appropriate.
8. **Other Duties:** Perform such other activities consistent with this Charter and governing law as the Committee deems necessary or appropriate, or as the Board may otherwise request.