



Health Care Endowment Sustainability

Nebraska Investment Council
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Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc., an Aon Company.



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Overview of Health Care Endowment

- The Health Care Endowment includes two funds grouped together with the same asset allocation policy:
 - Nebraska Medicaid Intergovernmental Trust (3/31/2018 market value = \$22.3 million)
 - Nebraska Tobacco Settlement Trust (3/31/2018 market value = \$402.9 million)
- The investment goals of the Endowment are twofold:
 - 1) Provide funds for current spending needs
 - 2) Increase the size of the portfolio to support future needs
- NIC determines asset allocation policy only (i.e., not distribution policy)
- Spending policy is determined by legislation; historically a fixed dollar amount rather than a % of assets:

2005	\$52.0 million	2012	\$56.3 million
2006	\$52.0 million	2013	\$56.1 million
2007	\$55.0 million	2014	\$60.3 million
2008	\$56.4 million	2015	\$60.4 million
2009	\$53.6 million	2016	\$60.4 million
2010	\$56.1 million	2017	\$60.7 million
2011	\$59.1 million		

Overview of Health Care Endowment (Cont'd)

- Tobacco Master Settlement Agreement (MSA) payments received by the State of Nebraska each year are contributed in to the endowment
- Forecasts for Tobacco MSA payments exist through 2035, though it should be noted that there is a great deal of uncertainty in projecting these payments
 - Additional detail on Tobacco MSA payment projections can be found in the Appendix of this document
- NIC determines asset allocation policy; the endowment targets 75% return-seeking assets / 25% risk-reducing assets

	Policy Allocation
U.S. Equity	40.0%
Non-U.S. Equity	15.0%
Global Equity	10.0%
Real Estate	5.0%
Private Equity	5.0%
Fixed Income	25.0%
Total Health Care Endowment	100.0%
Projected Returns*	6.4%
Projected Volatility*	12.6%

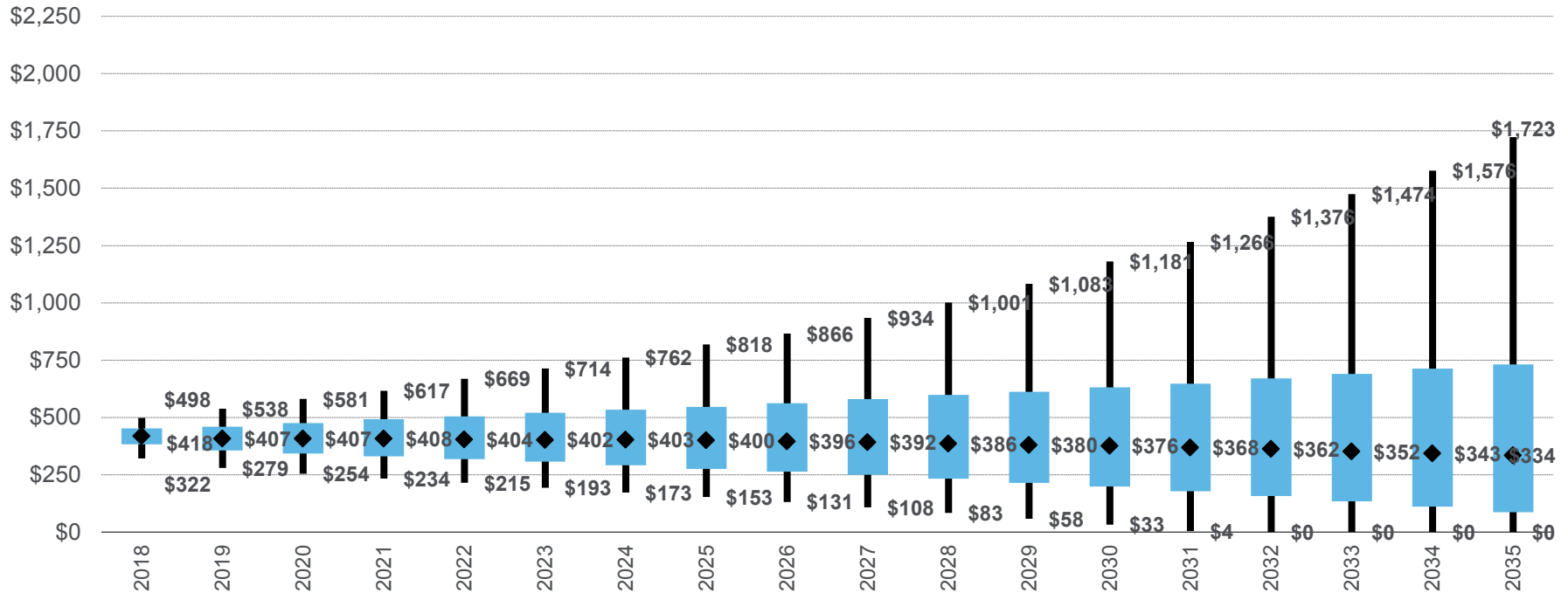
*Based on AHIC CMAs

Overview of Health Care Endowment (Cont'd)

- The following two slides provide our forecasted market values for the Health Care Endowment through 2035
 - I.e., as far out as we have forecasted values for Tobacco MSA payments
- We provide forecasts on both a nominal and real (i.e., net of the impact inflation) basis
- Ideally, real market value would remain stable (or increase) under the median scenario
 - This would imply that the Health Care endowment could continue to provide the same level of funding to the various programs it supports in the future as it does today

Health Care Endowment – Future Market Value Forecast (Nominal)

Distribution of Nominal Market Values



- As shown above, median forecasted market values decline over the next 17 years
 - Median market value decline accelerates as the forecast progresses
- Under a “worst case” scenario (i.e., 95th percentile outcome), the endowment will be completely spent down by 2032

Health Care Endowment – Future Market Value Forecast (Real)

Distribution of Real Market Values



- The exhibit above recreates the analysis on the previous slide on a “real” (i.e., net of inflation) basis
- As shown, the median forecast suggests that in 2035 the Health Care Endowment will be worth approximately half of what is today (in today’s dollars)

Health Care Endowment – How Should these Forecasts Impact Asset Allocation Policy?

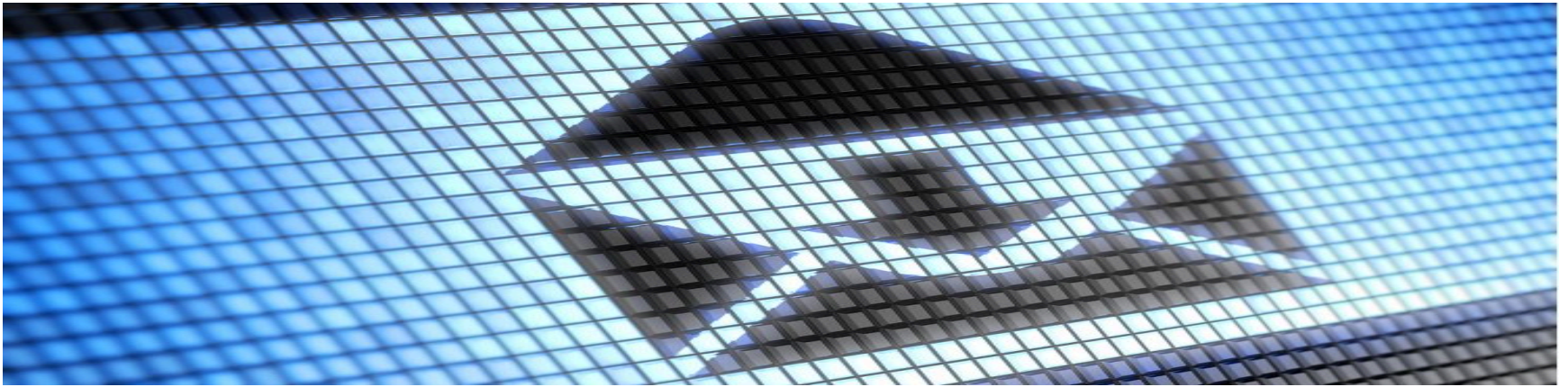
- From an asset allocation perspective, there is little that the Council can do to reverse the downward trend in median portfolio market value that is illustrated on the previous slides
 - The Health Care endowment is forecast to have net distributions of 6-9% of its market value per year over the next 17 years
 - ❖ Based on our current capital market assumptions, net outflows of 4-4.5% per annum are at the top end of what an endowment can sustain while preserving real purchasing power
 - Increased risk-taking could increase median forecasted endowment returns at the margin, but could not bridge a 2-4% gap
 - ❖ Increased risk-taking could also lead to the endowment being completely spent down sooner in an adverse economic scenario
- Somewhat paradoxically, the Council may wish to meaningfully reduce risk within the Health Care Endowment at some point in the future
 - When it becomes clear that an endowment will not last into perpetuity, risk-taking is often curtailed at some point to protect against unexpected asset depletion in the near term
 - ❖ Tradeoff = shorter projected endowment life for more certainty that near term obligations can be met

Health Care Endowment – How Should these Forecasts Impact Asset Allocation Policy? (Cont'd)

- After forecasting future Endowment market values using alternative, more conservative asset allocation policies, it is not clear to us that the Council should take action (i.e., reduce risk) now

	Probability that Real Market Value of Endowment Will be Maintained as of Year-End 2035	Median Forecasted Real Market Value at Year-end 2035	Probability that Endowment will be Completely Spent Down by Year-End 2035	In 95 th Percentile Outcome, Endowment Will be Exhausted in...
Current AA Targets	27%	\$213 Million	15%	2032
Utilize 50-50 Endowment AA Targets	10%	\$156 Million	11%	2034
Split the Difference (i.e., 62.5% Return-Seeking)	19%	\$186 Million	13%	2033

- Should our base case (or below median) forecast ultimately be realized, the Council will likely want to reduce risk within the Health Care Endowment at some point in the coming years
- “When” will depend on 1) the Council’s risk tolerance, 2) how far out Endowment distributions are appropriated to the various entities that the Health Care Endowment supports, and 3) the ability of those entities to withstand a funding shortfall
- We are happy to revisit this analysis periodically to assist the Council with this decision



Appendices

Appendix I: Health Care Endowment Cash Flow Forecasts

Year	Estimated Contributions	Estimated Distributions	Net Distribution
2018	\$35,885,863	\$72,100,000	(\$36,214,137)
2019	\$35,885,863	\$71,350,000	(\$35,464,137)
2020	\$35,505,473	\$60,450,000	(\$24,944,527)
2021	\$35,131,669	\$60,450,000	(\$25,318,331)
2022	\$34,764,447	\$60,450,000	(\$25,685,553)
2023	\$34,403,805	\$60,450,000	(\$26,046,195)
2024	\$34,049,745	\$60,450,000	(\$26,400,255)
2025	\$33,702,266	\$60,450,000	(\$26,747,734)
2026	\$33,361,376	\$60,450,000	(\$27,088,624)
2027	\$33,027,082	\$60,450,000	(\$27,422,918)
2028	\$32,699,392	\$60,450,000	(\$27,750,608)
2029	\$32,378,319	\$60,450,000	(\$28,071,681)
2030	\$32,063,877	\$60,450,000	(\$28,386,123)
2031	\$31,756,082	\$60,450,000	(\$28,693,918)
2032	\$31,454,954	\$60,450,000	(\$28,995,046)
2033	\$31,160,515	\$60,450,000	(\$29,289,485)
2034	\$30,872,789	\$60,450,000	(\$29,577,211)
2035	\$30,591,804	\$60,450,000	(\$29,858,196)

Appendix II: Additional Detail on Tobacco MSA Payment Projections*

- The table below represents the most recent estimates of Tobacco Master Settlement Agreement payments to be received by the State of Nebraska.

Nebraska MSA Payment Projections - 2 scenarios

3% Infl. Adj.

4% Vol. Adj.

Scenario A

Scenario B

Fiscal Year	Total Est. Annual MSA Payments (excl. adjustments)	Total Est. Annual MSA Payments (assuming \$5 million adjustments/credits)
2019	40,885,863	35,885,863
2020	40,505,473	35,505,473
2021	40,131,669	35,131,669
2022	39,764,447	34,764,447
2023	39,403,805	34,403,805
2024	39,049,745	34,049,745
2025	38,702,266	33,702,266
2026	38,361,376	33,361,376
2027	38,027,082	33,027,082
2028	37,699,392	32,699,392
2029	37,378,319	32,378,319
2030	37,063,877	32,063,877
2031	36,756,082	31,756,082
2032	36,454,954	31,454,954
2033	36,160,515	31,160,515
2034	35,872,789	30,872,789
2035	35,591,804	30,591,804

*Source: Nebraska Department of Administrative Services -- State Budget Division

Appendix II: Additional Detail on Tobacco MSA Payment Projections* (Cont'd)

- The estimates include two scenarios. Scenario A assumes there is no Non-Participating Manufacturer, or NPM, adjustment or other significant credits allowed to participating manufacturers that would reduce the amounts owed. Scenario B assumes a level of NPM adjustments and credits allowed of \$5 million is applied each year. It should be noted that there is a great deal of uncertainty in projecting Tobacco Master Settlement Agreement payments. The NPM adjustment, disputed amounts, and credits allowed to participating manufacturers are very difficult to estimate as little of any certainty is known in advance about the factors that led to these adjustments. However, Nebraska has seen the actual amounts received consistently under the projected amounts by about \$5 million annually and the factors allowing for the reductions, primarily the market share loss of cigarette products sold by the participating manufacturers, are not abating. For these reasons, scenario B is the more likely of the two scenarios presented.
- One cautionary note—if at any point Nebraska is found to have not diligently enforced the NPM escrow provisions of the MSA, it could result in a complete loss of the MSA payment for Nebraska (though that is a worst case scenario).

*Source: Nebraska Department of Administrative Services -- State Budget Division

Appendix II: Additional Detail on Tobacco MSA Payment Projections* (Cont'd)

NOTES:

A. While the Master Settlement Agreement provides that the payments will continue in perpetuity, only the next 17 years through 2035 are shown in this analysis.

B. The payment projections make certain assumptions about cigarette consumption and the rate of inflation. If the rate of increase in the CPI-U is higher than the assumption, the actual payments could be higher. Likewise, if cigarette consumption varies from the assumption, the payments could be higher or lower. And, if more consumption shifts from Participating Manufacturers to Non-Participating Manufacturers, the payments could be lower.

C. The projections ignore the possibility of default by any Participating Manufacturer. If experience is any indication of the future, some of the Participating Manufacturers, especially the smaller ones, are likely to fail to pay, go out of business, and/or file bankruptcy. The projections also ignore back payments and interest, but such amounts tend to be quite marginal relative to the total. Finally, the projections do not include any assumptions regarding future distributions from the dispute account.

D. The annual estimates in both scenarios are based on the following assumptions:

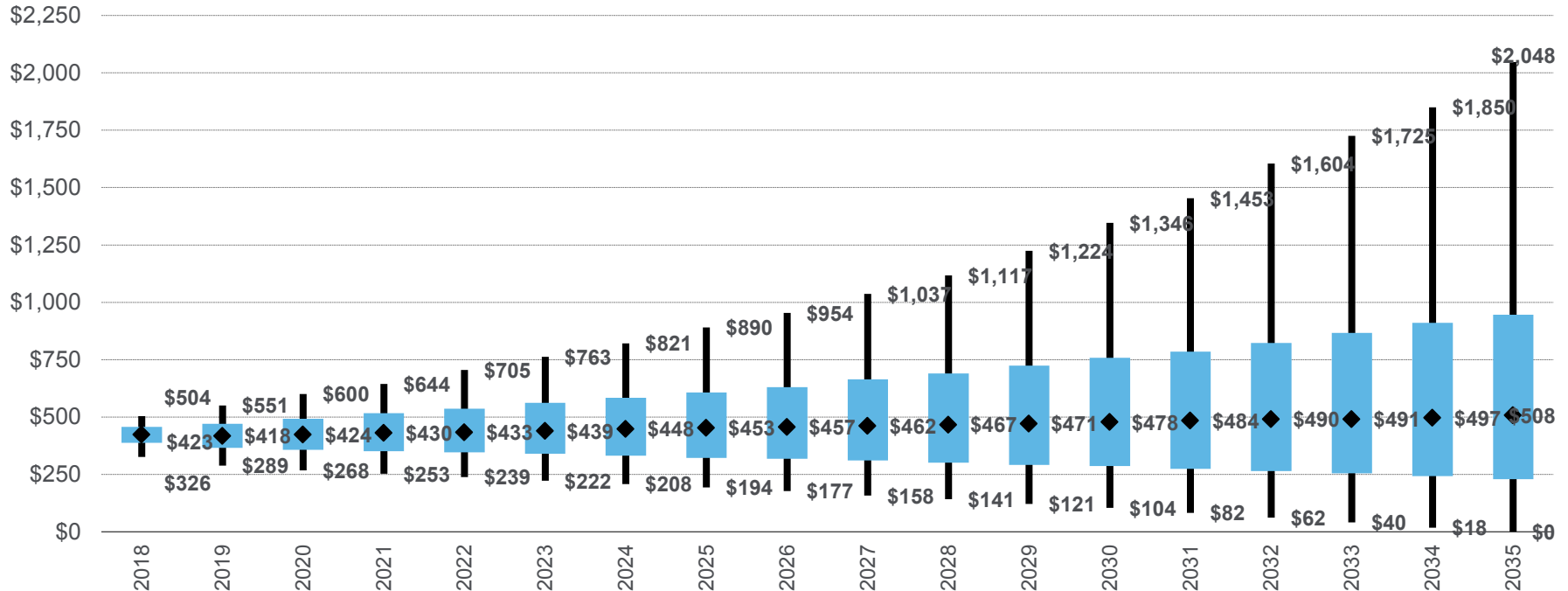
1. Annual Inflation Adjustment of 3.0% (the minimum adjustment pursuant to the MSA)
 - a) For example, actual CPI-U growth for calendar year 2017 was 2.11% which resulted in application of the 3% minimum for the FY 2017-18 payments.
2. Annual Volume Adjustment of 4.0% (Source: NAAG)
 - a) The actual volume adjustment to be applied for any one year is not typically known until March or April of that year. The volume adjustment over the last fifteen years has averaged 3.995%.

Appendix III: Future MV Forecasts Using MSA Payment Projection “Scenario A”

- In our modeling, we based estimated in-flows into the Health Care Endowment on MSA Payment Projection “Scenario B”, given guidance that this scenario was the more likely of the two scenarios presented
- On the following slides, we reproduce our future market value forecasts for the Health Care Endowment using MSA Payment Projection “Scenario A” for the sake of completeness

Appendix III: Health Care Endowment – Future Market Value Forecast under MSA Payment Projection “Scenario A” (Nominal)

Distribution of Nominal Market Values



- As shown above, median forecasted market values increase over the next 17 years
- Under a “worst case” scenario (i.e., 95th percentile outcome), the endowment will be completely spent down by 2035

Appendix III: Health Care Endowment – Future Market Value Forecast under MSA Payment Projection “Scenario A” (Real)

Distribution of Real Market Values



- The exhibit above recreates the analysis on the previous slide on a “real” (i.e., net of inflation) basis
- As shown, the median forecast suggests that in 2035 the Health Care Endowment will be worth approximately 75% of what is today (in today’s dollars)