

Legacy and Budget Stabilization Fund Advisory Board

Legacy Fund - Asset Allocation Review: Phase Two

March 23, 2021

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ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Legacy Fund

Source: **NDRIO Legacy Fund website** <https://www.rio.nd.gov/legacy-fund>

The Legacy Fund was created by a constitutional amendment in 2010. The amendment provides that 30% of oil and gas gross production and oil extraction taxes on oil produced after June 30, 2011, be transferred to the Legacy Fund. The State Investment Board (SIB) is responsible for the investment of the fund. The first Legacy Fund transfer was received by the SIB in September 2011. The ND Constitution also requires that all earnings accrued after June 30, 2017, must be transferred to the state's general fund at the end of each biennium.

Balances listed below as of January 31, 2021.



FUND VALUE

\$8,162,305,388



INCEPTION-TO-DATE NET INCOME

\$2,680,527,701



PRINCIPAL BALANCE

\$6,373,880,575



CURRENT BIENNIUM-TO-DATE EARNINGS

(as defined by NDCC 21-10-12)

\$636,395,417



EARNINGS TRANSFERRED TO GENERAL FUND

2017-19 Biennium \$455,263,216

Legacy Fund Asset Allocation

Actual versus Target

As of January 31, 2021

	<u>Allocation</u>			Current FYTD
	Market Value	Actual	Policy	Returns Net
TOTAL LEGACY FUND	8,166,501,207	100%	100%	14.04%
POLICY TARGET BENCHMARK				13.09%
TOTAL RELATIVE RETURN				0.95%
GLOBAL EQUITY <i>Benchmark</i>	4,109,487,729	50.3%	50.0%	25.29% 25.45%
GLOBAL FIXED INCOME <i>Benchmark</i>	2,870,839,422	35.2%	35.0%	2.95% 0.57%
GLOBAL REAL ASSETS <i>Benchmark</i>	1,135,120,455	13.9%	15.0%	4.08% 3.24%
GLOBAL CASH <i>Benchmark</i>	51,053,601	0.6%	0.0%	0.03% 0.08%

Initial funding September 7, 2011.

NOTE: Monthly returns and market values are preliminary and subject to change.

North Dakota's Legacy Fund earned a Net Investment Return of 9.25% for the 5-years ended 12/31/2020 including a 14.37% return in the last half of 2020

	Current FYTD <u>12/31/2020</u>	1 Yr Ended <u>12/31/2020</u>	3 Yrs Ended <u>12/31/2020</u>	5 Yrs Ended <u>12/31/2020</u>
Legacy \$8.16 billion				
Total Fund Return - Net	14.37%	12.22%	7.88%	9.25%
Policy Benchmark Return	13.32%	12.08%	7.96%	8.60%
Total Relative Return	1.06%	0.14%	-0.08%	0.65%

1. As of 12/31/2020, Legacy had a market value of over \$8.1 billion. Legacy's target asset allocation policy is 50% Global Equity, 35% Global Fixed Income and 15% Diversified Real Assets (including Global Real Estate & Infrastructure and U.S. Treasuries), as approved by the Legacy Fund Advisory Board and SIB.
2. In the Current Fiscal Year To Date (FYTD) 12/31/2020, Legacy Fund generated a Net Investment Return of 14.37% exceeding the Policy Benchmark of 13.32% by over 1%.
3. For the 5-Years Ended 12/31/2020, Legacy Fund earned a Net Return of 9.25% exceeding the Policy Benchmark Return of 8.60% by 0.65% over the last 5-years.
4. The SIB's prudent use of active investment management generated over \$70 million of incremental income (versus passive investments) for the Legacy Fund over the last 6-months after deducting all investment fees and expenses (e.g. average balance over \$7 billion x Excess Return of over 1% = \$70 million in the last six months).

RIO Overview of Callan Asset Allocation Review: Phase Two

Overview

- **Section 21-10-11 of the North Dakota Century Code provides a description of the Legacy and Budget Stabilization Fund Advisory Board's (Advisory Board) responsibilities, including the following:**
 1. "The legacy and budget stabilization fund advisory board is created to develop recommendations for the investment of funds in the legacy fund and the budget stabilization fund to present to the state investment board."
 2. "The goal of investment for the legacy fund is *principal preservation while maximizing total return.*"
 7. "The staff and consultants of the state retirement and investment office shall advise the board in developing asset allocation and investment policies."
- **Consistent with the duties listed above, the North Dakota Retirement and Investment Office (RIO) made a series of recommendations to the Advisory Board on January 29, 2021:**
 - A. Determine if the Advisory Board seeks to expand the "in state investment platform" by allowing private market investments; and if so
 - B. Seek to retain a qualified outside firm to conduct an asset allocation study with the purpose of evaluating a potential addition of "private equity" to the Legacy Fund's strategic asset allocation policy.
- **Callan performed the asset allocation study in two phases.**
 - C. **Phase One was a returns-only analysis. The study was presented February 12, 2021 to the Advisory Board. It evaluates what adding Private Capital investments may do to the Legacy Fund's expected return and risk levels.**
 - D. **Phase Two analyzes the impact of Private Capital investments by measuring the dollar-based future variations in the Legacy Fund's market value; ranges of expected inflows (based on projected oil prices and production volumes); and outflows transferred to the General Fund based on projected earnings.**

Private Capital and the North Dakota Legacy Fund

- **The State of North Dakota is currently considering legislation that would encourage the Legacy Fund to allocate capital to in-state investments. The majority of states with in-state programs invest via private rather than public markets for these types of investment mandates. This experience provides the basis for considering “private capital” as an asset class to house prospective direct private investments for Legacy Fund.**
- **“Private capital” includes the potential for investment in private equity (ownership) and private debt (direct lending)**
- **Private equity and private debt require development of a comprehensive program to deploy capital**
 - Establish goals, design portfolio, develop plan to allocate capital across strategies and time, source deals, execute, and monitor
- **An allocation to in-state investments, including through Private Capital, should have the goal of meeting institutional best practices in design, execution, and due diligence, as well as expectations for risk and return**
- **A Private Capital program will focus on investing in North Dakota, but the allocation will be broadly diversified and include private investments across the U.S.**
- **Callan Observation - Existing in-state investment programs have clearly shown that the majority of investments are made via private markets rather than through public markets. They have typically begun with low single-digit target allocations.**
- **RIO Summary of Callan Recommendation - Callan recommended the Advisory Board consider adopting Mix 3. The interim Private Capital target is 3 +/- 3% (with a range of 0% to 6%).**
 - **The Target can be adjusted as the program gains traction via successful implementation.**
 - **The Advisory Board and SIB approved this recommendation to FURTHER EXPAND Legacy Fund’s in-state investment program with a private capital target allocation of 3% (to complement the existing 5% target to the BND In-State Investment Program (Match Loan).**
 - **Expansion of the in-state investment mandate is subject to SIB retaining a qualified program manager.**

Cash Flow, Market Value and Annual Distribution Analysis

Fully Integrated Model of the Legacy Fund

Phase Two of this asset allocation study takes a deeper dive to measure the cash flow implications of asset mixes that include various amounts of private capital. The study includes an evaluation of future Fund MV and cash flow based on:

- 1. ND government projections of oil prices and production volumes** that are used to establish inflows into the Legacy Fund;
- 2. Callan's standard Capital Market Assumptions (CMAs)** to model alternative asset mixes' performance;
- 3. Outflow assumptions (annual distributions to the State's general fund.** Two methods examined:
 - 1. Current policy** - based on the North Dakota Century Code's definition of "earnings", AND
 - 2. A percent of market value (POMV) model**, which Callan suggests is industry best practice

A key element to the analysis included an evaluation of the distribution or "spending policy" of the ND Legacy Fund.

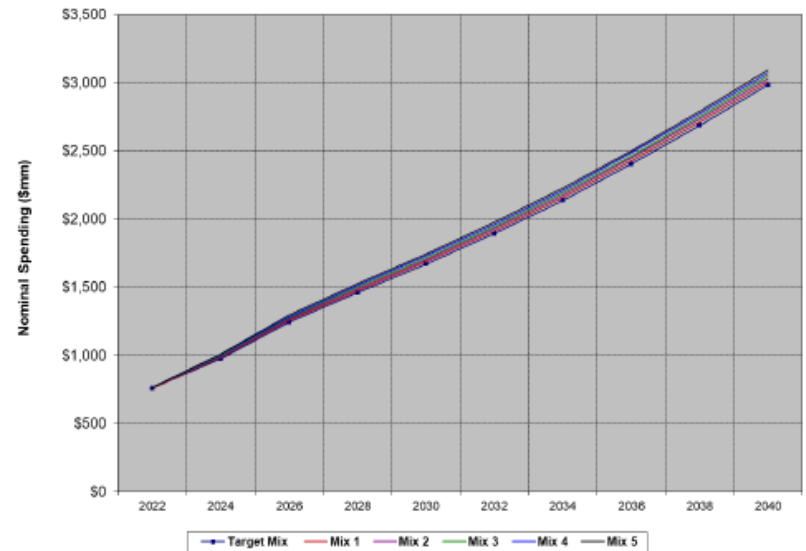
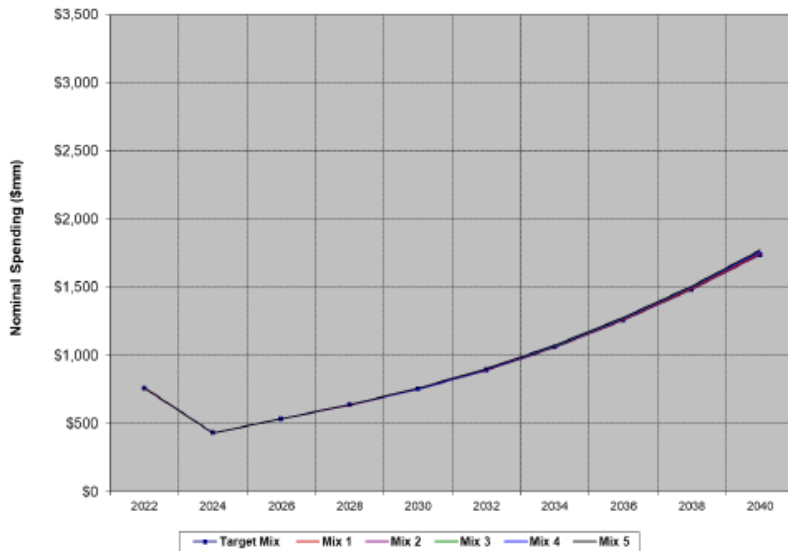
- The ND legislature is considering a change to the NDCC to remove "earnings" and replace the distribution policy to POMV, so we modeled both methods.**
- The volatility of the distribution can vary greatly under the two methods (earnings and POMV)**
- The size of the distribution can be tailored under either method to meet goals articulated for the Fund.**
 - For the earnings method, the percent of earnings transferred can be changed, as can the definition of earnings. Current policy is 100% of earnings.
 - For POMV, the % of assets transferred can be changed, as can the period over which the market value is calculated for the transfer.

Nominal Distributions – POMV versus Earnings

Deterministic Projections – No Capital Market Uncertainty

6% POMV Per Biennium, 5-Year MV Smooth, Lagged One Fiscal Year

Earnings Transferred Each Biennium in the First Month of the Next Biennium



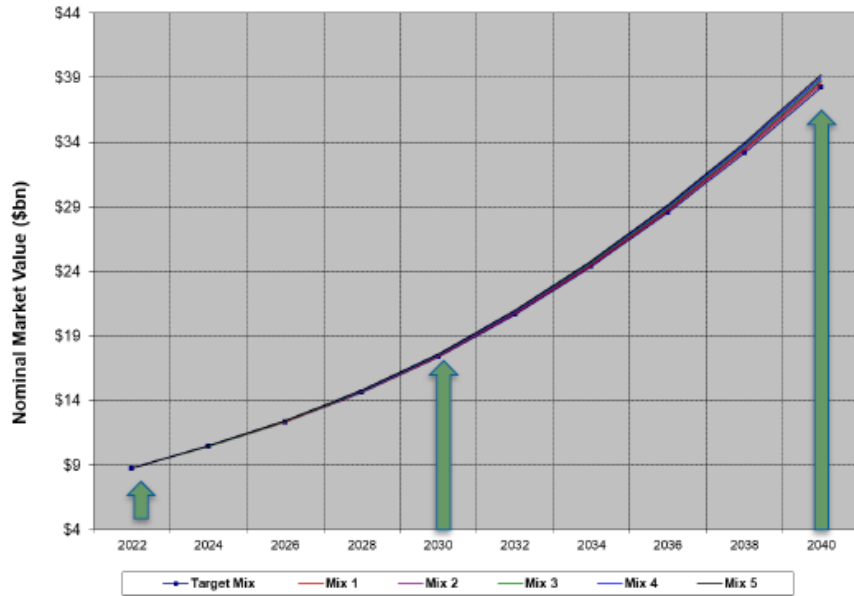
– Distribution for FY 2022 reflects transfer of 100% of earnings based on 2019-21 biennium. 6% of biennia POMV is assumed thereafter.

– Distribution for 100% of earnings is assumed for the forecast.
– Charts are on the same scale to facilitate comparison.

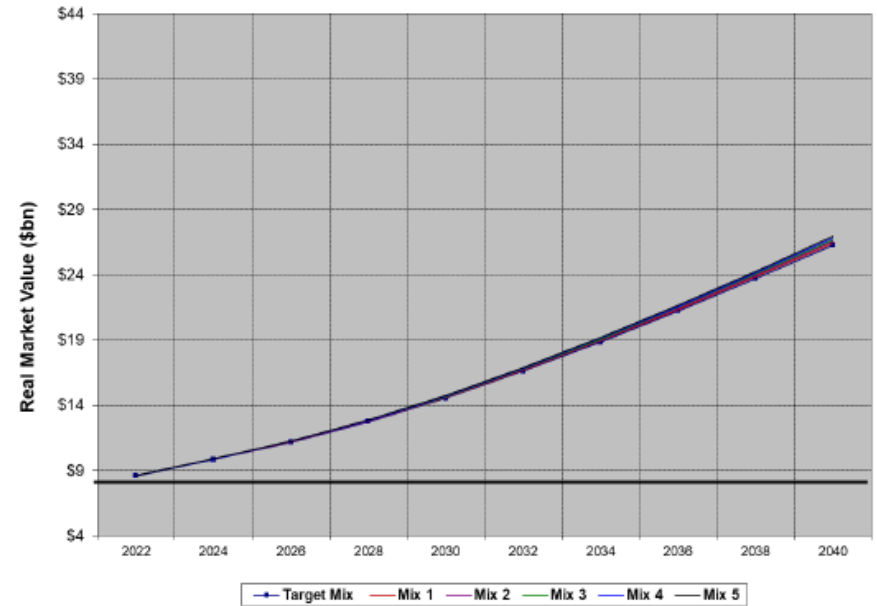
Projected Growth in Legacy Fund Market Value – 6% POMV

Distribution Policy of 6% of Market Value of Assets Per Biennium

Nominal Market Value



Real Market Value



Mix 3 = Legacy Fund grows to \$17 billion in 2030 and \$38 billion by 2040.

Charts show nominal and real (inflation-adjusted) market value for the year following each biennium, after transfers to the General Fund have been removed.

Nominal and real market values increase under all asset allocations, supported by strong inflows from ND royalty forecasts.

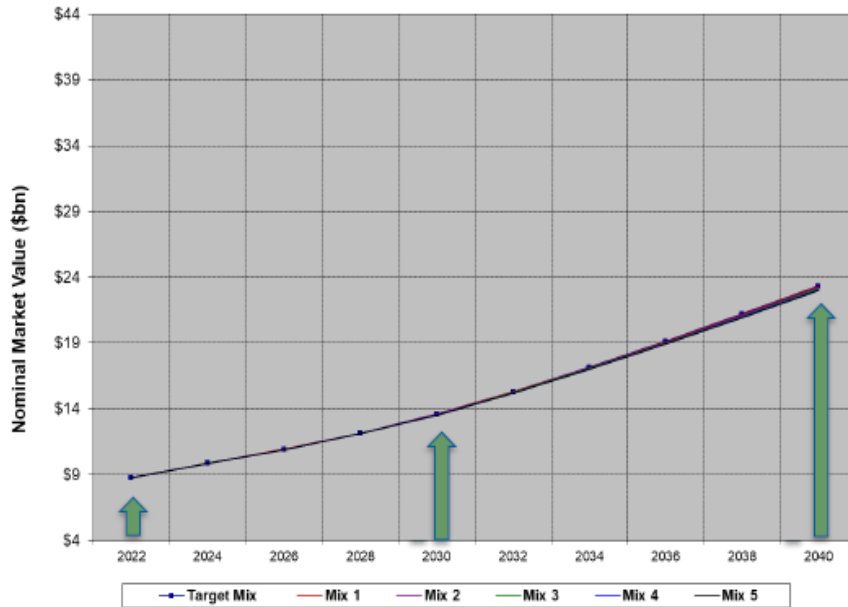
Purchasing power of the Legacy Fund (real value of Fund assets) can be sustained over the long run under a distribution policy of 6% of POMV each biennium. The Fund could easily sustain a higher rate of POMV spending, 4% to 5% per year, or 8-10% per biennium.

Distributing at the maximum rate allowed for the Fund (income plus 15% of fund value) would eventually catch up to inflows from oil and gas, and real value of the fund begins to decline after 15 years for all mixes (not shown above).

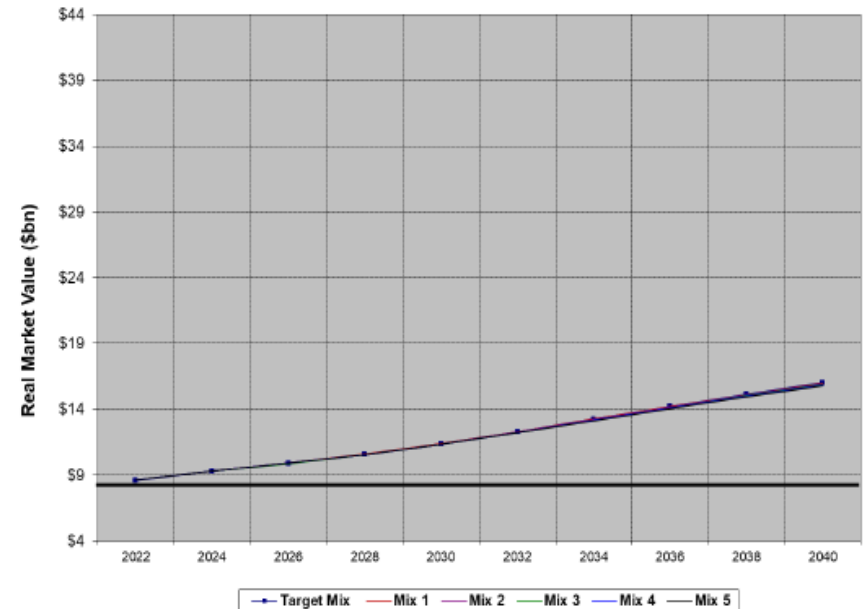
Projected Growth in Legacy Fund Market Value – Earnings

Distribution Policy of 100% of Earnings (NDCC Definition) Assets Per Biennium

Nominal Market Value



Real Market Value



Mix 3 = Legacy Fund grows to \$14 billion in 2030 and \$23 billion by 2040.

Charts show nominal and real (inflation-adjusted) market value for the year following each biennium, after transfers to the General Fund have been removed.

Nominal and real market values increase under all asset allocations, supported by strong inflows from ND royalty forecasts.

Purchasing power of the Legacy Fund (real value of Fund assets) can be sustained over the long run under a spending policy of 100% of earnings each biennium. Effective annual spending rate rises from 5% to 8% over the forecast period. Earnings spending can be managed by adjusting the percentage spent (0-100%) or changing the definition of earnings with regard to capital gains.

Summary of Results

POMV Distribution Policy

- **A POMV distribution policy simplifies the accounting of and planning for the transfers to the general fund, and greatly improves on the stability and predictability of the amount distributed each biennium.**
- **The POMV policy is an industry standard that acknowledges total return and Fund market value without separately accounting for income, realized and unrealized gains. The distribution policy generates a much narrower range of potential outcomes, enabling the legislature to better plan for the use of the transfers in budgeting. The rate of the POMV policy, along with the calculation of the MV against which the policy is applied can be easily tailored to meet the goals of the Legacy Fund:**
 - Intergenerational equity – setting the rate that will be sustained by the Fund's expected return and royalty deposits
 - Stability of transfers – smoothing of the MV calculation by averaging over multiple years' MV
 - Predictability – lagging of the MV calculation in advance of the transfer, along with the smoothing of the MV over multiple years
 - The effect of smoothing and lagging shifts the impact of market volatility from the annual distribution to corpus of the Legacy Fund, which has a much longer time horizon than the biennial state budget process
- **The proposed policy of 6% of POMV per biennium implies an annual rate of 3%. The smoothing over 5 fiscal years and lagging the calculation one year results in an effective spending rate that comes out to 1-2% of MV per year, or 2-4% per biennium.**

Summary of Results

Private Capital Allocation

- **The analysis of the financial condition of the ND Legacy Fund under both earnings-based and POMV distribution policies suggest the proposed allocation of 3% to private capital (private equity and private credit) does not pose any immediate issues to the liquidity requirement of the ND Legacy Fund.**
- **Current projections for robust royalties from oil and gas in ND will support strong growth in the market value of fund assets and distributions under either policy, and that the increase in exposure to illiquid assets does not compromise the ability of the Fund to meet its transfer obligations to the general fund, nor interfere with the operation of the investment program. One caveat to this finding:**
 - Spending at the maximum allowable rate (15% of principal plus income) will eventually cause growth in the real value of the corpus and spending will stop after 15 years, and both measures will begin to decline as spending catches up to the inflows.
 - This analysis assumes the legislature does not invoke this maximum allowable rate, but sticks with either the current earnings distribution policy or adopts a POMV policy.
- **The analysis of the proposed Mix 3, with 3% in private capital, suggests that MV and spending will be modestly improved over the current target, with no substantial worsening of the worse case result.**

Appendix – Reference Materials

North Dakota In-State Investment Program Overview

Neutral Factual Testimony

The State Investment Board (SIB) has supported Bank of North Dakota's (BND) Match Loan CD Program, which provides cost-efficient funding to businesses looking to grow existing operations or establish a new business in North Dakota, for over 30 years.

In 2019 and 2020, the Legacy Fund Advisory Board (Advisory Board) and SIB doubled the size of its commitment to the BND Match Loan CD Program from \$200 million in 2019 to \$400 million in 2020 (and represents an approximate 5% target asset allocation).

In 2020 and 2021, the Advisory Board and SIB conducted a study to determine the most efficient and prudent manner to expand the in-state investment program. After reviewing the study, the Advisory Board approved a new 3% Private Capital allocation with a preference for in-state investments. The SIB approved this recommendation to increase Legacy in-state investment targets to 8%.

As a result, the Legacy Fund asset allocation policy now includes a 5% target for the BND Match Loan CD Program as a Fixed Income sector allocation in addition to a target 3% Private Capital allocation (+/- 3%) with a preference for in-state investments at a competitive rate (which reduced Legacy's asset allocation to Global Equities from 50% to 47%).

Private market investments take a significant length of time to prudently deploy capital as it commonly takes many years to hit investment targets.

Legacy Fund earned a net investment return of 9.25% per annum for the 5-years ended Dec. 31, 2020. In the last half of 2020, Legacy's net investment return was 14.3% (or \$1 billion) which exceeded the policy benchmark return by 1% (or \$70 million) after all fees and expenses.

As of January 31, 2021, the Legacy Fund balance exceeded \$8.1 billion including nearly \$2.7 billion of net investment income (since inception) with current biennium to date earnings of \$636 million (as defined by NDCC 21-10-12). Legacy Fund earnings were \$455,263,216 in the 2017-19 biennium (as defined by NDCC 21-10-12) and were transferred to the General Fund in mid-2019.

Note: Reported amounts post June 30, 2020, are unaudited and subject to change.

Overview of Recent SIB and Advisory Board Legacy Fund In-State Investment Plan Activities

Key Milestones to Expand Legacy Fund In-State Investment Program:

- Sep. 25, 2020** - SIB raises Legacy Fund In-State Investment Program Commitment to \$400 million
- Oct. 23, 2020** - Callan, Barings, Commerce, Grosvenor and Hamilton Lane share their insight, background and experience in expanding SIB's existing in-state investment program
- Nov. 20, 2020** - Callan, RIO and SWIB In-State Portfolio Manager highlight common elements of other mature in-state investment programs in private equity, venture capital and private credit
 - Mosaic Governance Advisors reviews key factors when *"Constructing Prudent Due Diligence When Considering an In-State Investment Program"*
- Jan. 22, 2021** - RIO outlines key considerations to expand the Legacy Fund In-State Investment Program
 - Callan and RIO review recent in-state investment survey results and propose a timeline to advance an "In-State Investment Program" for review and approval by the Advisory Board
- Jan. 29, 2021** - RIO recommends the Advisory Board engage Callan to conduct an asset allocation study to evaluate the impact of including a target allocation to private equity by February 12, 2021; and
 - Acknowledge the SIB will seek to engage Callan to identify at least one private equity firm with expert, institutional experience within "in-state private equity programs" by March 26, 2021
- Feb. 12, 2021** - Callan to present the results of their asset allocation study including the recommended options to expand the Legacy Fund in-state investment program in the private markets. RIO will seek to incorporate the recommended changes into a new Legacy Fund investment policy statement

Feb. 26, 2021 - RIO will seek SIB approval of Legacy Fund's revised investment policy statement including any asset allocation changes to add a new private markets in-state investment program

Mar. 26, 2021 - Callan and RIO will advance at least one investment management firm with expert, institutional experience in implementing a new in-state investment program in the private markets

Callan In-State Investment Program Research of Other U.S. Public Funds:

Callan previously provided a comprehensive list of 23 in-state investment programs in 16 other states ranging in size from \$50 million in Colorado and Nevada and up to roughly \$1 billion in larger states like California, Florida, New Mexico, New York and Texas. Although the dollar value of the programs varied widely, they generally represented less than 3% of the underlying investment fund.

Callan also highlighted programs in states like Alaska, Connecticut, Nevada, New Mexico and Oregon with state economies being more closely comparable to North Dakota's in terms of size and structure (with GDP ranging from \$54 to \$287 billion). Amounts invested within this group ranged from \$50 million to \$360 million based on Callan's research. Most of these programs invested in multiple asset classes, though the primary focus is venture capital and growth equity, noting that these two strategies are expected to be the most effective in driving job creation and economic development. Implementation has been through a combination of private equity fund commitments and co-investments, although each state uses different guidelines for which types of businesses the programs intend to target. Most of these programs are designed to support businesses in the state, although Connecticut and Oregon's are regional. Investment outcomes across these state programs has varied from satisfactory to disappointing.

Asset Class	Policy Target Percentage
Broad US Equity	30%
Broad International Equity	20%
Fixed Income and BND CD	35%
Core Real Estate	5%
Diversified Real Assets	10%



Broad U.S. Equity	28%
Broad Non-U.S. Equity	19%
Private Capital	3%
Fixed Income and BND CD	35%
Broad Real Estate	5%
Diversified Real Assets	10%

SIB Raises In-State Investment Targets up to 8% as Recommended by Legacy Fund Advisory Board

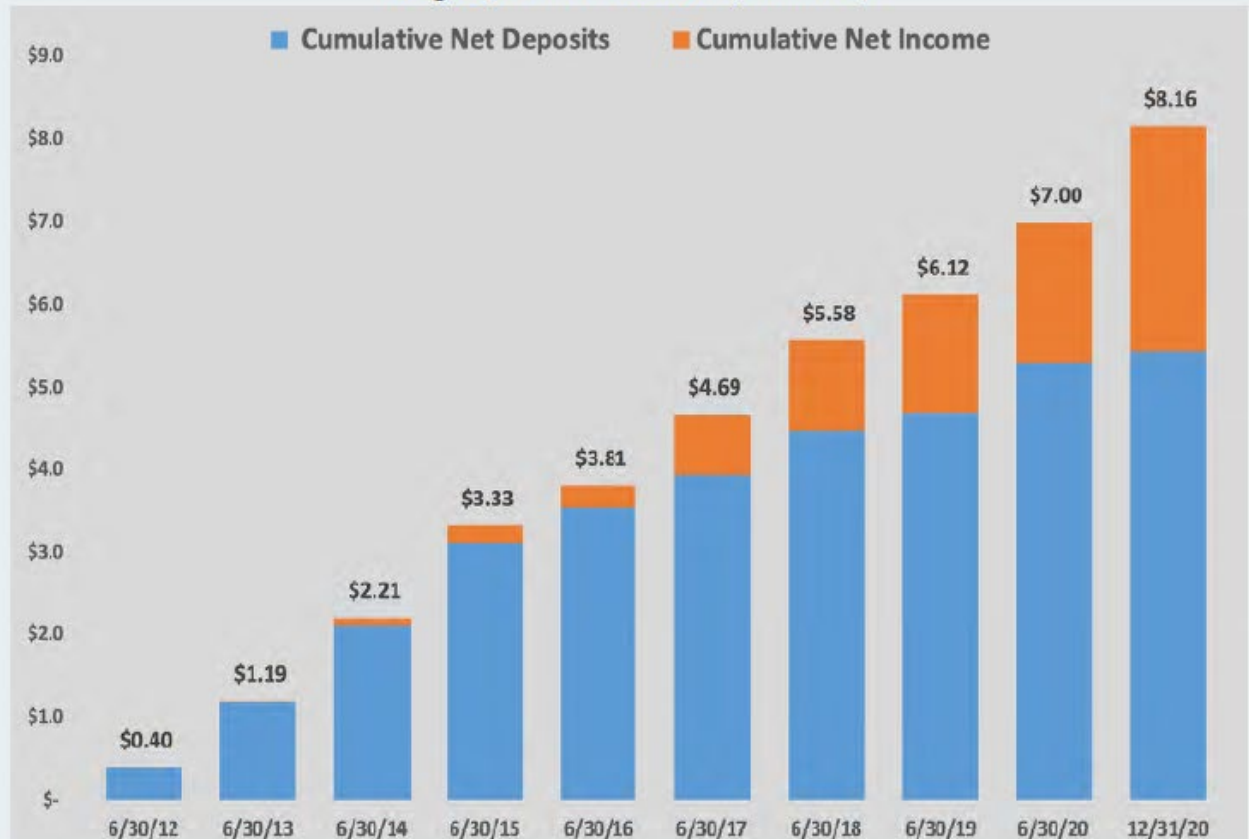
During the past 18 months, the SIB has doubled the size of the Legacy Fund In-State Investment Program by increasing its long-standing commitment to the Bank of North Dakota Match Loan Program – from a \$200 million commitment in August of 2019 to a \$400 million in November 2020. In 2021, the Advisory Board and SIB seeks to further expand its commitment to the Legacy Fund In-State Investment Program by adding a new private capital allocation with a preference to target in-state investments in private equity and private credit. The SIB approved these Advisory Board recommendations in February and is working towards identifying a new In-State Investment Program management firm.

Legacy Fund Gains Over \$1 billion in Last Half of 2020

The Legacy Fund balance exceeded \$8 billion at year-end 2020 and has earned over \$2.7 billion of net investment income since inception.

Legacy Fund net investment returns exceeded 14.3% in the last half of 2020 and 9.25% per annum for the 5-years ended 12/31/2020. Month-end valuations and investment results are reported on RIO's website.

Legacy Fund Balance (\$ in billions)



SWFI Rank		6-Mos. Ended 12/31/2020	1-Year Ended 12/31/2020	5-Yrs. Ended 12/31/2020
1	Norway Gov't. Pension Fund Global \$1.3 trillion			
	Net Investment Return	na	10.86%	8.69%
	- <i>Passive Benchmark</i>	<i>na</i>	<i>10.59%</i>	<i>8.50%</i>
	<i>72.8% Equity / 24.7% Fixed Income / 2.5% Real Estate</i>			
18	Alaska Permanent Fund \$73 billion			
	Net Investment Return	15.74%	12.15%	10.09%
	- <i>Passive Benchmark</i>	<i>18.24%</i>	<i>12.38%</i>	<i>9.40%</i>
	<i>60% Equity / 20% Fixed Income / 10% US TIPs / 10% Real Estate</i>			
31	New Mexico SIC Land Grant \$22 billion			
	Net Investment Return	14.24%	8.94%	8.68%
	- <i>Interim Policy Index</i>	<i>14.55%</i>	<i>10.13%</i>	<i>8.75%</i>
	<i>51% Equity / 26% Fixed Income / 12% Real Estate / 10% Real Return / 1% Cash</i>			
45	Wyoming Permanent Mineral \$9 billion			
	Net Investment Return	11.5%	9.1%	7.1%
	- <i>Passive Benchmark</i>	<i>11.2%</i>	<i>8.4%</i>	<i>6.9%</i>
	<i>40% Equity / 36% Fixed Income / 11% Real Estate / 7.5% Hedge Funds / 5.5% MLPs</i>			
47	North Dakota Legacy \$8 billion			
	Net Investment Return	14.37%	12.22%	9.25%
	- <i>Passive Benchmark</i>	<i>13.32%</i>	<i>12.08%</i>	<i>8.60%</i>
	<i>50% Equity / 35% Fixed Income / 5% US TIPs / 5% Real Estate / 5% Infrastructure</i>			