

Guide to Forecasting Endowment Payout

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What is this about?

Forecasting the payout from endowment funds can be tricky. But a reliable estimate can be made for any given fund with the right pieces of information and the understanding of how to make use of them. The aim of this guide is to help you do just that.

First, however, let's clarify what we mean by endowment "payout"...this refers to the quarterly distributions made from endowment funds to their associated expendable fund to support program needs. To be sure, there isn't consistent terminology used across campus. Some call this endowment "earnings" or "income" or even "endowment spending." For purposes of this document, we'll refer to it as "payout." Regardless, we want to be clear about what we're discussing.

Section A - Background

How do endowment funds work?

Before diving into forecasting methods, it might be helpful to first provide a primer on how endowment funds work. The information in this section isn't strictly necessary to know in order to forecast your endowment payout, but may be helpful background information. However, if you're already comfortable with your working knowledge of endowments and know where to find information about them, feel free to skip to [Section C](#).

Generally speaking, each of our endowment funds holds units in the Notre Dame Endowment Pool (a.k.a. "investment pool", "endowment pool", "unitized pool"), which I'll refer to in short as the "NDEP." The NDEP works similar to a mutual fund. When an endowment fund is created with a new gift, the proceeds are sent to the NDEP and the endowment fund receives shares, or "units." These units represent the endowment fund's share of the pooled investments held in the NDEP. Endowment funds themselves generally cannot be expended—rather, they are typically held in perpetuity. However, a portion of the returns generated by endowment funds is distributed on a quarterly basis to a sister fund that *is* expendable (which we'll refer to as the "spending fund"). These quarterly distributions represent the "endowment payout" that is the subject of this guide, the forecasting of which we'll address shortly.

In the mutual fund world, the market value of the fund is calculated daily. However, many of the underlying investments held by the NDEP are not traded on open markets and quoted daily, which makes daily valuation of the NDEP impractical. Hence, the valuation of the NDEP takes place at the end of each quarter.

The market value can rise or fall depending on market conditions, and the market value for any given endowment fund is determined by multiplying the number of units held by the fund by the most recent per-unit market value (often referred to as the "NAV" or per-unit net asset value). The fund balance, or "book value" of an endowment does not rise and fall with changes in market value. Rather, fund balance can be thought of as the cumulative historical record of net additions to and withdrawals from an endowment fund. Transactions such as the original gift, supplemental gifts, reinvestments of income and transfers in/out are all examples of the type of activity that would be embodied in the fund balance. This is also the basis for what you would

find if looking up an endowment fund's activity in Banner (market value is not reflected in Banner).

When transactions occur that move money into or out of an endowment fund, there are dollar-based entries that are posted to Banner, of course. But transactions also involve changes in unit balances (which occur behind the scenes in Banner). Units are transacted at the prior quarter's ending per-unit NAV. So, in order to determine the number of units a fund purchases or surrenders in a transaction, the dollar amount of the transaction is divided by the prior quarter's NAV. For example, the *units* associated with a gift credited to an endowment fund in May would be determined using the March 31 per-unit NAV.

Returns generated by the investments in the NDEP are broadly classified as either "income" or "gains". Income consists of dividends, interest and the like, while gains represent the capital gains realized on the sales of investments (i.e. difference between sale price and cost) or the unrealized appreciation on investments held. Under the accounting method employed for the NDEP, income is allocated to individual endowment funds on a pro rata basis (i.e. based on the number of units held at the beginning of the quarter). However, gains are *not* allocated to individual funds, but rather serve to increase the per-unit NAV.

Endowment payout is made at the end of each quarter. The amount distributed from each endowment is funded by two components: the actual income allocated to the fund for the quarter and a supplemental amount (ostensibly from accumulated gains) to make up the difference between the amount distributed and the fund's income allocation (which is typically not sufficient to cover the full payout). The point to take away from this is that an endowment's fund balance *does not* change when payout is made each quarter. However, the unit balance *will decline* slightly in most quarters. The reason is the supplemental amount that makes up the difference between current income and the total payout; to generate the supplemental amount, the fund must surrender or "cash in" units. The number of units surrendered is determined based on the prior quarter's NAV, consistent with the basis for other unit-based transactions. The term we use for this quarterly surrender of units is "**erosion.**" We'll come back to the concept of *erosion* again shortly, as it has ramifications for both calculating actual payout and forecasting future payout.

The chart at **Appendix B** provides a visual illustration of the components in the payout calculation.

How is endowment payout determined?

There are several points to cover here. From a policy standpoint, the University's general target for payout is an amount that falls within the range of 4-5% of the trailing 12 quarter average NAV. This target percentage is not used to directly calculate the payout for any particular year, because it is backward-looking by nature. Rather, this percentage serves as a benchmark to inform the more direct decision made by the board each spring about how much to increase (or decrease) endowment payout relative to the prior year.

For example, if payout has been running closer to high end of the target range (5%), the board may opt for a smaller increase (or even a decrease) in payout for the upcoming year relative to the prior year with an eye toward remaining within the target range. Regardless, the board's annual decision about payout growth is what most directly drives the determination of payout for a given fiscal year. If the board decides, for example, on a 2% increase in payout over the prior

year, we would expect the payout from most funds to be 2% greater than last year's payout (with some caveats explained later). So, other things being equal, a fund that paid out \$1,000 in the prior year would pay out \$1,020 in the upcoming year.

Although payout is based on the board's payout growth decision, from a mechanical standpoint payout for a given fund is a function of its number of units multiplied by a *per-unit payout rate*. This per-unit rate represents the means by which we place the board's payout growth directive into action. The rate is set in the spring for the upcoming fiscal year after the board has approved the payout growth rate over the prior year, and is set at a level intended to come as close as possible to producing the payout in dollars that equates to the board growth directive. So, building on the previous paragraph's example where the board approves a 2% increase in payout, we would set a per-unit rate that when multiplied by the fund's units would produce approximately \$1,020 in payout.

We say *approximately*, because there is one consideration that makes it nearly impossible to set a per-unit payout rate that achieves the desired payout growth exactly—the declining unit balances over the year due to the “erosion” of units described earlier. Precisely predicting the degree of erosion is difficult because it is dependent on the actual income produced by investments each quarter, which varies subject to market conditions, asset allocation and other factors. Hence, only the payout for the first three quarters of the fiscal year is based strictly on the per-unit payout rate multiplied by the fund's unit balance at the beginning of the quarter. In the fourth quarter, we alter that per-unit rate slightly to “true-up” to the payout target based on the board approved increase. This can be an adjustment up or down depending on the amount needed to hit the payout target. So, going back to the fund in our example, if payout produced through three quarters by our per-unit payout rate was \$800, then we will adjust the per-unit rate for the fourth quarter so that it results in a payout of exactly \$220 in order to hit the expected \$1,020 payout target.

When an endowment is created, when does payout begin?

When a new fund is created and activated for spending, it is subject to a two-quarter “holdback” period before quarterly payout begins (as illustrated in the chart at **Appendix C**). The primary reason for the holdback period is to allow the fund to accumulate sufficient appreciation to cover the portion of payout funded by gains, mitigating the risk that the fund immediately finds itself “underwater” by virtue of having payout demands in excess of its resources. In terms of specific timing, the two-quarter holdback period begins in the quarter *after* the fund is established. For example, if a new gift establishing an endowed fund is received in March, its holdback period would be the subsequent quarters ending in June and September. Thus, its first quarterly payout distribution would be expected in December. Note, subsequent incremental gifts to an existing endowment are not subject to any additional holdback period. So, say there was an incremental gift to the fund described above a year later; the units acquired with that incremental gift would generate incremental payout in the quarter following the gift.

Section B – Finding Key Information for Forecasting Payout

Where can I find information on my endowment funds?

As of this writing, the best place to find endowment-related information is in DataND, Collections, Endowment Pool. Specifically, the [Fund Balances](#) report has a wealth of information on individual funds, including the key pieces of information that we'll refer to in the next section when discussing methods for forecasting payout. The report can be filtered for any quarter end, and the lower section of the report lists information for individual funds, as depicted in the screenshot in Exhibit B.1.

Exhibit B.1

Search by Fund Code or Name (NDEP) **Fund Level Balances, FY2023 Q3** (NAV \$ 9,270.775) Search by Spend Fund Code

(hover over balances to display additional information)

Fund Code - Name - NDEP	Organization Code - NDEP	D Spend Fund Code	D Organization Code	B Fund Class Detail	A Fund Current Spending Status Detail - NDEP	Fund Current Overhead Status - ND..	Quarter Fund Balance	C Quarter Units Balance	Quarter Market Value
621550 - ND Club-Greater Hartf..	46010	380811	46010	Scholarship	Spending	No Overhead	\$112,012.26	36.782	\$340,997.65
621560 - ND Club-Greater Orlan..	46010	360208	46010	Scholarship	Spending	No Overhead	\$228,459.31	43.653	\$404,697.14
621570 - ND Club-Greater Sava..	46010	380149	46010	Scholarship	Spending	No Overhead	\$27,857.22	15.909	\$147,488.76
621580 - ND Club-Green Bay/Fo..	46010	380754	46010	Scholarship	Spending	No Overhead	\$33,436.93	15.656	\$145,143.25
621590 - ND Club-Greensburg/..	46010	381393	46010	Scholarship	Spending	No Overhead	\$94,018.80	25.407	\$235,542.58
621600 - ND Club-Hanover Tow..	46010	381424	46010	Scholarship	Spending	No Overhead	\$45,650.74	14.912	\$138,245.80
621610 - ND Club-Harrisburg	46010	381640	46010	Scholarship	Spending	No Overhead	\$330,967.60	98.506	\$913,226.96
621620 - ND Club-Hawaii	46010	380776	46010	Scholarship	Spending	No Overhead	\$160,533.37	44.004	\$407,951.18
621630 - ND Club-Hilton Head	46010	381665	46010	Scholarship	Spending	No Overhead	\$62,317.96	14.601	\$135,362.59
621640 - ND Club-Houston	46010	382200	46010	Scholarship	Spending	No Overhead	\$646,077.29	277.770	\$2,575,143.17
621650 - ND Club-Idaho	46010	382351	46010	Scholarship	Spending	No Overhead	\$42,372.76	9.657	\$89,527.87
621660 - ND Club-Indianapolis	46010	382092	46010	Scholarship	Spending	No Overhead	\$811,407.25	467.688	\$4,335,830.22

The information provided in this report relevant to forecasting payout is summarized as follows (letters correspond to the labels on the screenshot above):

- A. **Fund Current Spending Status Detail** – This identifies whether the fund is currently in “spending”, “pending”, or “reinvesting” mode. Most funds will be in “spending” mode, which simply means that they are actively making a quarterly payout distribution to an expendable fund. As the name implies, fundings in “Pending” status have been placed in the pipeline to begin making quarterly payout distributions, but are currently in the two-quarter waiting period. “Reinvesting” funds have not yet been activated to begin quarterly distributions.
- B. **Fund Class Detail** – The University uses two per-unit payout rates, one of which is net of an overhead charge to support the indirect costs of administering endowment-supported programs. The fund’s class is relevant to identifying which per-unit payout rate applies to the fund. Financial aid-related classes (“Scholarships”, “Fellowships-Business”, “Fellowships-Law”, “Fellowships-Graduate” and “Prizes”) are exempt from overhead and receive the full per-unit rate. Funds in all other classes use the per-unit payout rate that is net of overhead. Note, a chart listing the per-unit payout rates applicable to each quarter is maintained in a [Google sheet](#) (URL is also provided in **Section D**).
- C. **Quarter Units Balance** – This represents the number of units the fund holds in the NDEP as of the end of the selected quarter.
- D. **Spend Fund Code and Organization Code** – For funds in “Spending” mode, this is the fund-org combination that receives the quarterly payout distribution.

The information in this report can be used to answer questions such as:

- What is the spending fund associated with an endowment fund?
- What is the fund balance/unit balance/market value of an endowment fund?
- Which fund class is an endowment fund a part of?
- What is an endowment fund’s spending status?

- What are the restrictions associated with an endowment fund?

How can I find which endowment is distributing payout to my expendable fund?

Perhaps the easiest way to find the endowment associated with your expendable fund is to use the transaction detail in GLEZ (as the following screenshots illustrate). Find the account code to which payout is being credited (for most funds this is account 55202):

Exhibit B.2

Account Summary (May 2023) ND Club-Orlando - 360208-46010

Filter description... Table Layout Export to CSV

Category	Account	Account Title	Year to Date
Total Beginning Balance			
Total Beginning Fund Balance			466.64
Revenue			
Investment Income			
	55202	General Investment Income	10,842.68
Total Investment Income			10,842.68
Contributions			
	59009	Gifts	12,278.40
Total Contributions			12,278.40
Total Revenue			23,121.08
Total Resources			23,587.72

Click through the amount in the “Year to Date” column (circled in red above) to get to the transaction details...see Exhibit B.3.

Exhibit B.3

Trans Date	Doc Code	Transaction Description	Amount
03/31/2023	DV013460	APPLEARN-621560	3,730.15
12/31/2022	DV013185	APPLEARN-621560	3,548.79
09/30/2022	DV012885	APPLEARN-621560	3,563.74
			10,842.68

In the “Transaction Description” column, endowment payout transactions will be denoted by “APPLEARN” followed by a six-digit fund number (as circled above). This fund number represents the endowment fund generating the payout (in this case, 621560).

Note, the expendable fund number (i.e., 360208) also cross-references to the “Spend Fund Code” column in the Fund Balances report in DataND, as illustrated at Exhibit B.1 on page 4.

Where can I find information about expected payout growth and/or per-unit payout rates?

A table cataloging this information is maintained in a [Google sheet](#) (URL is also provided in **Section D**). Remember that the per-unit rate applicable to a given fund is determined by the fund’s class. Financial aid-related classes receive a slightly greater payout rate, while the rate applicable to all other funds is net of an overhead recovery allocation.

Section C – Methods for Forecasting Endowment Payout

There are several approaches to forecasting payout that will provide reasonable estimates. Some may be more accurate than others, depending on circumstances applicable to a given fund. There are also tradeoffs to consider between complexity and accuracy. Knowing the pros and cons of each approach will help you select the one that’s most appropriate for your needs.

Method #1 – Use current units and the applicable per-unit payout rate (quarterly)

This is the most accurate way to forecast payout for an upcoming quarter. Since payout is determined mechanically by applying the per-unit payout rate to the fund’s unit balance at the beginning of the quarter, the upcoming quarter’s payout can be forecasted to the dollar with these two pieces of information. Granted, most users are probably more interested in forecasting payout for an upcoming year or beyond rather than a quarter, but let’s get the principles down here and we’ll cover that example next. Continuing to use fund 360208 and its corresponding endowment fund, 621560, let’s look at an example of how this method works for, say, Q2 2021.

First, let’s get the unit balance for 621560 at the end of Q1 2021 from the Fund Balance report in DataND:

Exhibit C.1

Search by Fund Code or Name (NDEP) **Fund Level Balances, FY2021 Q1 (NAV \$ 7,044.234)** Search by Spend Fund

(hover over balances to display additional information)

Fund Code - Name - NDEP	Organization Code - NDEP	Spend Fund Code	Organization Code	Fund Class Detail	Fund Current Spending Status Detail - NDEP	Fund Current Overhead Status - ND..	Quarter Fund Balance	Quarter Units Balance
621560 - ND Club-Greater Orlan..	46010	360208	46010	Scholarship	Spending	No Overhead	\$168,032.11	39.880
Grand Total							\$168,032.11	39.880

Note, the Fund Class Detail field in the screenshot above indicates this fund is in the “Scholarship” class (circled in green), thus the financial aid per-unit spending rate applies to this fund. We can again go to the [Google-based payout rate table](#) also in **Section D**) and find the applicable rate for Q2 2021:

Exhibit C.2

Fiscal Year	Payout Growth ¹	Per-Unit Endowment Payout Rates										Estimated Annual Erosion ⁴
		Financial Aid Rate ²					Other Programs Rate ³					
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
2015	3%	49.50	49.50	49.50	49.18	197.68	43.04	43.04	43.04	42.76	171.88	3.50%
2016	5%	53.50	53.50	53.50	54.82	215.32	46.52	46.52	46.52	47.64	187.20	3.75%
2017	5%	58.38	58.38	58.38	60.00	235.14	50.78	50.78	50.78	52.08	204.42	4.00%
2018	3%	62.46	62.46	62.46	65.16	252.54	54.30	54.30	54.30	56.66	219.56	4.00%
2019	-2%	64.24	64.24	64.24	64.78	257.50	55.85	55.85	55.85	56.32	223.87	3.75%
2020	0%	66.79	66.79	66.79	67.26	267.63	58.07	58.07	58.07	58.47	232.68	4.00%
2021	0%	69.42	69.42	69.42	70.52	278.78	60.35	60.35	60.35	61.32	242.37	3.25%
2022	6%	75.96	75.96	75.96	75.51	303.39	66.04	66.04	66.04	65.65	263.77	2.20%
2023	10%	84.95	84.95	84.95	86.42	341.27	73.86	73.86	73.86	75.12	296.70	2.20%
2024	6%	92.35	92.35	92.35	92.35	369.40	80.29	80.29	80.29	80.29	321.16	2.25%

Multiplying the Q1 2021 unit balance of 39.880 (Exhibit C.1) by the Q2 2021 rate of \$69.42 (Exhibit C.2) yields an expected payout of \$2,768.47.

If we go to GLEZ and check the payout for that quarter, we can validate the method was accurate:

Exhibit C.3

Trans Date	Doc Code	Transaction Description	Amount
05/31/2021	DV011224	APPLEARN-621560	2,804.23
03/31/2021	DV011050	APPLEARN-621560	2,756.74
12/31/2020	DV010715	APPLEARN-621560	2,768.47
09/30/2020	DV010393	APPLEARN-621560	2,795.40
			11,124.84

Method #2 – Use current units and the applicable per-unit payout rate (annual)

The same basic method demonstrated in Method #1 for one quarter can also be used to forecast payout for the upcoming year, but requires us to take an additional consideration into account—unit erosion, a concept described in [Section A](#) (see page 2). As the term implies, erosion refers to the decline in unit balance as each successive quarter’s payout is made. Therefore, if we simply used the beginning of year units as the base for applying the full year’s total payout rate, we would likely produce a forecasted payout that is higher than expected, because the total payout rate for the year is inflated to attempt to account for the effect of erosion.

Let’s illustrate this method by forecasting the fiscal 2022 payout for the same fund above. First, we’ll grab the unit balance for endowment fund 621560 at the end of fiscal 2021 from the Fund Balance report in DataND:

Exhibit C.4

Search by Fund Code or Name (NDEP) **Fund Level Balances, FY2021 Q4** (NAV \$ 9,636.184) Search by Spend Fund C

(hover over balances to display additional information)

Fund Code - Name - NDEP	Organization Code - NDEP	Spend Fund Code	Organization Code	Fund Class Detail	Fund Current Spending Status Detail - NDEP	Fund Current Overhead Status - ND..	Quarter Fund Balance	Quarter Units Balance
621560 - ND Club-Greater Orlan..	46010	360208	46010	Scholarship	Spending	No Overhead	\$173,202.11	39.667
Grand Total							\$173,202.11	39.667

We can again go to the [Google-based payout rate table](#) (URL also in [Section D](#)) and find the applicable *total* rate for fiscal 2022, as well as the estimated rate of erosion:

Exhibit C.5

Fiscal Year	Payout Growth ¹	Per-Unit Endowment Payout Rates										Estimated Annual Erosion ⁴
		Financial Aid Rate ²					Other Programs Rate ³					
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
2015	3%	49.50	49.50	49.50	49.18	197.68	43.04	43.04	43.04	42.76	171.88	3.50%
2016	5%	53.50	53.50	53.50	54.82	215.32	46.52	46.52	46.52	47.64	187.20	3.75%
2017	5%	58.38	58.38	58.38	60.00	235.14	50.78	50.78	50.78	52.08	204.42	4.00%
2018	3%	62.46	62.46	62.46	65.16	252.54	54.30	54.30	54.30	56.66	219.56	4.00%
2019	-2%	64.24	64.24	64.24	64.78	257.50	55.85	55.85	55.85	56.32	223.87	3.75%
2020	0%	66.79	66.79	66.79	67.26	267.63	58.07	58.07	58.07	58.47	232.68	4.00%
2021	0%	69.42	69.42	69.42	70.52	278.78	60.35	60.35	60.35	61.32	242.37	3.25%
2022	6%	75.96	75.96	75.96	75.51	303.39	66.04	66.04	66.04	65.65	263.77	2.20%
2023	10%	84.95	84.95	84.95	86.42	341.27	73.86	73.86	73.86	75.12	296.70	2.20%
2024	6%	92.35	92.35	92.35	92.35	369.40	80.29	80.29	80.29	80.29	321.16	2.25%

Remember—this particular fund uses the financial aid rate because it is in the “Scholarship” class. Funds from other classes such as Chairs, Academic Programs, etc. will use the “other programs rate” from the table at Exhibit C.5. Note the footnotes on the column header descriptions in the rate table provide the detail as to which classes use which rate.

The fiscal 2022 forecasted payout is then the product of the following calculation:

Ending 2021 unit balance	39.667 (Exhibit C.4)
x Fiscal 2022 payout rate	\$ 303.39 (Exhibit C.5)
x (1 minus the 2022 erosion rate of 2.20% (Exhibit C.5))	97.80%
	<u>\$11,769.81</u>

This method of forecasting annual payout can be very accurate, but is not as precise as using it for forecasting the next quarter’s payout because of the variability in actual unit erosion. In addition, any additions or withdrawals to/from the applicable endowment fund (e.g., incremental gifts) during the forecast period can affect the unit balance mid-year, resulting in variance from forecast, as well.

Method #3: Use the payout growth percentage (annual)

This is perhaps the simplest method and is relatively easy to apply to a large group of funds if you’re after a reasonable estimate of how much payout to expect for the upcoming fiscal year.

To forecast with this method, you’ll need your fund’s total payout for the most recently completed fiscal year and the payout growth percentage for the upcoming fiscal year. The forecasted payout is then simply the current year payout multiplied by the payout growth percentage. Let’s walk through an example in which we’ll forecast fiscal 2022 payout for the fund used in the previous example.

First, let's find the payout growth percentage applicable to fiscal 2022 from the [Google-based payout rate table](#) (URL also in [Section D](#)):

Exhibit C.6

Fiscal Year	Payout Growth ¹	Per-Unit Endowment Payout Rates										Estimated Annual Erosion ⁴
		Financial Aid Rate ²					Other Programs Rate ³					
		Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	
2015	3%	49.50	49.50	49.50	49.18	197.68	43.04	43.04	43.04	42.76	171.88	3.50%
2016	5%	53.50	53.50	53.50	54.82	215.32	46.52	46.52	46.52	47.64	187.20	3.75%
2017	5%	58.38	58.38	58.38	60.00	235.14	50.78	50.78	50.78	52.08	204.42	4.00%
2018	3%	62.46	62.46	62.46	65.16	252.54	54.30	54.30	54.30	56.66	219.56	4.00%
2019	-2%	64.24	64.24	64.24	64.78	257.50	55.85	55.85	55.85	56.32	223.87	3.75%
2020	0%	66.79	66.79	66.79	67.26	267.63	58.07	58.07	58.07	58.47	232.68	4.00%
2021	0%	69.42	69.42	69.42	70.52	278.78	60.35	60.35	60.35	61.32	242.37	3.25%
2022	6%	75.96	75.96	75.96	75.51	303.39	66.04	66.04	66.04	65.65	263.77	2.20%
2023	10%	84.95	84.95	84.95	86.42	341.27	73.86	73.86	73.86	75.12	296.70	2.20%
2024	6%	92.35	92.35	92.35	92.35	369.40	80.29	80.29	80.29	80.29	321.16	2.25%

Next, from GLEZ we can determine that fund 360208 received \$11,124.84 in payout during fiscal 2021, as illustrated below:

Exhibit C.7

Account Summary Year-Month View

Account Summary (Full Yr 2020-2021) ND Club-Orlando - 360208-46010

Filter description... Table Layout Export to CSV

Category	Account	Account Title	Year to Date
Resources			
> Beginning Fund Balance			434.88
Revenue			
Investment Income			
	55202	General Investment Income	11,124.84
Total Investment Income			11,124.84
Contributions			
	59009	Gifts	6,133.60
Total Contributions			6,133.60
Total Revenue			17,258.44

Applying the fiscal 2022 6% payout growth percentage (Exhibit C.6) to the 2022 total payout (Exhibit C.7) yields a forecasted payout for 2022 of \$11,792.23. Note, we don't need to consider erosion with this method since units are not used in the calculation. Also note that the projected amount produced by this method is very close to the amount produced by Method #2.

So, like Method #2, this method can also be very accurate, especially if there are no incremental changes to the endowment fund's balance during the forecast period. However, the same caveats would apply in the event there are incremental endowment gifts or other changes. To illustrate, let's compare our fiscal 2022 forecasted payout to the actual 2022 payout per GLEZ:

Exhibit C.8

Account Summary **Year-Month View**

Account Summary (Full Yr 2021-2022) ND Club-Orlando - 360208-46010

Filter description... Table Layout Export to CSV

Category	Account	Account Title	Year to Date
Resources			
> Beginning Fund Balance			193.32
Revenue			
Investment Income			
55202	General Investment Income		12,400.31
Total Investment Income			12,400.31
Contributions			
59009	Gifts		15,873.01
Total Contributions			15,873.01
Total Revenue			28,273.32

The actual 2022 payout turned out to be ~\$600 more than the \$11,792 forecast. The reason is that during fiscal 2022 the applicable endowment fund (621560) received incremental gifts that added new units to the fund, boosting its payout. Had there been no additions to the endowment fund, we can expect that the actual 2022 payout would likely have been within a few dollars of the forecast.

Bottom line...the effect of incremental changes is just something to keep in mind. If you use this Method #2 or #3 for an annual forecast and are expecting, say, a significant pledge payment to come into the endowment fund during the year, it might be worth it to factor that into the forecast.

Method #4: Use the benchmark 12 quarter average target rate (multiyear or long term)

When a payout forecast is desired for a period beyond the next fiscal year, the variables considered in the previously described methods are less certain. For example, if it's currently May 2023 and I want to estimate payout for the next five years, I would need to make a number of assumptions to employ the previously described methods (e.g., future payout growth rates, etc.). A forecast could be built on incremental year-over-year payout utilizing assumed payout growth for each year, for example, by using Method #3.

However, in cases where precision takes a backseat to expediency or where a quick estimate of future payout for a large number of funds (say, all of the College of Science)

is desired, the policy target of 4-5% of the 12-quarter average market value can be used as a practical means of quickly estimating future payout.

Using this method, we would simply multiply the market value of the endowment fund(s) by a percentage approximating the policy target. This is clearly not an apples-to-apples application of the policy target rate, since the rate applies to a rolling, backward-looking 12 quarter average market value.

For example, if I know the collective market value of my organization's endowment funds is \$25 million, I might use this method to quickly determine that annual payout for the next five years might be in the neighborhood of \$1 million ($\$25 \text{ million} \times 4\%$). This can be refined a bit by adding an assumed annual rate of return, and/or using several rate assumptions (say, 4.25% and 4.75%) to come up with a range of payout scenarios.

Regardless and to be clear, estimates produced by this method should be recognized as a rough, "back of the envelope" style estimate. We do not recommend this method as a substitute for the previously described methods when a near term or precise forecast is desired.

Section D – Other Resources

A tool for estimating near-term payout from new or incremental endowment fund gifts ("New Gift Payout Calculator") is available on the Budget Office's website (<https://budget.nd.edu/forms/>). This is a downloadable Excel form into which gift amount and timing can be input to produce a payout estimate that is essentially based upon a variation of Method #1 [described](#) above.

It's worth repeating here the other key reports and files utilized in Methods #1-3 above. The URLs listed for each can be copied/pasted into your browser (hyperlinks for these items have proven spotty, hence providing the URL, as well):

Endowment Pool Fund Balances Report:

<https://data.nd.edu/reports/endowment-pool:-fund-balances>

Payout Rate Table:

<https://docs.google.com/spreadsheets/d/1UidalXt9ncrDvHkaaYtbUQeZ2a9i68iDBHOGvr2nZ30/edit#gid=1384758467>

Lastly, you can always reach out to your partners in the Controller's Office. Please feel free to contact any of the following:

Chuck Pope (cpope@nd.edu), Manager-Endowment Fund Accounting 1-8589
Cheryl Schlimpert (cschlimp@nd.edu), Endowed Programs Manager 1-3861
Jason Schroeder (jschroed@nd.edu), Assistant Controller-Financial Reporting 1-0993

Appendix A: Payout Forecast Calculations Summary

Method #1 Per-unit Payout Rate (quarterly):

$$X \frac{\text{Quarter Unit Balance (prior quarter)}}{\text{Per Unit Endowment Quarterly Payout Rate (forecast quarter)}}$$

Method #2 Per-Unit Payout (annual):

$$X \frac{\text{Ending Unit Balance (prior year)}}{\text{Per Unit Endowment Annual Payout Rate}} \\ X (1 - \text{Estimated Annual Erosion})$$

Method #3 Payout Growth % (annual):

$$X \frac{\text{FY21 payout}}{(1 + \text{FY22 payout growth \%})}$$

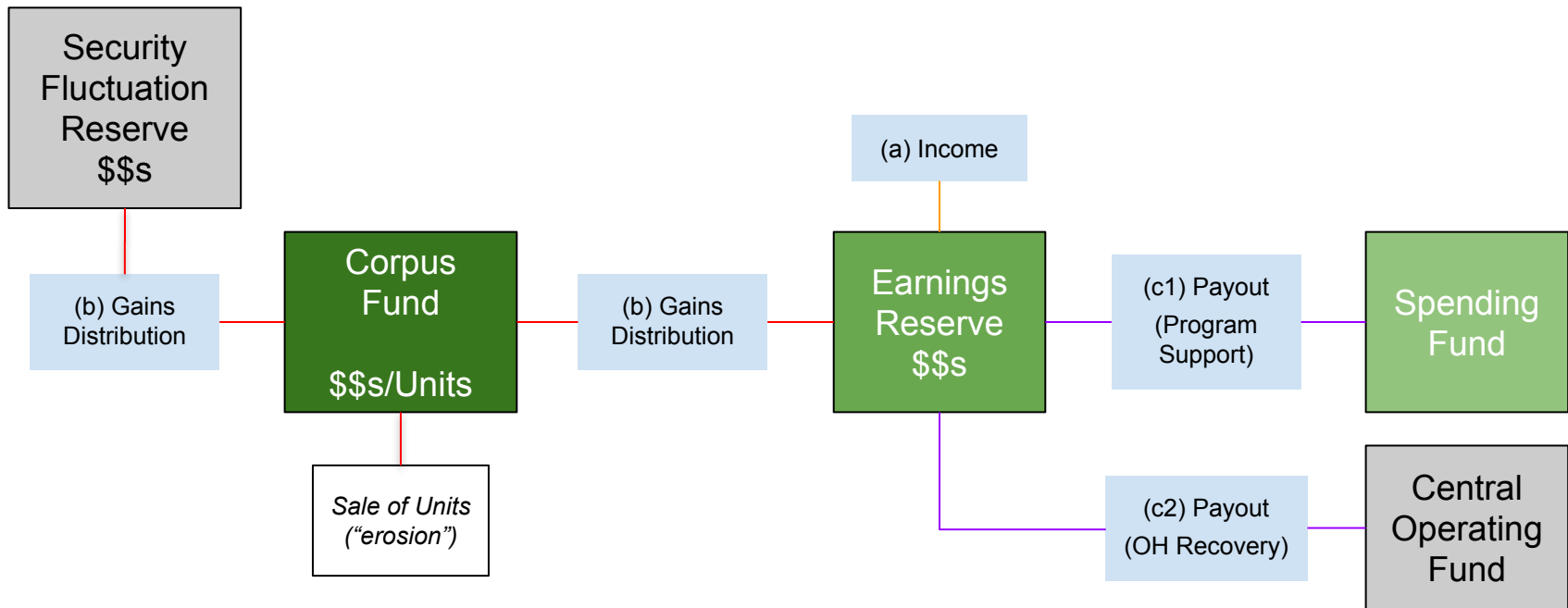
Method #4 Benchmark 12 Quarter Average Target Rate (multiyear or long term)

$$\div \frac{\text{Per-Unit Payout Rate (annual)}}{\text{12 Quarter Average NAV}}$$

Method #4 Note

To be clear, estimates produced by method #4 should be recognized as a rough, “back of the envelope” style estimate. We ***do not recommend*** this method as a substitute for the previously described methods ***when a near term or precise forecast is desired.***

Appendix B - Quarterly Payout Flow



(a) Quarterly share of income is distributed to the individual endowment's "earnings reserve" fund.

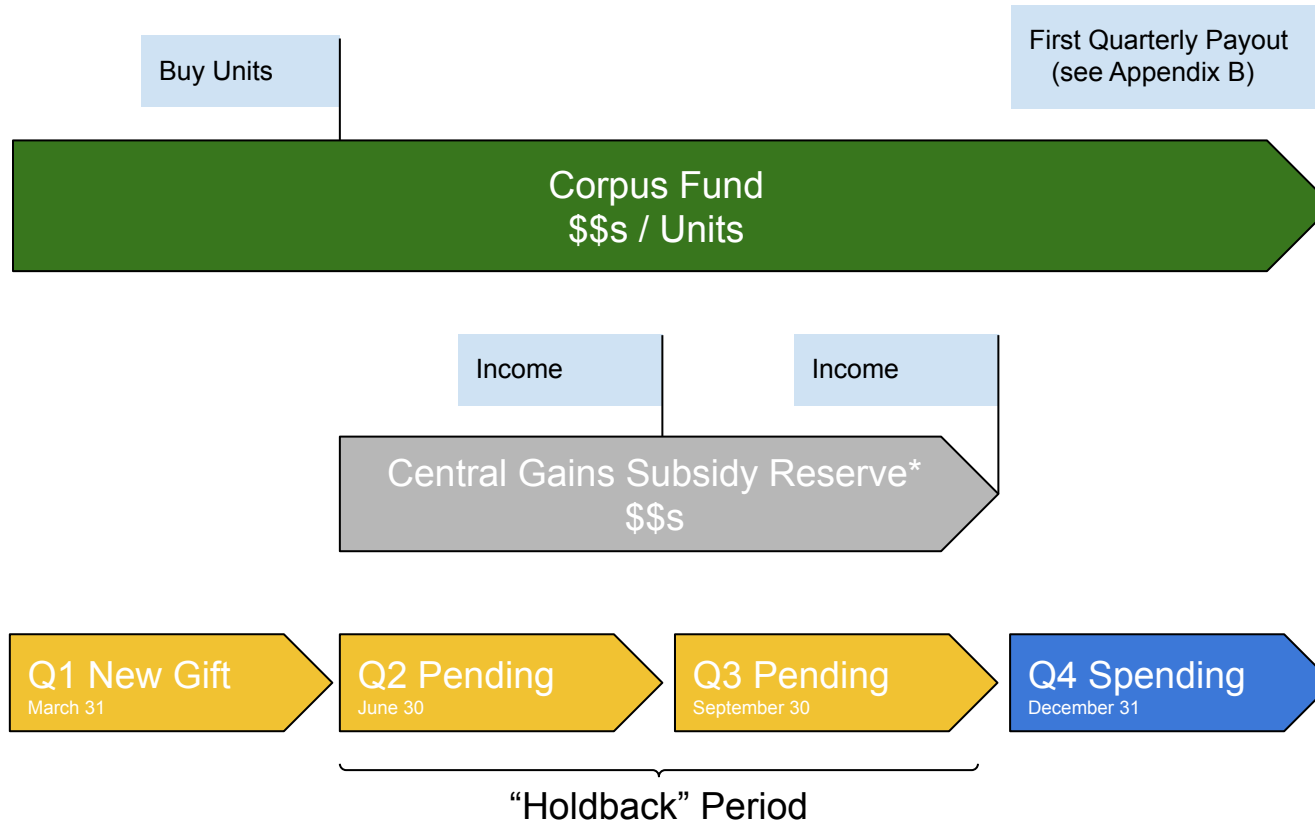
(b) The difference between total payout (c1+c2) and quarterly income (a) is funded by a distribution of gains from the central Security Fluctuation Reserve. The gains distribution is first passed through the endowment's unit-holding "corpus" fund, then deposited into the endowment's "earnings reserve" fund..

(c1) The portion of payout directed to the endowment fund's beneficiary program/purpose is distributed from the "earnings reserve" to the applicable spending fund.

(c2) For funds subject to overhead recovery (i.e. non-financial aid funds), the portion of payout directed to support central overhead costs is distributed to the applicable central operating fund.

Appendix C - Timing of Initial Payout Distribution

Scenario: New endowed fund with initial gift in quarter ending March 31



* During the holdback period, the fund’s quarterly income share is deposited in a central reserve fund from which future payout can be subsidized should the funder ever find itself in an “underwater” position (i.e. insufficient appreciation to cover the gain portion of payout funding).