

An Analysis of the Financial Position

of

University of Toledo

Fiscal Years 2007-2022

Prepared for AAUP

By

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Introduction

1. Overall, the performance at University of Toledo has been marked by some volatility but can generally be characterized as being stable from 2007-2022. UT has solid reserves relative to its debt and expenses and positive cash flows.
2. Declining enrollments present a challenge. Unfortunately, the administration seems to have responded by reducing the number of faculty significantly while increasing the number of administrators.
3. The bottom line is University of Toledo is in good financial condition.

This report provides an analysis of the financial position of the University of Toledo for the fiscal years 2007 through 2022. The analysis contained in this report is based on information contained in the audited financial statements and other information that appears in the annual audited [Financial Statements of University of Toledo](#) and the [Integrated Post-Secondary Educational Data University \(IPEDS\)](#) for the aforementioned years.

Most businesses have a goal of earning profit for stockholders. Thus, the financial statements of most businesses are designed to allow stockholders and others concerned with profitability a means to monitor the performance of the business in question.

Universities, colleges and other non-profit organizations ostensibly have an entirely different purpose. Universities and colleges, in particular, are institutions of higher learning established primarily to create and disseminate knowledge. Universities and colleges receive a significant portion of their funding from donors and governmental entities. These funds are often given with certain restrictions and conditions. Consequently, universities use a system of fund accounting. The primary purpose of fund accounting is to provide trustees, who are legally responsible for running universities, the information to monitor the funds that come into the institution and make sure that they are expended for their intended purpose.

Since the primary purpose of fund accounting is to ensure that funds provided by donors and government are expended in the manner they were intended, it has been difficult for faculty to look at a university or college's financial statements and get a true picture of the university's financial health. In the past, financial statements for universities were broken down into various fund groups. In effect, each fund group had its own financial statements and universities could move money between funds making it difficult to understand whether universities had revenues in excess of expenses or whether expenses exceeded revenues.

The Governmental Account Standards Board (GASB) governs the reporting of financial data for public universities and colleges. In 2002, public universities and colleges changed their financial statements so that they too more closely resembled those in for profit businesses (GASB 34).

The effect of the changes of GASB on the way universities and colleges report their financial data was to put it in a format that much more closely aligned with for profit

businesses. In fact, one might argue that this new reporting format reflects the growing corporatization of universities, which are increasingly being run more and more like for-profit enterprises. However, one of the benefits of the new reporting format is that it is now easier for faculty to understand the financial status of their institutions.

Historically, most universities and colleges have had some sort of a faculty budget oversight committee as part of faculty governance institutions. Many of the functions of these budget oversight committees have been taken over by collective bargaining agents at institutions where faculty members have opted to engage in collective bargaining. However, whether an institution has collective bargaining or a traditional budget oversight committee, faculty at most institutions focus on the annual budget of the institution.

Looking only at a university or college’s budget can be misleading. Budgets are plans that normally deal with the current fund. However, universities have the ability to transfer money from one fund to another so looking only at the current fund does not give a true picture of a university’s finances. Figure 1 below shows the structure of university or college funds.

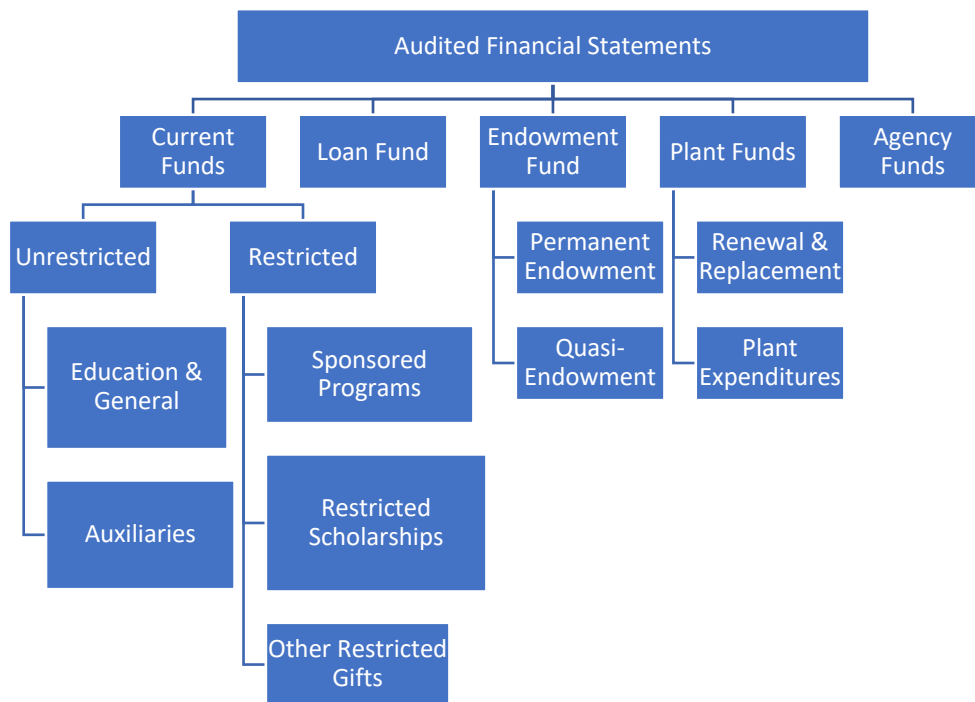


Figure 1

In addition, since a budget is just a financial plan, institutions have no legal obligation to spend money in accordance with their budgets. For example, a budget may show that money has been allocated for a certain number of faculty positions. However, in any given year a certain number of faculty members leave institutions, e.g., to take jobs elsewhere or retire. Consequently, in any given year a certain number of positions that are budgeted are vacant. Therefore, what a university or college budgets for faculty salaries and benefits is not necessarily what it actually spends. As a result, some percentage of funds for budgeted positions either gets spent elsewhere or accumulates and becomes part of a university or college's net assets.

Moreover, when faculty members retire, and institutions hire replacements, they are often replaced by faculty hired at lower salaries. We refer to this as the swap, wherein institutions swap lower paid for higher paid faculty, but budget as if the higher paid faculty members are still employed. This has the effect of systematically over-estimating expenses.

Budgets also depend on making projections regarding enrollment and other sources of revenue. Administrators are notorious for under-estimating enrollment growth or for assuming that tuition is the only sources of revenue. This tends to systematically under-estimate revenue.

Budgets require estimates of inflation e.g., how much health care costs, energy costs or the cost of library materials will increase. Changing any of these assumptions can drastically alter a budget. For example, for campuses that are located in areas where there is snow, administrators may assume that every winter will be have record snow fall and thus over-estimate the cost of snow removal or salt. Where campuses are located in warmer climates, administrators assume that there will be record temperatures and hence over-estimate the cost of air conditioning.

The chart below summarizes some of the key differences between audited financial statements and budgets.

Audited Financials	Budgets
Reports what actually happened	Reports predicted amounts
Is certified by an outside independent entity	Is made up by administrators and checked by admins
Includes the entire university; nothing is excluded	Includes whatever the administration wants to include; the admin can exclude some activities if they desire
Reports both accrual-based and cash flow results	Uses whatever accounting construct they desire
Reports results of real arms-length transactions	Reports transfers to and from organizations within the university that are not true revenues or expenses
The final results are what actually occurred	Budgets always balance, which real life never does

In many cases administrators argue that they are just being risk averse and don't want any negative surprises. While this may be true, consistently over-estimating costs or under-estimating expenses means that actual revenues will exceed actual expenses and lead to the accumulation of reserves. Having reserves is certainly desirable, because they can be used for a "rainy day." However, budgeting as if every day is a "rainy day" means that funds are accumulated in reserves, when those funds could have been used to support the primary mission of the institution.

Finally, budgets are always balanced, and this creates the impression that institutions spend every dollar of revenue that they take in. This is far from true for most institutions. In general, most universities and colleges will have balanced budgets and yet in most years they will have revenues that are substantially in excess of expenses.

To get a true picture of a college or university's finances, one must look at the actual audited financial statements, which represent the actual revenues and expenses of the institution. Evaluating a college or university's finances by looking at its budget would be the equivalent of evaluating the performance of a for-profit company by looking at its business plan.

In a for-profit business, revenues are generated through the sale of goods and services. In the process of producing goods and providing services firms incur expenses. The difference between revenues and expenses represents a firm's profit or loss. This profit or loss is one of the primary indicators of how a firm is performing.

As non-profit organizations, most universities and colleges take in revenue in the form of tuition dollars, donations and governmental support. In the process of carrying out the mission of their institution, universities and colleges also incur expenses. The difference between the revenues and expenses is known as the change in net assets (change in net position). If a university or college's revenue exceeds its expenses, there is an increase in net assets. Conversely, if the expenses exceed the revenues there is a decrease in net assets. Increases (or decreases) in net assets are one of the prime indicators of how a university is performing financially. They are the rough equivalent of profits (or losses).

Financial data is reported either as a stock (a level) or flow (a change). A stock is a snapshot taken at a particular point in time. For example, the amount of money in your savings account is a stock. Flows are measurements that tell us about changes overtime, as a particular stock moves from one level to another. Flows always have a time dimension. For example, income is a flow; it is measuring the number of dollars we receive per year.

Universities and colleges have three main financial statements. First there is a **balance sheet** or a **statement of net position (statement of net assets)**. Balance sheets have three main components: **assets, liabilities and net assets**. Assets are things of value owned by a university. Liabilities are claims against a university and net assets are the difference between assets and liabilities. Balance sheets deal primarily with levels i.e., it is a snapshot of a university or college's finances on the last day of the fiscal year.

Net assets represent the wealth of the institution. A well-presented balance sheet for a particular fiscal year will report on assets, liabilities, and net assets not only at the end of the current fiscal year, but also at the end of the previous fiscal year. (Fiscal years are always associated with the calendar year in which they end. For example, a fiscal year starting on July 1, 2016 and ending on June 30, 2017 is known as "fiscal year 2017" for short).

The full name of the second major financial statement is the **statement of revenues, expenses and changes in net position (changes in net assets)**. In the accounting world, another common name for this statement is the **income statement**. This financial statement shows how a university's finances are changing over a period of time, namely a fiscal year that normally runs from July 1 to June 30 of the following year. This statement therefore deals with flows and measures how a university's revenues and expenses are changing over time.

There is a relationship between stocks and flows or between the balance sheet and income statement. For example, suppose the income statement for a given fiscal year shows revenues that are greater than expenses; then, the same income statement will show a positive change in net assets, and the balance sheet for the same fiscal year will report end-of-year net assets greater than beginning-of-year net assets.

More specifically, the following equation shows an important relationship between the balance sheet and the income statement: the net assets at the beginning of a fiscal year (shown on the balance sheet) plus the change in net assets (shown on the income statement) equals the net assets at the end of the fiscal (again, shown on the balance sheet).

$$Net\ Assets_t = Net\ Assets_{t-1} + \Delta Net\ Assets_t$$

Here is a related equation: The change in net assets (shown on the income statement) equals revenue minus expenses (both shown on the income statement) which in turn equals the change in assets minus the change in liabilities (shown on the balance sheet).

$$\Delta Net\ Assets_t = Revenue_t - Expenses_t = \Delta Assets_t - \Delta Liabilities_t$$

The third major financial statement is the **statement of cash flows**. To understand what the cash flow statement is and why it is needed, one must realize that universities use accrual accounting; this means they book revenues when they earn them and book expenses when they are incurred. However, recognizing revenue is not always the same as collecting cash. For example, a university may send a bill to a student for tuition but not immediately collect the money owed. This shows up on a university's balance sheet as an increase in accounts receivable and is booked as revenue on the income statement (a.k.a. the statement of revenues, expenses and changes in net position). Accrual accounting also includes non-cash expenses like depreciation and unrealized gains and losses on investments. Thus, a university may report revenue, but not actually have more cash or it may report expenses but not have less cash. The role of the cash flow statement is to show the inflows and outflows of cash. Of the three statements, the cash flow statement is the easiest to understand and perhaps ultimately the most important, because at the end of the day cash inflows allow universities and colleges to pay their bills, including the salaries and benefits paid to employees.

The purpose of this update is to help educate faculty at the University of Toledo about the financial status of their institution. The information provided in this report is provided solely for educational purposes. Every effort has been made to ensure that the information in this report is accurate. Any errors or misstatements are purely unintentional, and the author accepts no responsibilities for any damage that may result.

The Balance Sheet

A balance sheet (statement of financial position or statement of net assets) is a snapshot of the university or college's financial position on the last day of the fiscal year. This statement deals with stocks (levels as opposed to changes). Generally fiscal years begin on July 1 and end on June 30 and when a fiscal year is referred to the number refers to the calendar year in which a particular fiscal year ends. A balance sheet has two sides and represents a balance between assets on the left side and liabilities and changes in net assets on the right side. The equation that summarizes a balance sheet is $\text{Assets \& Deferred Outflows} = \text{Liabilities \& Deferred Inflows} + \text{Net Assets}$. The basic structure of the balance sheet is illustrated in Figure 2 below.

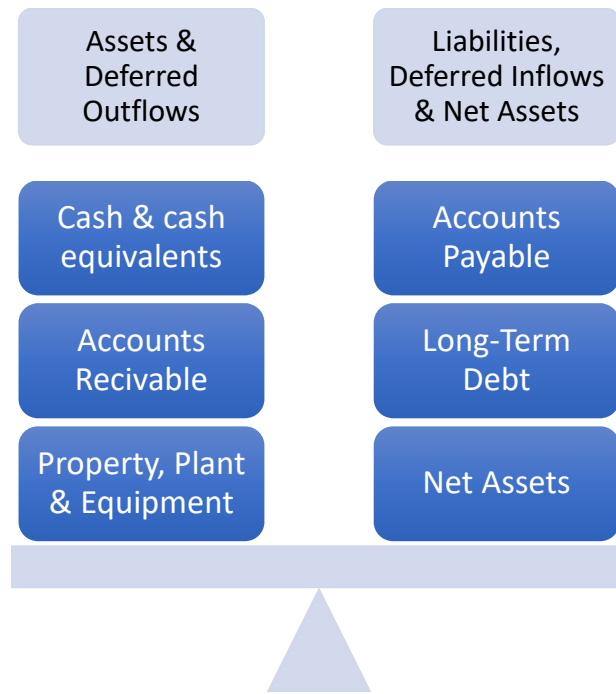


Figure 2.

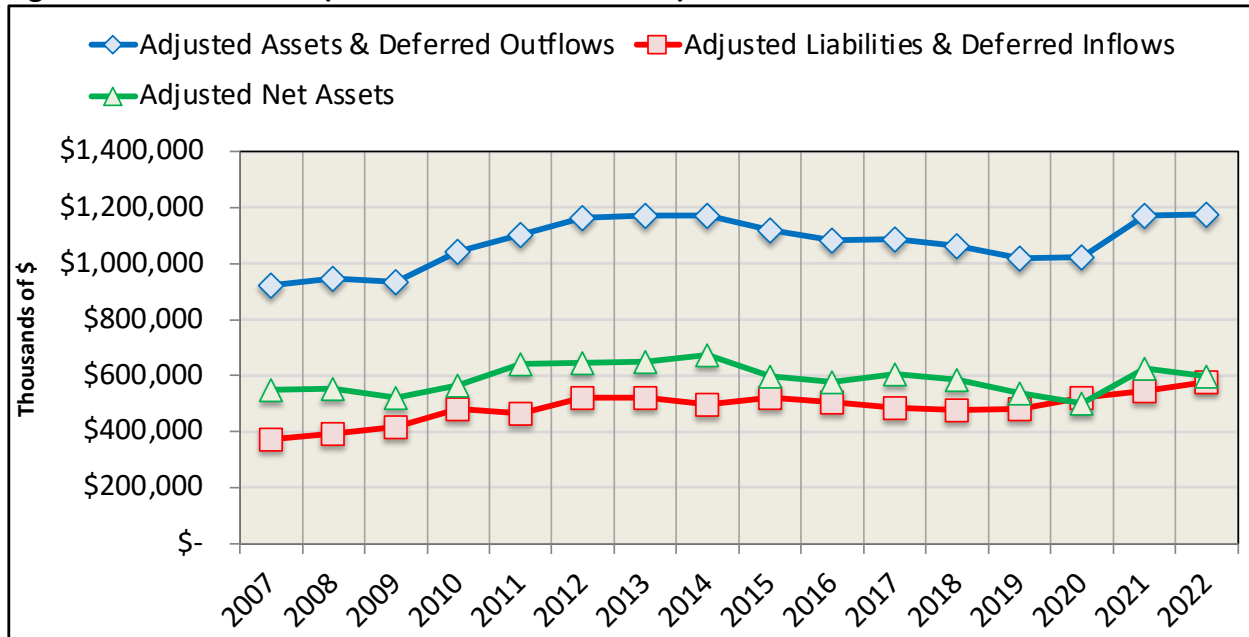
In the sections that follow we will explain the major components that make up the balance sheet and focus in on how much of the University's net assets are true reserves. In addition, we will look at how the level of reserves has changed over the last 16-years. In particular we look at reserves relative to expenses and debt to assess the adequacy of reserves.

Table 1 and Figure 3 show a summary of the balance sheet for University of Toledo as a whole, adjusted for GASB 68 and GASB 75, which will be discussed later in this report. They show a slight upward trend in total adjusted assets and deferred outflows, although from 2013 through 2020 total adjusted assets and deferred outflows were declining. For the most part adjusted total liabilities and deferred inflows have matched total adjusted assets and deferred outflows, the result being that the adjusted change in net position has been fairly flat.

Table 1. Balance Sheet

Year	Adjusted Total Assets & Deferred Outflows	Adjusted Total Liabilities & Deferred Inflows	Adjusted Total Net Assets
2007	\$ 924,374	\$ 374,173	\$ 550,201
2008	\$ 947,696	\$ 393,177	\$ 554,519
2009	\$ 935,819	\$ 414,969	\$ 520,850
2010	\$ 1,044,865	\$ 479,521	\$ 565,344
2011	\$ 1,103,346	\$ 463,091	\$ 640,255
2012	\$ 1,164,289	\$ 518,949	\$ 645,340
2013	\$ 1,170,217	\$ 519,728	\$ 650,489
2014	\$ 1,170,163	\$ 495,695	\$ 674,468
2015	\$ 1,119,087	\$ 521,818	\$ 597,269
2016	\$ 1,083,794	\$ 506,699	\$ 577,095
2017	\$ 1,088,522	\$ 484,174	\$ 604,348
2018	\$ 1,061,147	\$ 476,998	\$ 584,149
2019	\$ 1,019,882	\$ 481,100	\$ 538,782
2020	\$ 1,021,273	\$ 519,123	\$ 502,150
2021	\$ 1,171,349	\$ 547,007	\$ 624,342
2022	\$ 1,175,383	\$ 577,254	\$ 598,129

Figure 3. Balance Sheet (Statement of Net Position)



Assets & Deferred Outflows

An asset is something that an institution owns that is expected to provide a benefit in the future. Assets can be divided into two classes: **real assets** such as classrooms, laboratories, computers, library books and journals etc., and **financial assets** such as cash that can be used to make student loans and finance current operations, and investments in financial instruments such as endowments which can be used to generate income to defray certain expenses or be liquidated during a period of a financial crisis. Assets increase as resources are obtained and decrease as assets are disposed of or used up.

Deferred outflows are consumption of net assets applicable to a future reporting period. For example, if a university makes a payment to a pension fund in the current fiscal year but the payment is for the following fiscal year, there would be a decrease in cash which would lower the value of net assets. But since the payment is for a subsequent year, it is offset by a deferred outflow so there is no change in net assets for the current year. So, in this case, adding a deferred outflow gives a better picture of how the University is performing in the current fiscal year.

Total Assets (Blue line) = Total Liabilities (red line) + Total Net Assets (Green line)

A university's assets can be divided into **current** and **non-current assets**. These are shown in Table 2.

Current assets consist of assets that will be converted to cash or used up during a year. The major items that comprise current assets are cash and cash equivalents, short-term investments, accounts receivable, notes receivable, and inventories.

Cash and cash equivalents consist of physical cash, checking accounts, certificates of deposit, government securities, and money market mutual funds. Accounts receivable represent amounts that are owed to a college or university for services provided (e.g. tuition, room and board) and are reported net of allowances for doubtful accounts, which are amounts the college or university expects that it is unlikely to collect. Notes receivable are amounts owed by other entities such as grants or loans receivable, i.e., money that is owed to the university by granting agencies for loans. Inventories at universities consist of items like publications (marketing materials) and general merchandise.

Non-current assets consist of accounts receivable, notes receivable, long-term investments, endowment investments and capital assets, all assets that will not be converted to cash or used up during the current year. Capital assets are recorded at historical cost (the amount you paid for the item, or the amount it cost to build the capital asset as opposed to replacement cost), measured net of accumulated depreciation.

Current assets are generally more stable and are generally matched to current liabilities. The lion's share of the University's assets are in non-current assets, meaning long-term

investments and capital assets. So, the increase in non-current assets largely reflects the growth in long-term investments.

Table 2. Assets (Thousands of \$)

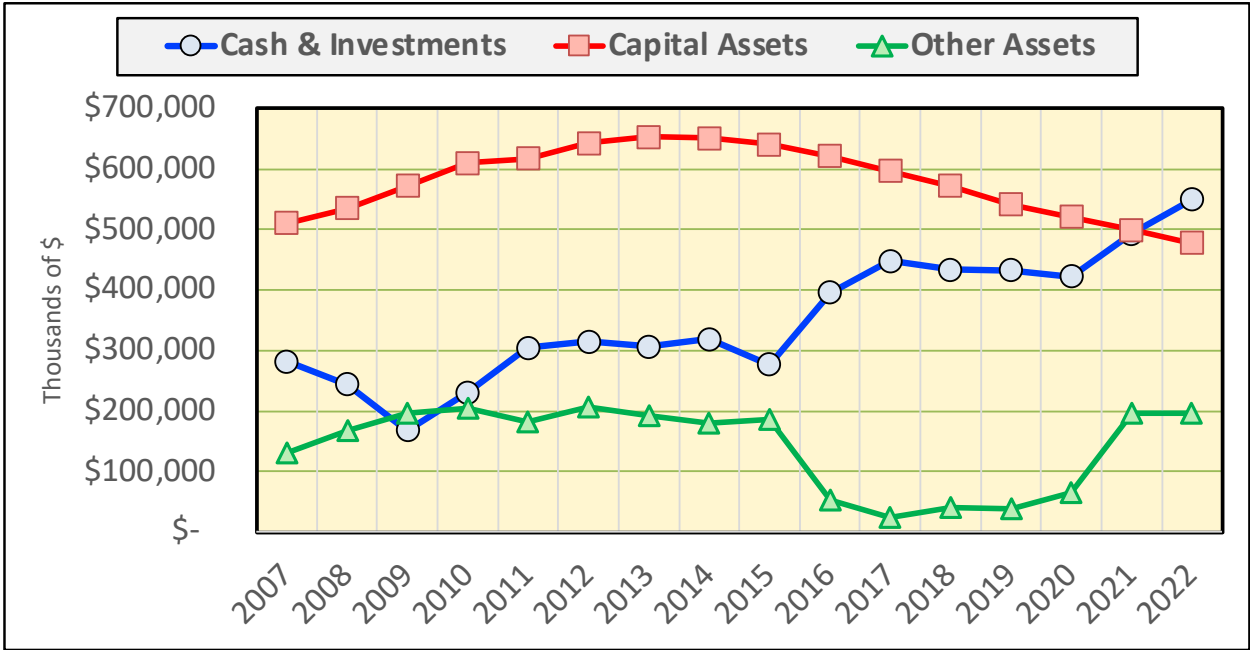
Year	Cash & Investments	Capital Assets	Other Assets	Current Assets	Non-Current Assets	Total Assets
2007	\$ 281,884	\$ 510,948	\$ 131,542	\$ 174,336	\$ 750,038	\$ 924,374
2008	\$ 244,004	\$ 535,302	\$ 168,390	\$ 183,637	\$ 764,059	\$ 947,696
2009	\$ 167,577	\$ 572,650	\$ 195,592	\$ 196,145	\$ 739,674	\$ 935,819
2010	\$ 230,127	\$ 609,803	\$ 204,935	\$ 207,353	\$ 837,512	\$ 1,044,865
2011	\$ 304,862	\$ 617,429	\$ 181,055	\$ 223,991	\$ 879,355	\$ 1,103,346
2012	\$ 314,903	\$ 643,228	\$ 206,158	\$ 201,657	\$ 962,632	\$ 1,164,289
2013	\$ 306,264	\$ 652,952	\$ 191,384	\$ 194,027	\$ 956,573	\$ 1,150,600
2014	\$ 318,632	\$ 651,090	\$ 180,240	\$ 187,866	\$ 962,096	\$ 1,149,962
2015	\$ 277,225	\$ 640,862	\$ 185,177	\$ 176,352	\$ 926,912	\$ 1,103,264
2016	\$ 395,226	\$ 621,056	\$ 53,181	\$ 187,682	\$ 881,781	\$ 1,069,463
2017	\$ 447,513	\$ 596,844	\$ 23,678	\$ 158,251	\$ 909,784	\$ 1,068,035
2018	\$ 433,621	\$ 572,529	\$ 39,665	\$ 177,650	\$ 868,165	\$ 1,045,815
2019	\$ 432,455	\$ 541,857	\$ 37,417	\$ 168,374	\$ 843,355	\$ 1,011,729
2020	\$ 421,890	\$ 521,024	\$ 65,907	\$ 222,420	\$ 786,401	\$ 1,008,821
2021	\$ 492,805	\$ 499,459	\$ 195,615	\$ 298,562	\$ 889,317	\$ 1,187,879
2022	\$ 549,208	\$ 477,721	\$ 195,604	\$ 276,853	\$ 945,680	\$ 1,222,533

Figure 4 shows a summary of assets for the University broken down into the two largest components, cash and investments and capital assets, also shown in Table 2. No adjustment for GASB 68 or 75 has been made for the numbers in Table 2 because our main focus is to show that the bulk of assets are composed of cash and investments and capital assets, net of accumulated depreciation.

In 2007 the University had \$281.9 million in cash and investments. There was a drop in the value of cash and investments in 2008 and 2009 with cash and investments falling to \$167.6 million in 2009 because of the Great Financial Crisis (GFC). In 2010 cash and investments increased although they were still below the value they had attained in 2007. But by 2011 the value of cash & investments surpassed the value in 2007 ending the year at \$304.9 million. Cash and investments were higher in 2012 and then dropped in 2013. In 2014 the value of cash and investments rose \$318.6 million and then dropped to \$277.2 million in 2015. From 2015 to 2017 the value of cash and investments rose to \$447.5 million and then dropped in the following three years, ending 2020 at \$421.9 million. Cash and investments were up again in 2021 and then up sharply in 2022 to \$549.2 million.

So overall, there has been an upward trend in the value of cash and investments, but that trend contains a fair amount of volatility. Before 2016 there was volatility in both cash and investment holdings. However, since 2016 all the volatility is due to changes in the value of investments. This volatility in the value of investments is important because it can affect changes

in the value of net assets from year to year. However, it is important to remember that most of these changes are from unrealized gains and losses, which are in effect paper gains and losses.

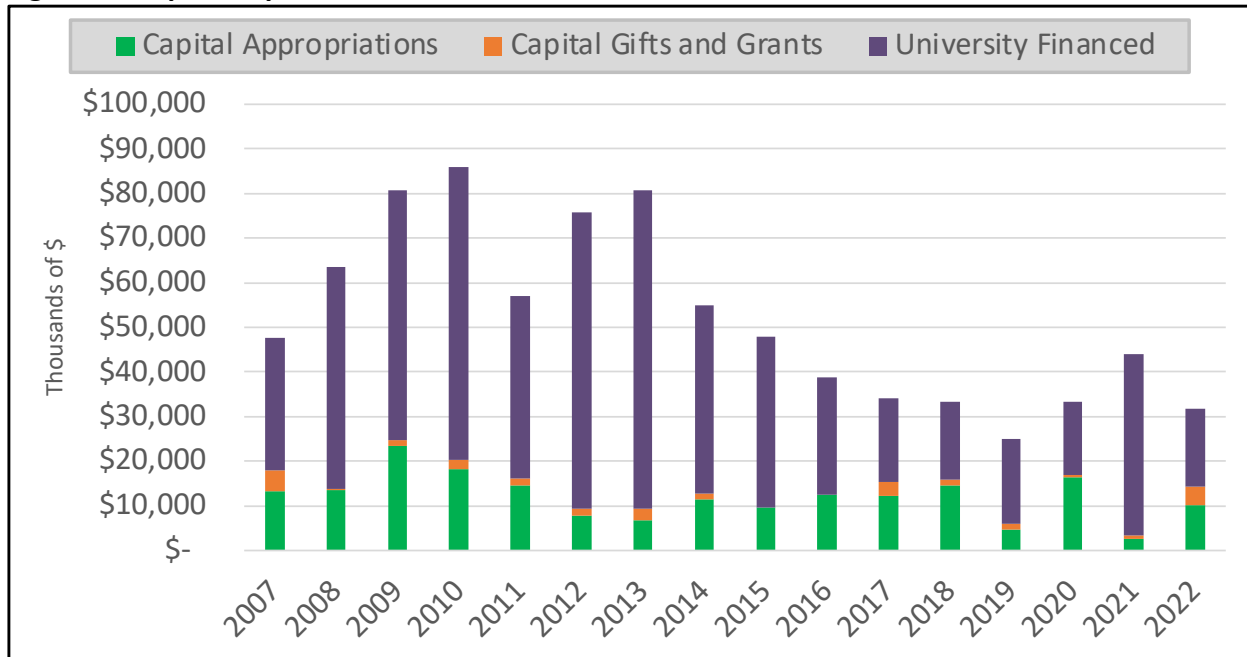


UT holds some of its own investments directly and most appear to be in safe assets such as Certificates of Deposit, corporate bonds and notes and government bonds. However, most of its investments are shown as being equity in an internal pool of investments management by the UT Foundation. In 2022 the University reported that it held \$272.5 million in the Foundation investment pool and its total investments were \$359 million. So pooled investments managed by the Foundation account for about three-quarters of the University’s investments. The pooled investments of the Foundation have about two-thirds of its investments in mutual funds, index funds, common stock, corporate bonds and real estate. The remaining third is in alternative investments such as hedge funds and partnerships. Hedge funds and partnerships can be risky and, in many cases, do not have great track records compared to performance in public markets i.e., publicly traded stock and bonds.

Capital assets are shown net of accumulated depreciation. These are also shown in Figure 4. With respect to capital assets, they were \$510.9 million in 2007 and rose to \$651 million in 2014. Since 2014 the value of capital assets has been falling. By 2022 the value of capital assets was down to \$477.7 million. This decline in the value of capital assets does not mean the University has fewer buildings, equipment or has sold off land. The book value of the University’s capital assets has continued to increase. But capital assets are measured in the statement of net position as being net of accumulated depreciation. So, the main reason for the decline in the value of the University’s capital assets is that depreciation is increasing faster than the book value of assets, so their net value is declining.

Figure 5 shows capital expenditures, and sources of funding for those expenditures. The University provides most of the money for capital expenditures. It does this in two ways: 1) it borrows money and 2) it can also use reserves for capital expenditures. The second largest source of funding for capital expenditures is capital appropriations. Gifts and grants are the third source of funding and Figure 5 shows these are very small at UT. Looking at the graph we can also see a downward trend in capital expenditures starting in 2014, which is consistent with the decline in capital values.

Figure 5. Capital Expenditures



It is unusual for a major state university to have declines in capital assets, and it raises two issues. First, as universities renovate older buildings, they restate the book value, and the building is given a higher value and then the depreciation process begins from that newly established value. The decline in capital values implies that the University is not putting up new buildings and it is not renovating its older buildings at a pace sufficient to keep their net values from declining. If older buildings are in good shape and do not need renovating, then declining capital values are not a problem. If this is the case, then the University will have more resources to spend on other priorities. However, it is also possible that University has a problem of deferred maintenance.

The second reason why declining capital assets are important is that the change in overall net assets is an indicator used to measure performance. As was mentioned earlier there are two types of assets: financial assets and physical assets. Performance should be measured by focusing on financial assets, and we should keep this in mind when we look at the change in net assets later in this report.

Liabilities and Deferred Inflows

Liabilities are claims on an institution's resources (alternatively, *liabilities* are present obligations to sacrifice resources or future resources that an institution cannot get out of). **Deferred inflows** are acquisitions of net assets applicable to a future reporting period. For example, if a university receives an advanced payment to fund a pension, i.e., cash in a current fiscal year to fund a pension in a subsequent fiscal year it will have an inflow of cash, which is an asset. Other things being equal, an inflow of cash will lead to a higher level of net assets, making the university look wealthier. However, since that cash is to cover activity in a future year, it is offset by showing a deferred inflow of resources so that the net position of the pension in the current fiscal year remains unchanged, all other things being equal. Liabilities at public institutions can also generally be divided in current and non-current liabilities. Table 3 shows the liabilities and deferred inflows for the University.

Current liabilities are liabilities due within a year. Examples of current liabilities are accounts payable (claims of other businesses or institutions for goods and services), deferred revenue (revenue that has already been received for services that the institution will supply in the next fiscal year (e.g., collecting tuition in one fiscal year for classes that will be offered in the next fiscal year) and the current portion of long-term debt. Here, current again refers to the amount of long-term debt the institution expects to pay during the current year.

Non-current liabilities consist primarily of capitalized lease obligations and long-term debt obligations that are due in more than one year. Examples of non-current liabilities long-term debt (bonds, notes and capital leases) as well as compensated absences. Compensated absences are liabilities for vacation and sick leave. Finally starting in 2015, universities in states with public pensions were required by GASB 68 to recognize their proportionate share of unfunded liabilities of the pensions and in 2018 GASB 75 required recognition liabilities associated with Other Post-Employment Benefits (OPEB), which consist of health benefits associated with public retirement plans.

The liabilities for pensions and OPEB are the present value of all future expenses associated with current retirees and everyone who works at an institution who will retire in the future. **Present value** is a concept that derives from the fact if you have a dollar today you can invest that dollar and earn interest. Thus, it is better to have a dollar today than it is to have a dollar a year from now. This means that if you have to spend \$1 in ten years to pay for retirement benefits, you don't need a \$1 today.

The present value is the amount that you would need to invest today to generate the money you need to cover your promise to provide benefits in the future. It turns out that this is a very soft number and it depends on whether interest rates are going to rise or fall in the future. It also depends on changes in life expectancy, growth in wages, the cost of health care and how many of your current employees will actually retire and be eligible for benefits. A full discussion of pensions and post-retirement benefits is beyond the scope of this report. However, bond rating agencies discount the unfunded liabilities associated with GASB 68 & 75

when calculating certain key performance ratios, because accounting for this liability does not reflect any fundamental change in the institution's performance.

Again, the changes brought about by GASB 68 & GASB 75 require universities and colleges to show their proportionate share of any unfunded liability in a public pensions University as an institutional liability. This change affects the statement of net position and the statement of changes in revenue, expenses and changes in net position.

The theory behind the change is that pensions and retiree healthcare are part of an "employment exchange." In other words, employees agree to provide services in exchange for wages, benefits and the promise of a pension in the future. Thus, a pension or retiree healthcare is a form of deferred compensation i.e., it is a "bargained for benefit" and therefore the unfunded portion must be reported as a liability.

So, in effect the unfunded pension liability in public universities will be counted twice, once by the retirement System and then again by each individual governmental entity whose employees are covered by the public pension University.

In states where public pensions have significant unfunded liabilities this will have a dramatic effect on a college or university's net assets. It is even possible that some universities and colleges will show negative unrestricted net assets as a result of this change.

The legal meaning of this change will vary from state to state, depending on pension law in each state. In most states, it is likely that there is no legally enforceable means to collect this liability from institutions, because the benefits and the means of paying for these benefits are determined by state law. Since legislatures and governors can change these laws, a fact that is known to employees when they enter into an employment exchange, individual institutions have no legal or moral obligation to honor these liabilities.

The real impact of these liabilities is to support a neoliberal strategy to alarm the public about these liabilities, which will lead to attacks on defined benefit public pension plans and retiree healthcare resulting in increased calls for the elimination of these plans. Fortunately, most administrators understand that this is not a "real liability" for the University so when they calculate discretionary fund balances, they also adjust for the impact of the pension and OPEB on unrestricted net assets.

Therefore, in presenting numbers for liabilities we exclude liabilities for pensions (per GASB 68) and liabilities for OPEB (per GASB 75) and their associated deferred inflows. Total liabilities adjusted for GASB 68 and 75 are shown in Table 3. Figure 6 shows the debt as well as other liabilities, again excluding pension and OPEB liabilities from 2007-2022.

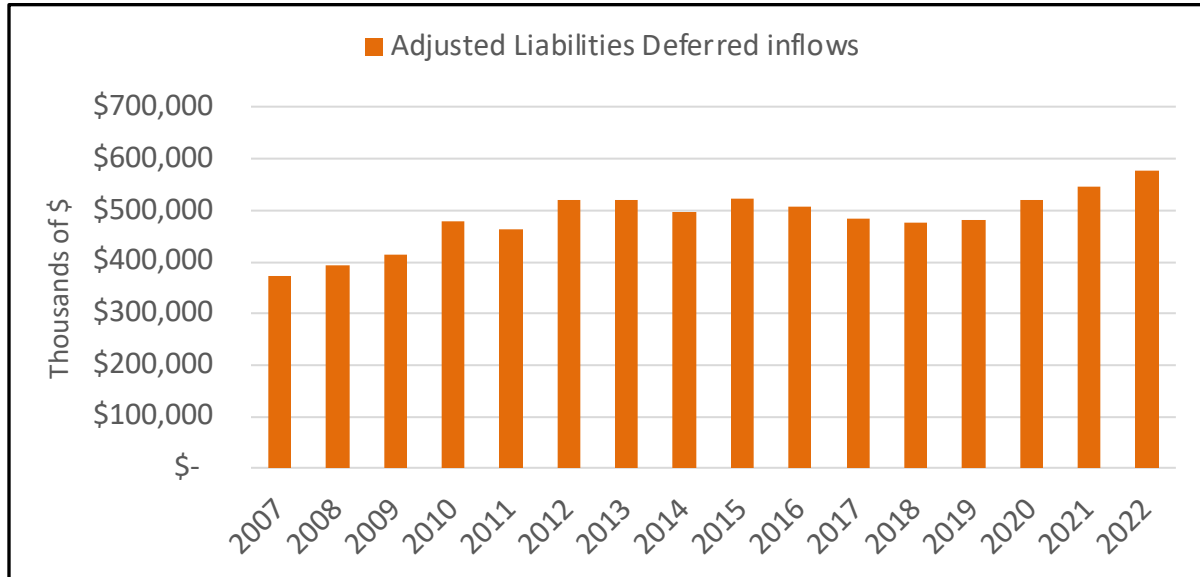
It shows that other liabilities (the purple portion of the bar) have been relatively stable. The main driver of the changes in liabilities for the University has been changes in debt (the red part of the bar). From 2002 to 2011 the University had relatively little debt. The level of debt increased significantly in 2012 and 2013 but has been declining steadily since 2013.

Table 3. Adjusted Liabilities (thousands of \$)

Year	Adjusted Liabilities Deferred inflows	Other Liabilities	Debt	Current Liabilities
2007	\$ 374,173	\$ 96,517	\$ 277,656	\$ 90,112
2008	\$ 393,177	\$ 127,768	\$ 265,409	\$ 126,198
2009	\$ 414,969	\$ 162,045	\$ 252,924	\$ 133,299
2010	\$ 479,521	\$ 183,960	\$ 295,561	\$ 175,827
2011	\$ 463,091	\$ 175,541	\$ 287,550	\$ 154,040
2012	\$ 518,949	\$ 188,003	\$ 330,946	\$ 150,861
2013	\$ 519,728	\$ 193,065	\$ 326,663	\$ 158,470
2014	\$ 495,695	\$ 183,004	\$ 312,691	\$ 148,909
2015	\$ 521,818	\$ 223,621	\$ 298,197	\$ 146,243
2016	\$ 506,699	\$ 208,502	\$ 298,197	\$ 157,774
2017	\$ 484,174	\$ 187,882	\$ 296,292	\$ 149,767
2018	\$ 476,998	\$ 193,346	\$ 283,652	\$ 151,495
2019	\$ 481,100	\$ 207,737	\$ 273,363	\$ 147,246
2020	\$ 519,123	\$ 247,560	\$ 271,563	\$ 183,637
2021	\$ 547,007	\$ 262,833	\$ 284,174	\$ 193,395
2022	\$ 577,254	\$ 284,178	\$ 293,076	\$ 207,333

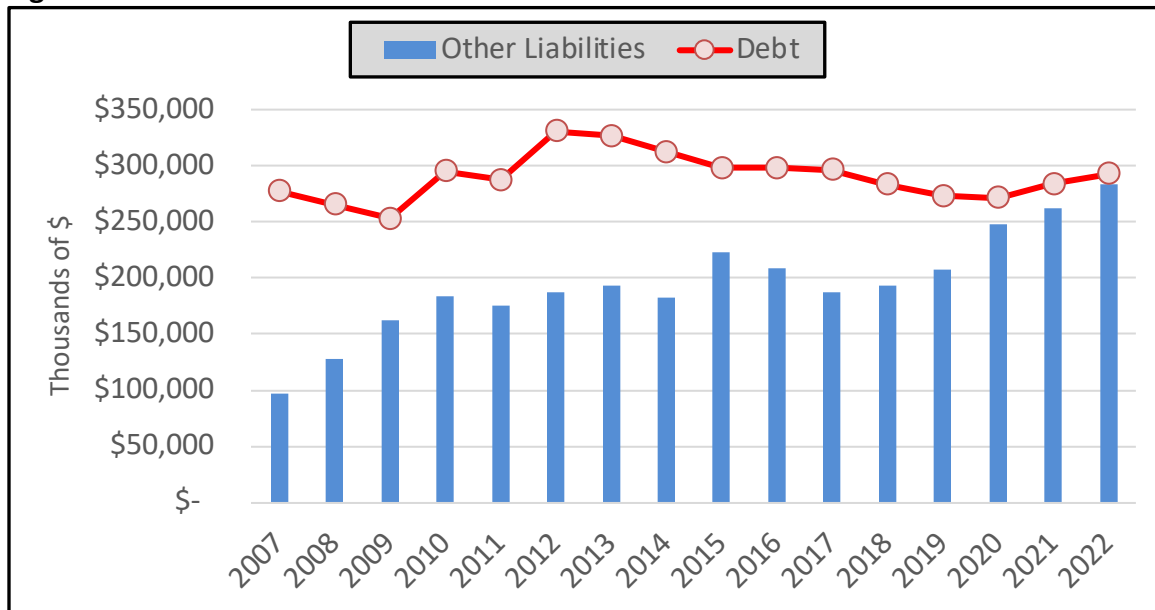
Figure 6 also shows adjusted total liabilities and deferred inflows. Overall, there has been a slight upward trend in adjusted liabilities and deferred inflows. From 2007 through 2015 adjusted liabilities were generally increasing, going from \$374.2 million in 2007 to \$521.8 million in 2015. From 2015 through 2018 adjusted liabilities were falling ending 2018 at \$476.9 million. Since 2018, adjusted total liabilities and deferred inflows have been increasing and were \$577.3 million in 2022.

Figure 6. Adjusted Total Liabilities & Deferred Inflows



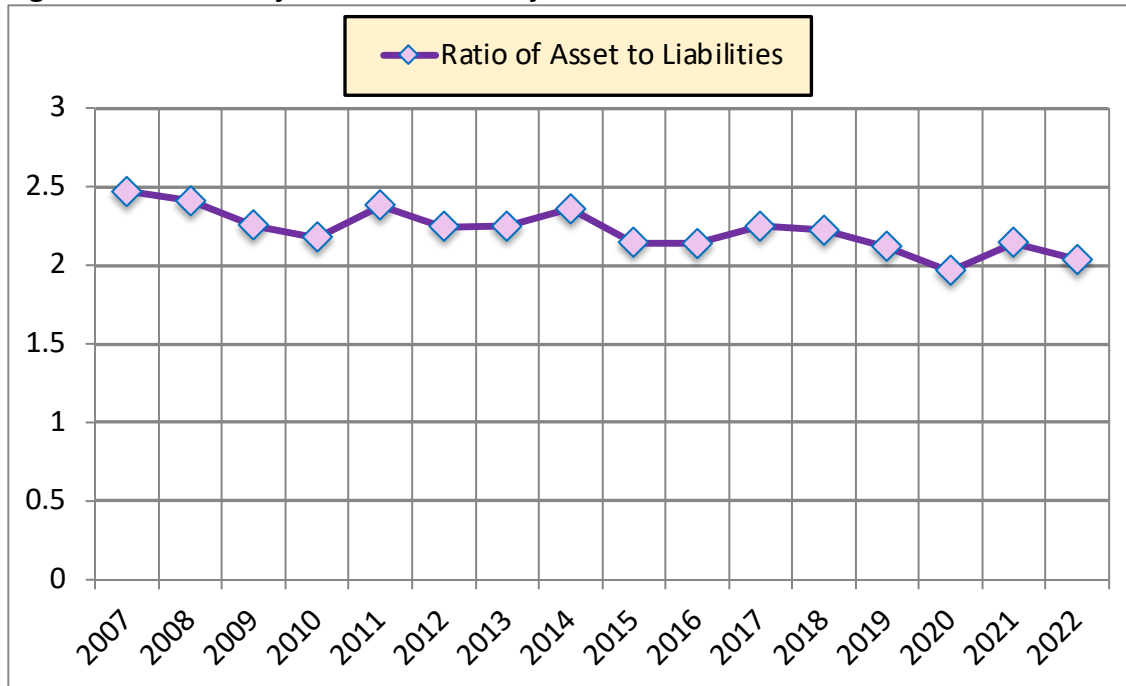
To see what has been driving the changes in liabilities Figure 7 shows total debt, both including long-term debt and the current portion of debt, which is the debt payable in the current fiscal year, along with all other non-current liabilities. The debt trended up from 2007 to about 2012 but since then has been trending downward. This is consistent with the downward trend in capital expenditures which are largely funded by debt. So, the slight upward trend is being driven by increases in other liabilities.

Figure 7. Debt and Other Non-Current Liabilities



Overall, the University of Toledo’s assets relative to its liabilities is moderately high. This can be seen in Figure 8 by looking at the ratio of assets to liabilities, excluding pension and OBEB adjustments. There is a downward trend in the ratio of assets to liabilities, but it seems to have slowed in recent years.

Figure 8. Ratio of Adjusted Assets to Adjusted Liabilities



Net Assets

In for-profit businesses, the difference between assets and liabilities is referred to as owner’s equity or stockholder’s equity. In theory, if a business were to sell off all of its assets and pay off all claims against the business, the amount remaining would be the owner’s claims on the business’s resources. In a non-profit organization, the difference between assets plus deferred outflows and liabilities plus deferred inflows is referred to as **net assets**. Since net assets are the difference between assets and liabilities, they represent the wealth of an institution. Therefore, net assets are an important indicator of the financial health. In the past, these net assets were referred to as fund balances.

At public universities and colleges there are four general categories of net assets:

1. Net Assets Invested in Capital Assets
2. Non-Expendable Restricted Net Assets
3. Expendable Restricted Net Assets
4. Unrestricted Net Assets

Net assets represent the net accumulation of an institution's assets over a period of time. Large portions of these net assets consist of the value of land, buildings, books and journals and equipment owned by the university or college. Universities and colleges are required to show accumulated depreciation on their balance sheets for certain real assets such as buildings and some equipment. An increase in net assets means that a university has increased its wealth and conversely a decrease in net assets implies that a university's wealth has decreased.

Wealth can be divided into two categories:

- financial net assets or
- tangible (real) net assets

Financial assets are assets whose value is based on contractual claims e.g., stocks, bonds, mutual funds, bank deposits etc. **Tangible assets** are physical assets e.g., the land, buildings, equipment and library books own by a university or college. A university or college's wealth can increase either because it has more real assets or because it has more financial assets. In many cases, the purchase of tangible assets is financed partially by state capital appropriations or by gifts. An increase in state capital appropriations or gifts for capital increases the wealth of an institution. However, the capital funds universities and colleges receive from the state or private donors are restricted and cannot be used for operations i.e., paying salaries and benefits.

In addition, to these tangible assets, universities and colleges also own financial assets such as stocks and bonds, mutual funds, hedge funds and shares in private equity funds. Finally, universities also generally hold small amounts of cash and money in checking and savings accounts.

If an increase in total net assets is exclusively due to increases in the value of land, buildings and equipment, the increase in wealth while real, does not give university added financial flexibility with respect to operations. To the extent that a university uses funds it generates through operations to purchase land, buildings and equipment, it can decide to reallocate these funds for alternative uses. But when it uses capital funds from the state or from private sources for purchases of land, buildings and equipment, it cannot reallocate that money for other purposes. However, it should be noted that when buildings are constructed, using capital funds, the new buildings add to operating expenses that could lead to a reallocation of resources.

When the state gives a university money to purchase or renovate a building in the form of a capital appropriation, or a donor gives a university a gift to put up a new building, the value of the university's assets increases. Typically, capital appropriations and gifts cover only a portion of the costs of new construction and renovations. To cover the remainder of the cost's universities can use unrestricted net assets, transforming liquid assets into fixed assets or it can borrow money by selling bonds. When a university sells bonds, it incurs a liability and the difference between the increase in the value of the assets and the increased liability represents the increase in net assets invested in plant.

Since universities purchase fixed assets that will be used over a long period of time, the cash outlay for construction in a given year is not considered an expense on the income statement. What a university does is to break up the cash outlay on construction and renovation by allocating that expenditure over a fixed period of time. The amount of time depends on the particular asset being purchased. The expenditure on a building is typically allocated as an expense over a 30-year period. The allocation of this expenditure over a period of time is known as depreciation. Thus, depreciation is a way of allocating the cost of fixed assets over the useful life of those assets. It is an expense and therefore it reduces the net assets of a university.

Each year when a university calculates the value of its net assets invested in plant and equipment is subtracts the depreciation for that year. The sum of all the depreciation that has been subtracted is known as accumulated depreciation. Often people have the impression that depreciation is a way of funding future investments i.e., that **accumulated depreciation** somehow represents a savings account or reserves for future investments and use the term "funding depreciation." There is no such thing as funding depreciation. It is the case, that universities can set aside unrestricted funds that are designated for future investment in plant and equipment, but this has nothing to do with depreciation per se.

Once a university invests money in its physical plant it is unusual for it to sell that asset. If a university were forced to respond to an unexpected shortfall in revenue or unexpected expenses it would have to use its **reserves**, which are financial assets. Thus, **financial net assets** are an indication of how well a university can react to unforeseen financial emergencies.

One consequence of depreciation can be that it causes the value of net assets to decrease. For example, this happens when a college or university does not put up any new buildings or renovate any existing buildings. The value of investment in capital is net of accumulated depreciation. If the gross value of capital investment does not change and buildings depreciate every year, increasing accumulated depreciation, then the net value will decrease if the gross value is constant or increases more slowly than the value of accumulated depreciation. This is important because it can create a situation where restricted and unrestricted net assets are rising but the overall change in net assets is negative because it is dragged down by accumulated depreciation.

In 2011 the terms “**net position**” and “**change in net position**” were introduced by GASB 63 although many institutions did not implement GASB 63 until 2013. These new terms have now taken the place of “net assets” and “change in net assets” respectively. This difference in terminology is minor and for our purposes, we will use the two pairs of terms interchangeably.

The **net position** = (assets + deferred outflows of resources) - (liabilities + deferred inflows of resources) and the **change net position** = the change (assets + deferred outflows of resources) - change (liabilities + deferred inflows of resources) or **Total Revenue - Total Expenses**.

Other things being equal an increase in liabilities lowers the net assets of a college or university. In particular, the reporting requirements for GASB 68 and GASB75 requiring the reporting of unfunded liabilities of state pension and Other Post-Employment Benefits (OPEB) have significant effects on unrestricted net assets. In many cases, these GASB adjustments result in institutions having negative unrestricted net assets. Unrestricted net assets are a major component of reserves.

But the reality is that Moody’s and other credit rating agencies, as well as those in states charged with monitoring the financial health of institutions of higher education recognize the fact that institutions are not actually responsible for these liabilities and therefore, they tend to discount or ignore these increases in liabilities when evaluating the credit worthiness or the financial health of an institution. For example, here is what the Ohio Department of Higher Education says about GASB 68 and the same logic can be applied to GASB 75:

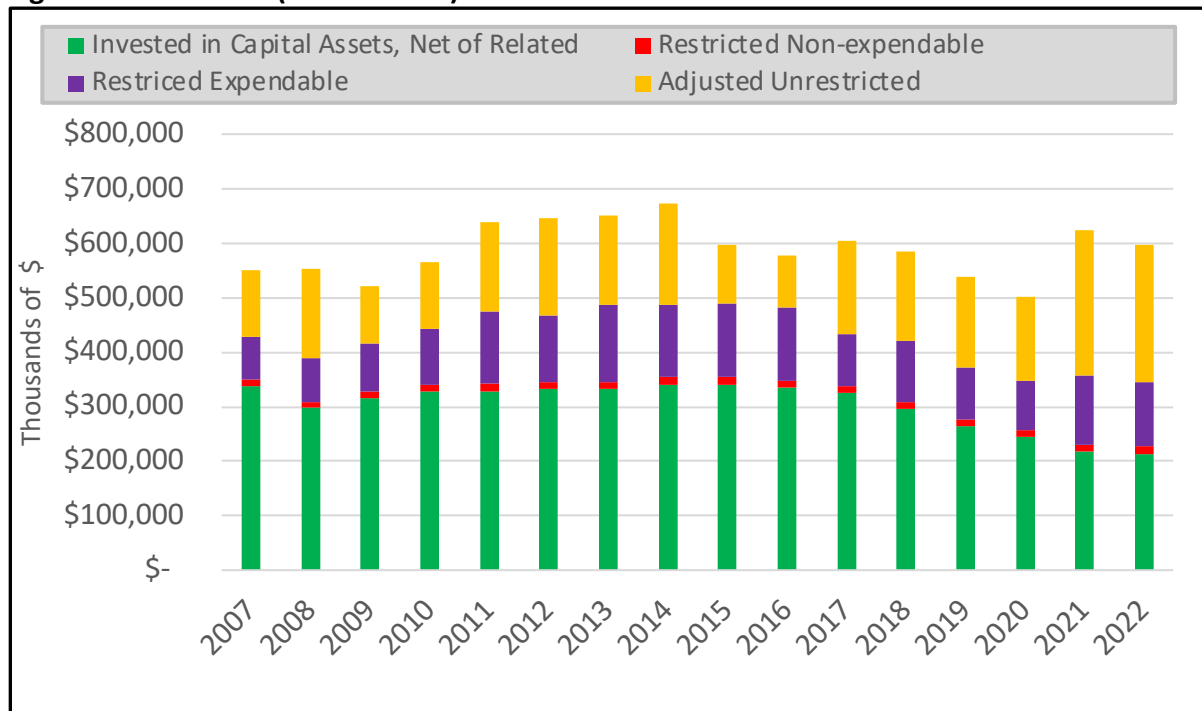
“In an effort to appropriately recognize the incorporation of these elements as an accounting change rather than a structural change in the true financial condition of the institution, the Ohio Department of Higher Education will calculate institutional financial ratios from FY2015 onward both including and excluding associated impacts of GASB 68.” <https://www.ohiohighered.org/campus-accountability>

Table 4 and Figure 8 shows the net assets of the University adjusted for GASB 68 and 75 from 2007-2022. Total net assets increased in 2008 from \$550.2 million to \$554.5 million. But underlying that relatively small increase was a \$41.1 million decrease in capital assets, which was offset by a \$46.4 million in **expendable net assets** (restricted expendable plus adjusted unrestricted). Expendable net assets are also known as reserves and these funds give the University the flexibility it needs to deal with unanticipated changes in revenue. In 2009 net assets declined sharply because of the GFC. Reserves declined by \$54.1 million although the overall change in net assets was minus \$33.7 million. The following year net assets recovered rising to \$565.3 million. About 30% of this increase was due to an increase in capital assets, but 70% was due to an increase in expendable net assets. Over the next four years net assets continued to rise and most years the increases were largely driven by expendable net assets. In 2015 and 2016 net assets fell and in both of those years the declines were main attributable to changes in expendable net assets, although in 2016 about 25% of the loss was due to a decline in capital assets.

Table 4. Net Assets (Net Position)

Year	Invested in Capital Assets, Net of Related	Restricted Non-expendable	Restricted Expendable	Adjusted Unrestricted	Total Net Assets
2007	\$ 339,132	\$ 11,039	\$ 79,297	\$ 120,733	\$ 550,201
2008	\$ 298,013	\$ 10,070	\$ 81,037	\$ 165,399	\$ 554,519
2009	\$ 314,906	\$ 13,661	\$ 87,002	\$ 105,281	\$ 520,850
2010	\$ 328,092	\$ 13,661	\$ 101,999	\$ 121,592	\$ 565,344
2011	\$ 329,461	\$ 13,669	\$ 132,198	\$ 164,927	\$ 640,255
2012	\$ 332,475	\$ 13,830	\$ 122,000	\$ 177,035	\$ 645,340
2013	\$ 332,188	\$ 13,830	\$ 141,922	\$ 162,549	\$ 650,489
2014	\$ 340,450	\$ 13,831	\$ 133,661	\$ 186,526	\$ 674,468
2015	\$ 341,396	\$ 12,985	\$ 136,582	\$ 106,306	\$ 597,269
2016	\$ 335,512	\$ 12,986	\$ 135,114	\$ 93,483	\$ 577,095
2017	\$ 324,703	\$ 13,236	\$ 96,211	\$ 170,198	\$ 604,348
2018	\$ 296,834	\$ 13,137	\$ 111,103	\$ 163,075	\$ 584,149
2019	\$ 264,446	\$ 12,798	\$ 95,035	\$ 166,503	\$ 538,782
2020	\$ 245,711	\$ 12,807	\$ 89,550	\$ 154,082	\$ 502,150
2021	\$ 218,891	\$ 12,808	\$ 126,289	\$ 266,354	\$ 624,342
2022	\$ 214,414	\$ 12,808	\$ 117,182	\$ 253,725	\$ 598,129

Figure 8. Net Assets (Net Position)



In 2017 net assets increased by \$27.3 million. However, this increase was dragged down by a \$5.9 million decrease in the value of capital assets, which partially offset the \$37.8 million increase in expendable net assets. In 2018 net assets declined by \$20.2 million and all the decline was due to a decline in capital assets. In 2019 and 2020 there were declines in net assets with net assets dropping to \$502.1 million. Most of the declines in these years were due to reductions in expendable net assets. In 2021 net assets increased to \$624.3 million driven by a \$149 million increase in expendable net assets. That year expendable net assets reached \$266.3 million which is the highest level during the 16-year period looked at in this update. Finally in 2022 net assets declined to \$598.1 million due to declines in both capital assets and expendable net assets.

Restricted and Unrestricted Net Assets

Universities and colleges also divide their net assets into restricted and unrestricted net assets. **Restricted net assets** are assets net of related liabilities held by a university or college that are designated for specific purposes by external entities, either government agencies or private donors. **Unrestricted net assets** are assets net of related liabilities that can be spent at the discretion of the institution.

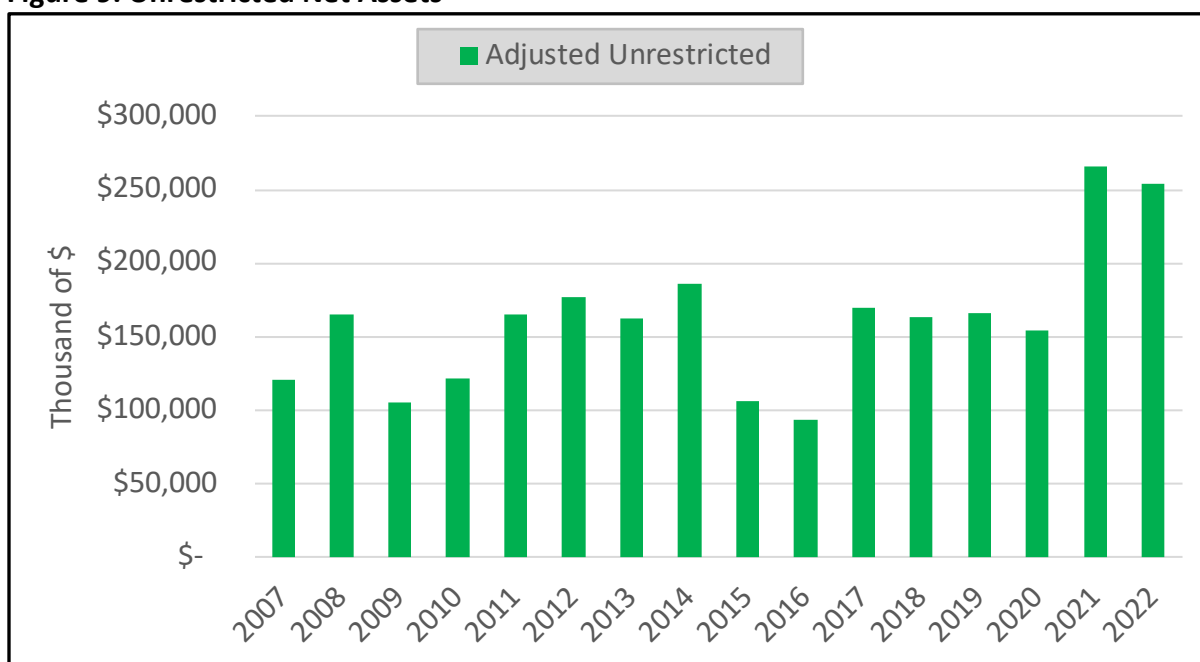
Restricted net assets are categorized as **non-expendable** or **expendable**. An example of a restricted non-expendable fund is true endowment where the corpus of the fund must be held in perpetuity and invested to generate income that can be spent for a specific purpose. UT does have a relatively small endowment. The red portion of the bars in Figure 8 shows the University's restricted non-expendable net assets. The level of these restricted non-expendable assets has varied between \$10.1 million in 2008 and \$13.2 million in 2017. In 2019 through 2022 restricted non-expendable net assets were approximately \$12.8 million.

Restricted expendable consists of net assets that legally can be used for operations or plant expenditures. So, for example, an institution may sell bonds or receive a capital appropriation for construction and deposit these funds in a trustee account to be spent at a later date. These funds would be considered restricted expendable funds. Other examples of restricted expendable funds are unspent funds associated with grants and sinking funds (think about these as being mandated savings accounts to make future principal and interest payments on debt). Again, these expendable funds are a measure of liquidity i.e., the ability to deal with unforeseen financial emergencies. The restricted expendable net assets went from \$79.3 million in 2007 to \$141.9 million in 2013. They declined to \$89.5 million in 2020 and then rose to \$126.3 million in 2021 before dropping to \$117.2 million in 2022.

Unrestricted Net Assets

Finally, we look at unrestricted net assets. **Unrestricted net assets** are shown in Figure 8 but because they are so important in determining reserves and give the University the most flexibility when it comes to dealing with unforeseen changes in revenue, we also show them separately in Figure 9. Unrestricted net assets give universities more flexibility than restricted net assets. However, one should not assume that just because an asset is restricted that it cannot be used for reallocation. For example, a university or college may be spending a significant amount of unrestricted funds on scholarships and then replace that funding with endowed scholarships. In such a case, there would be no change in unrestricted funds but there would be an increase in restricted funds. However, the unrestricted funds that were being used for scholarships have are available for reallocation.

Figure 9. Unrestricted Net Assets



An institution can use unrestricted net assets for any lawful purpose. Many universities claim that the Board of Trustees or management has designated all or most unrestricted net assets for specific purposes. Some of these designations may result from funds being collected by special fees. This type of statement is misleading in the sense that all of the designated fees are the result of board or management policy and that policy can be changed at the discretion of the Board.

For example, while spending money on deferred maintenance may be worthwhile, faculty may believe that a university can address issues of deferred maintenance over a longer period of time making unrestricted funds available for another item faculty believe is more important.

Few institutions have funds that are undesignated. The point that faculty need to understand is that current policies with respect to unrestricted net assets reflect the priorities of the governing board and/or management and may not reflect the priorities of faculty. While faculty cannot collectively bargain over the specific designation of unrestricted net assets, collective bargaining can cause the governing board or management to change its priorities resulting in the reallocation of these funds.

Often times universities designate the use of unrestricted funds. One way to do this is to create a **quasi-endowment**. Quasi-endowments consist of funds that have been set aside by the university governing board to function as an endowment. However, quasi-endowments are unrestricted and can be spent in any lawful manner in accordance with the wishes of the governing board.

The estimates of unrestricted net assets reflect adjustments made for GASB 68 and GASB 75 shown in Table 3 and Figures 8 and 9 to enable us to understand the true unrestricted net assets that are available as part of the University's reserves. To make the adjustment we take the sum of the pension assets, net OPEB assets and deferred outflows related to pensions and OPEB and then subtract the sum of net pension and OPEB liabilities plus deferred inflows from pensions and OPEB. This produces a large negative number which is then subtracted from the reported unrestricted net assets to arrive at adjusted unrestricted net assets. The Ohio Department of Higher Education (ODHE) reports unadjusted and adjusted net assets and the adjusted net assets in this report line up with those reported by ODHE.

Unrestricted net assets rose steadily from 120.7 million in 2007 to \$165.4 million in 2008. They declined to \$105 million in 2008 and went up over the next three years ending 2012 at \$177 million. In 2013 they dropped to \$162.5 million and then in 2014 rose to \$186.5 million. From that relative high point, they trended down ending 2020 at \$154.1 million. Then in 2021 they rose to an all-time high of \$266.3 million before dropping down to \$253.7, which is still 36% higher than the previous high in 2014. Overall, in looking at the performance of unrestricted net assets there was an upward trend between 2007 and 2022.

Reserves

Reserves consist of **expendable net assets** which is the sum of all unrestricted and restricted expendable net assets. Table 5 illustrates the calculation of reserves using 2022 data. It is important to note that reserves are not simply a pile of cash and investments but are cash and investments minus known liabilities i.e., claims on university resources by external agents. The concept of reserves is important because they represent net assets that provide universities with flexibility to deal with unforeseen events such as temporary declines in enrollment or unexpected expenses.

Table 5: University reserves in 2022:

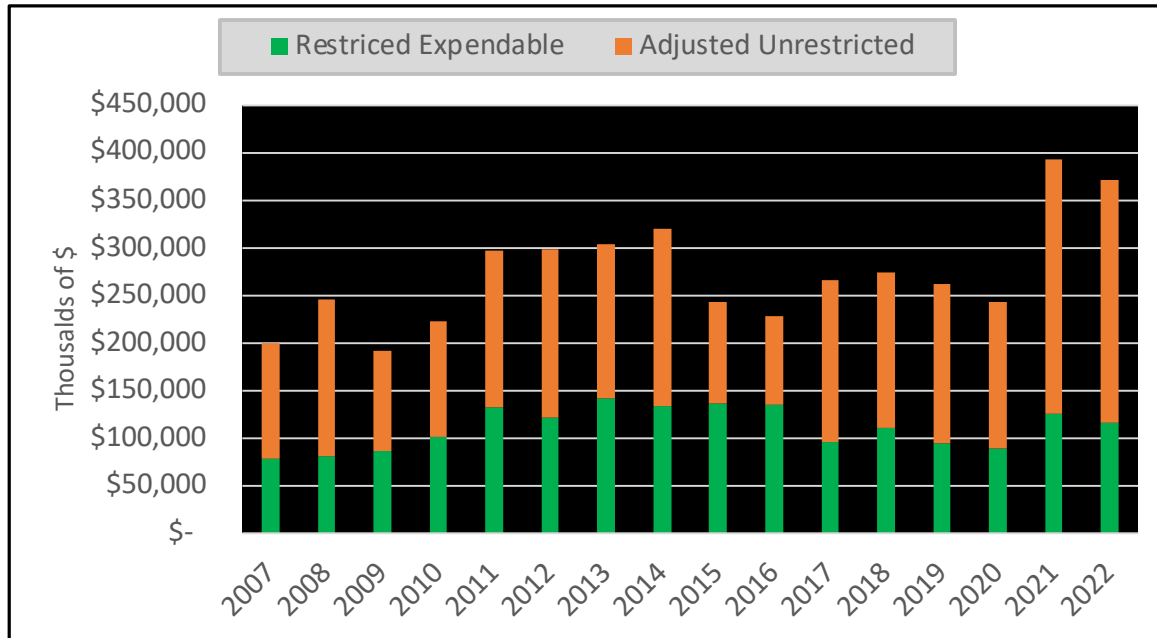
Category	Discussion	Amount	Reserves?
Investment in Capital Assets	Value of the buildings, and this component of net assets does not tell us anything about the financial freedom or flexibility of UT. Not part of reserves.	\$ 214,414	0
Restricted non-expendable net assets	These are net assets that have restrictions that do not allow for the principal of donated funds to be spent	\$ 12,808	0
Restricted expendable net assets	Purpose restricted. Can only be spent for a designated purpose. This component IS included in the calculation of reserves.	\$ 117,182	\$117,182
Unrestricted net assets	Unrestricted mean there are no restrictions. The administration may claim that unrestricted net assets are already spoken for. If the reserves were truly spoken for and contractually committed, the amounts would not be in the unrestricted category.	\$ 253,725	\$253,725
Total net assets		\$ 585,321	\$370,907

Reserves for the University from 2007 to 2022 are shown in Table 6 and in Figure 9.

Table 6: Reserves

Year	Restricted Expendable	Adjusted Unrestricted	Total Reserves
2007	\$ 79,297	\$ 120,733	\$ 200,030
2008	\$ 81,037	\$ 165,399	\$ 246,436
2009	\$ 87,002	\$ 105,281	\$ 192,283
2010	\$ 101,999	\$ 121,592	\$ 223,591
2011	\$ 132,198	\$ 164,927	\$ 297,125
2012	\$ 122,000	\$ 177,035	\$ 299,035
2013	\$ 141,922	\$ 162,549	\$ 304,471
2014	\$ 133,661	\$ 186,526	\$ 320,187
2015	\$ 136,582	\$ 106,306	\$ 242,888
2016	\$ 135,114	\$ 93,483	\$ 228,597
2017	\$ 96,211	\$ 170,198	\$ 266,409
2018	\$ 111,103	\$ 163,075	\$ 274,178
2019	\$ 95,035	\$ 166,503	\$ 261,538
2020	\$ 89,550	\$ 154,082	\$ 243,632
2021	\$ 126,289	\$ 266,354	\$ 392,643
2022	\$ 117,182	\$ 253,725	\$ 370,907

Figure 9. Reserves



Obviously from looking at Figure 9 we can see that there is some volatility in reserves. To get a better understanding of what has happened over time we can group reserves into 4 periods. First, we calculate average reserves for the period 2007-2010 which were \$220.8 million. Second, we calculate average reserves from 2011-2014 where they averaged \$305.2 million. Third we look at average reserves for the period from 2015-2020 where average reserves were \$252.9 million. Finally, we look at average reserves from 2021-2022 where they averaged \$381.8 million.

Figure 10. Trends in Components of Reserves

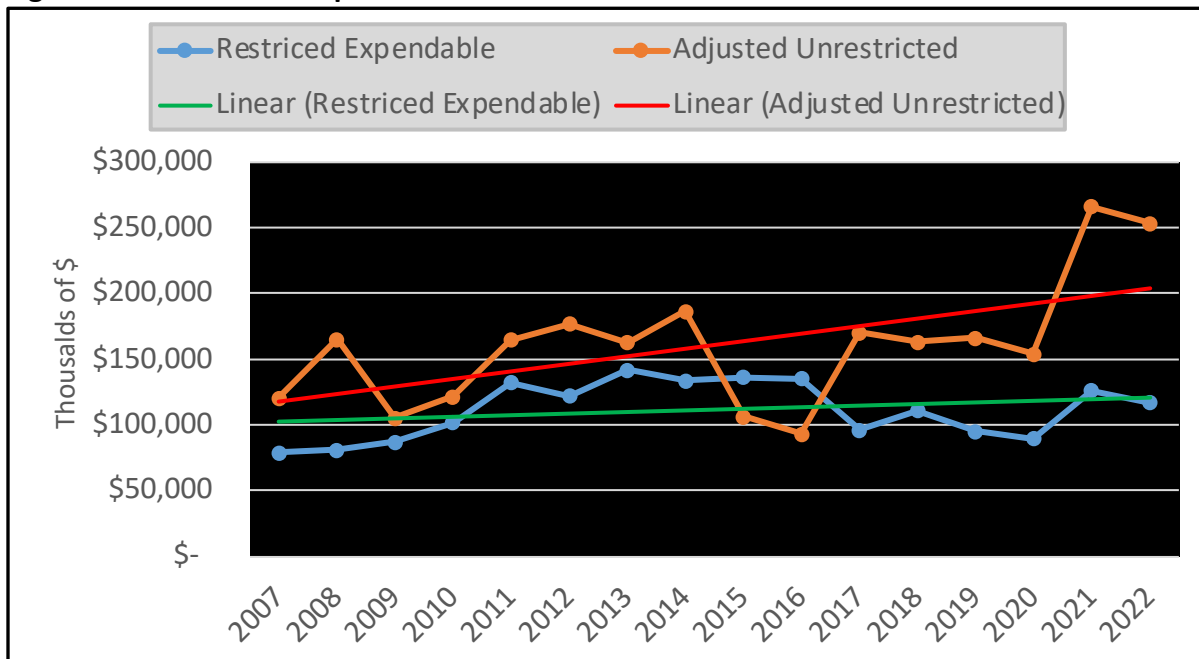


Figure 10 allows us to look at the trends in the two components that make up reserves. The adjusted unrestricted net assets are more volatile and have a stronger upward trend than the restricted expendable net assets which have almost no trend and are clearly less volatile.

To make clear the distinction between reserves, which as we explained before are a net difference between assets and liabilities and cash and investments, which are just assets we compare reserves to cash and investments in Figure 11 and Table 7. If the changes in reserves were only explained by the movement of cash and investments, then the correlation would equal 1. The correlation between reserves and cash and investments is 0.64 and it is statistically significant at the .01 level. This is a moderate level correlation, and shows that the movement in liabilities, the other factor in determining reserves, plays a role in determining reserves at UT, particularly in the years 2016-2022.

Figure 11. Comparison of Reserves and Cash & Investments



Table 7: Comparison of Reserves and Cash & Investments

Year	Cash & Investments	Total Reserves
2007	\$ 281,884	\$ 200,030
2008	\$ 244,004	\$ 246,436
2009	\$ 167,577	\$ 192,283
2010	\$ 230,127	\$ 223,591
2011	\$ 304,862	\$ 297,125
2012	\$ 314,903	\$ 299,035
2013	\$ 306,264	\$ 304,471
2014	\$ 318,632	\$ 320,187
2015	\$ 277,225	\$ 242,888
2016	\$ 395,226	\$ 228,597
2017	\$ 447,513	\$ 266,409
2018	\$ 433,621	\$ 274,178
2019	\$ 432,455	\$ 261,538
2020	\$ 421,890	\$ 243,632
2021	\$ 492,805	\$ 392,643
2022	\$ 549,208	\$ 370,907

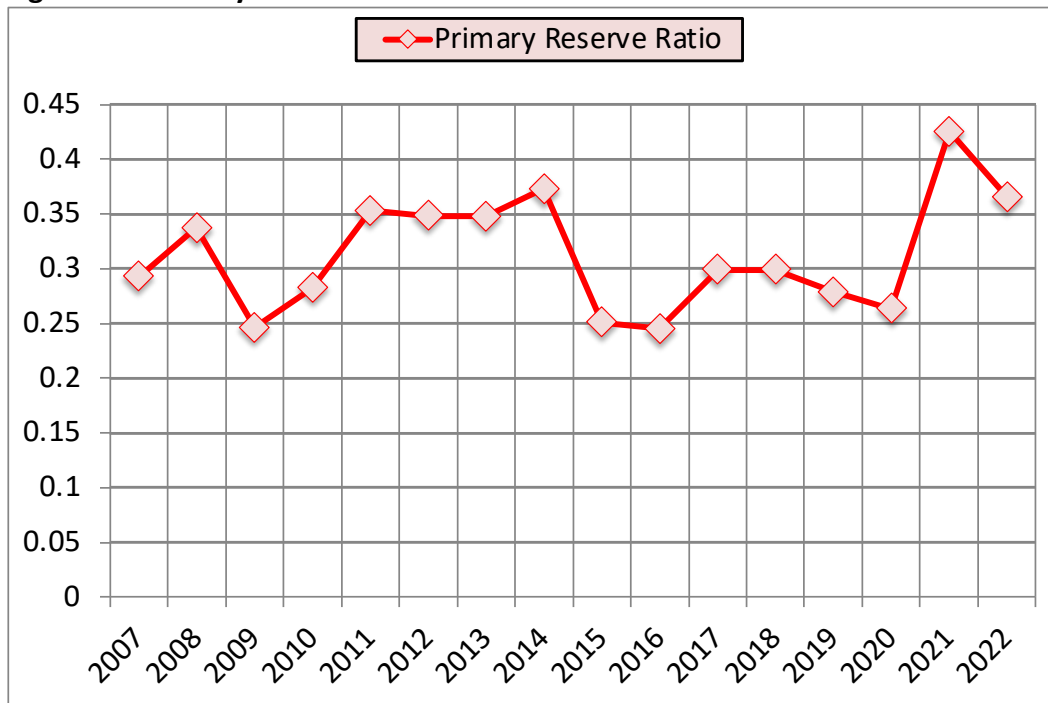
How do we evaluate the level of reserves at a university? How big a reserve should the university maintain? To answer these questions, we will take a look at a couple of key ratios that are important indicators of financial health.

The first way we can evaluate the level of reserves is to look at the **primary reserve ratio** shown in Table 8 and Figure 12. The primary reserve ratio is the ratio of expendable net assets (reserves) to expenses. It appears to follow the same general pattern as the average level of reserves. It was generally trending upward between 0.3 and 0.28 between 2007 and 2014 although it dipped down in 2009 and 2010. This decline was likely the result of unrealized losses on investments due the GFC. The primary reserve ratio dropped down to about 0.25 in 2015 and 2016 and then started rising. However, in 2020 it was still below the level it had reached in 2014. In 2021 it jumped to an all-time high of 0.43 and ended 2022 at 0.37, which was close to the 2014 level. A primary reserve ratio of 0.37 means that the University had enough reserves to operate for 4.4 months, which is a moderately high level of reserves relative to operating expenses.

Table 8: Primary Reserve Ratio (Thousands of \$)

Year	Total Reserves	Adjusted Expenses	Primary Reserve Ratio	Months of Reserves
2007	\$ 200,030	\$ 683,752	0.293	3.5
2008	\$ 246,436	\$ 730,576	0.337	4.0
2009	\$ 192,283	\$ 780,436	0.246	3.0
2010	\$ 223,591	\$ 792,172	0.282	3.4
2011	\$ 297,125	\$ 841,442	0.353	4.2
2012	\$ 299,035	\$ 859,071	0.348	4.2
2013	\$ 304,471	\$ 875,038	0.348	4.2
2014	\$ 320,187	\$ 858,774	0.373	4.5
2015	\$ 242,888	\$ 968,504	0.251	3.0
2016	\$ 228,597	\$ 932,631	0.245	2.9
2017	\$ 266,409	\$ 890,868	0.299	3.6
2018	\$ 274,178	\$ 916,946	0.299	3.6
2019	\$ 261,538	\$ 938,267	0.279	3.3
2020	\$ 243,632	\$ 925,032	0.263	3.2
2021	\$ 392,643	\$ 923,807	0.425	5.1
2022	\$ 370,907	\$ 1,014,880	0.365	4.4

Figure 12: Primary Reserve Ratio

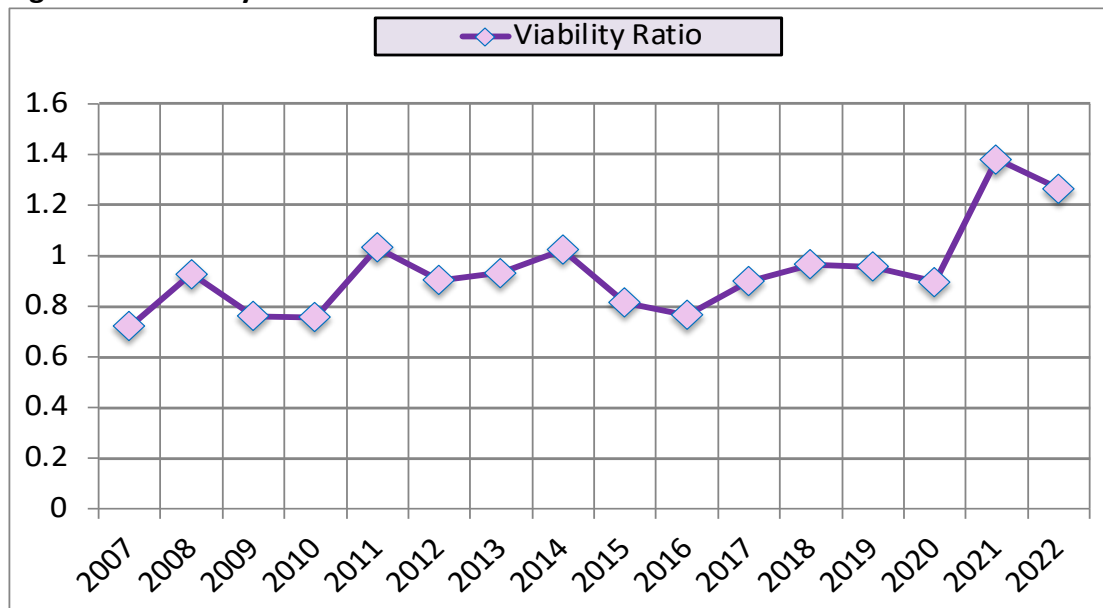


The second way of evaluating reserves is with the **viability ratio**, which is the ratio of expendable net assets (aka reserves) to debt. This ratio assesses if a university has a sufficient level of reserves when compared to its level of debt. Viability ratios are also shown in Table 9 and Figure 13.

Table 9. Viability Ratio

Year	Total Reserves	Debt	Viability Ratio
2007	\$ 200,030	\$ 277,656	0.720
2008	\$ 246,436	\$ 265,409	0.929
2009	\$ 192,283	\$ 252,924	0.760
2010	\$ 223,591	\$ 295,561	0.756
2011	\$ 297,125	\$ 287,550	1.033
2012	\$ 299,035	\$ 330,946	0.904
2013	\$ 304,471	\$ 326,663	0.932
2014	\$ 320,187	\$ 312,691	1.024
2015	\$ 242,888	\$ 298,197	0.815
2016	\$ 228,597	\$ 298,197	0.767
2017	\$ 266,409	\$ 296,292	0.899
2018	\$ 274,178	\$ 283,652	0.967
2019	\$ 261,538	\$ 273,363	0.957
2020	\$ 243,632	\$ 271,563	0.897
2021	\$ 392,643	\$ 284,174	1.382
2022	\$ 370,907	\$ 293,076	1.266

Figure 13. Viability Ratio



The viability ratio for UT has clearly been trending upward due to a combination of rising reserves and declining debt. A viability ratio of 1.2 means that the University has enough reserves to pay off 120% of its current level of debt. Again, this is a moderately high level of reserves relative to expenses.

Next, we turn to the balance sheet for the Foundation. Table 10 shows the total net assets for the University of Toledo Foundation. Figure 14 shows the non-expendable, expendable and unrestricted net assets of the Foundation. Foundation assets have been growing although there were declines in 2012, 2016, 2019 and 2022. Over the period from 2007-2020 about 41% of the net assets were non-expendable, 53% was restricted expendable and just 6% was unrestricted.

Table 10. Balance sheet for the UT Foundation

Year	Net Investment in Capital	Non- Expendable	Expendable	Unrestricted	Total Net Assets
2007	\$ 2,636	\$ 52,567	\$ 81,989	\$ 11,320	\$ 148,512
2008	\$ 2,636	\$ 52,567	\$ 81,989	\$ 11,320	\$ 148,512
2009	\$ 5,242	\$ 65,486	\$ 86,102	\$ (2,214)	\$ 154,616
2010	\$ 5,140	\$ 67,735	\$ 93,097	\$ 848	\$ 166,820
2011	\$ 3,633	\$ 73,458	\$ 113,686	\$ 8,737	\$ 199,514
2012	\$ 3,797	\$ 78,877	\$ 106,768	\$ 7,112	\$ 196,554
2013	\$ 3,648	\$ 96,948	\$ 110,767	\$ 11,948	\$ 223,311
2014	\$ 4,841	\$ 105,696	\$ 137,877	\$ 17,056	\$ 265,470
2015	\$ 7,403	\$ 112,120	\$ 135,534	\$ 15,962	\$ 271,019
2016	\$ 6,209	\$ 117,011	\$ 122,205	\$ 14,005	\$ 259,430
2017	\$ 5,721	\$ 121,372	\$ 139,960	\$ 18,224	\$ 285,277
2018	\$ 5,310	\$ 121,372	\$ 146,235	\$ 53,470	\$ 326,387
2019	\$ 34,578	\$ 123,757	\$ 146,226	\$ 22,270	\$ 326,831
2020	\$ 34,119	\$ 132,462	\$ 140,139	\$ 18,863	\$ 325,583
2021	\$ 33,768	\$ 136,721	\$ 204,721	\$ 35,319	\$ 410,529
2022	\$ 32,965	\$ 145,246	\$ 168,011	\$ 27,728	\$ 373,950

Figure 14. UT Foundation Financial Net Assets

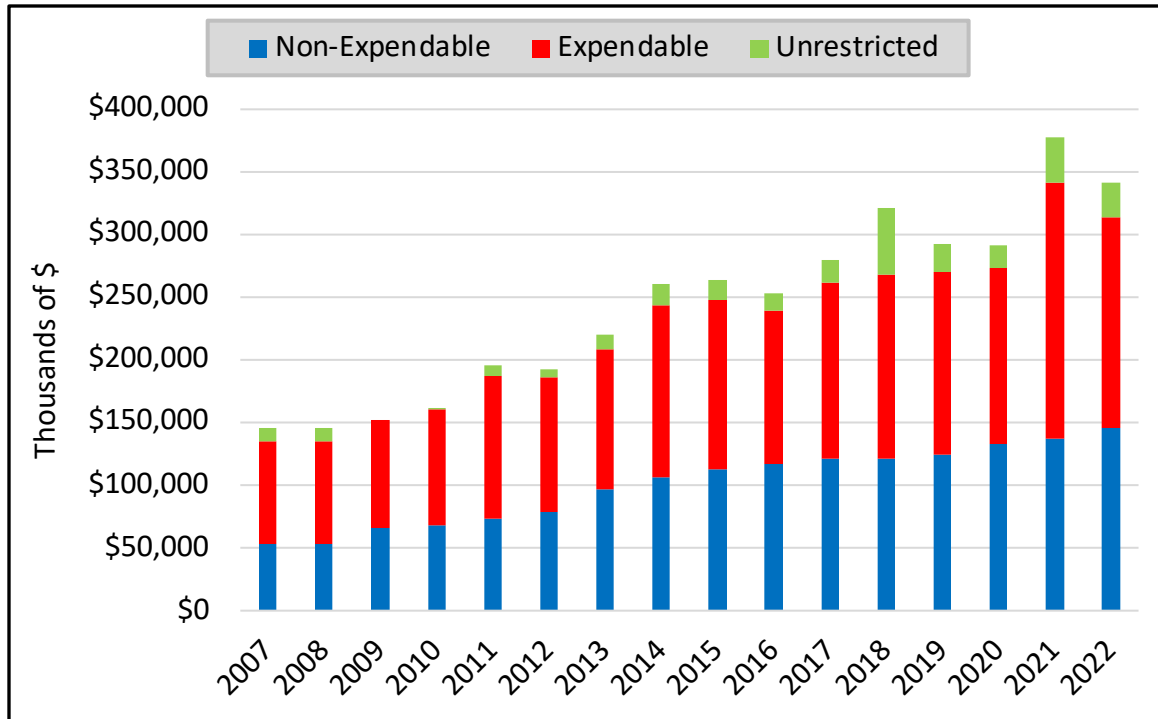
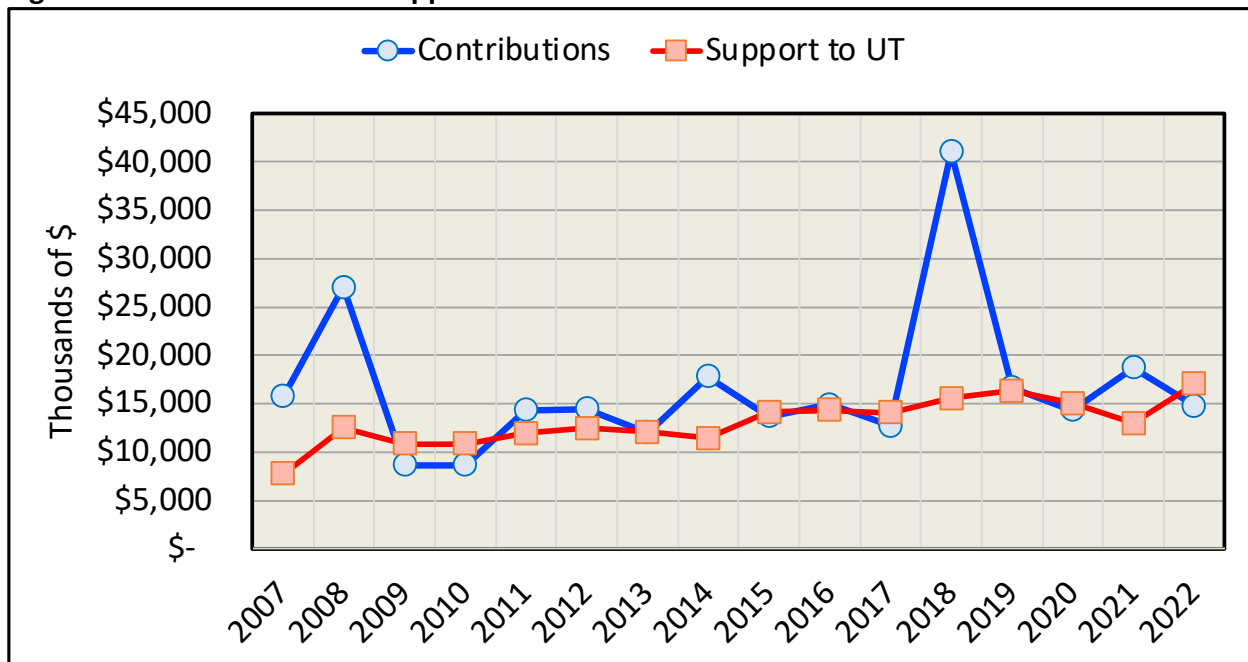


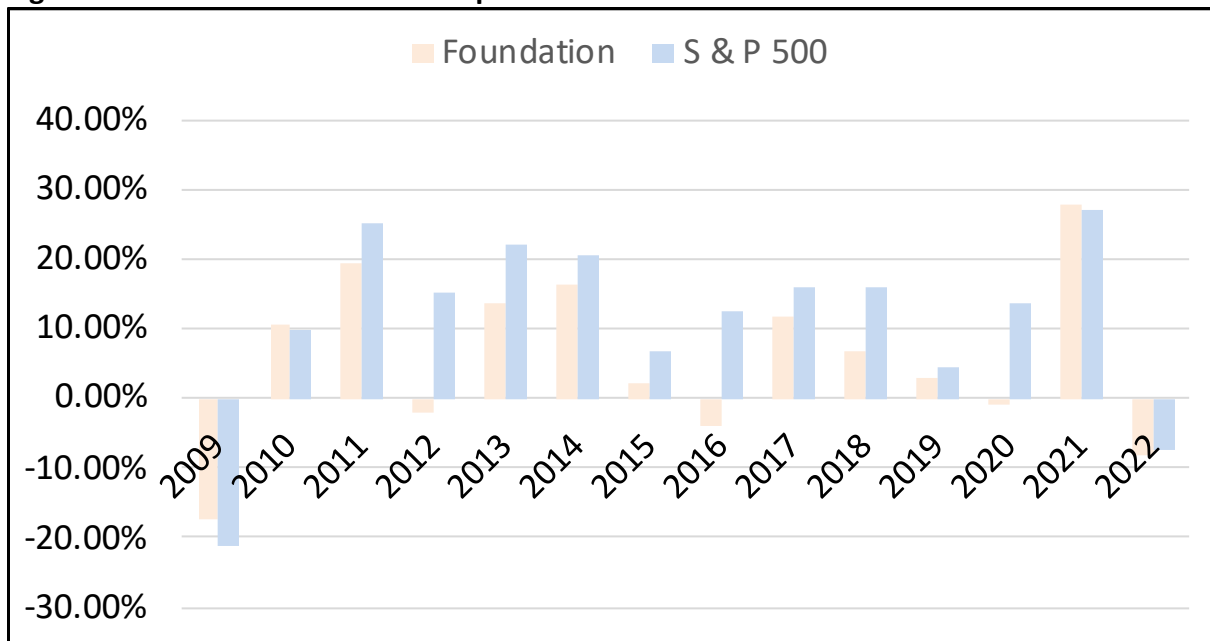
Figure 15 shows the contributions to the Foundation each year as well as the support the Foundation provides to the University each year. Contributions are clearly more volatile than support. Generally support for the University has been trending upward and accounts for about 1.5% of the University's total revenue.

Figure 15. Contribution and Support to UT from UT Foundation



The Foundation also manages a significant portion of the University’s investments through a pooled investment arrangement. Using data from the Foundation’s Annual Reports and its 990’s I calculated the rate of return on investments and compared it to the returns on the S & P 500. Table 11 and Figure 16 shows the returns of the Foundation in comparison to the returns of the S & P 500. Over the 14-year period the Foundation’s annual rate of return was 5.09% compared to 10.75% for the S & P 500. I am not suggesting that the Foundation should put all its assets into an S & P 500 index fund, but it does seem that the Foundation’s returns could be higher. There is also a considerable administrative cost associated with the Foundation.

Figure 16. Foundation Returns Compared to the S & P 500



Since the entire purpose of the Foundation is to support the activities of the University, credit rating agencies like Moody’s look at the spendable net assets of the Foundation along with those of the University as a part of the University’s reserves that can guarantee debt payments in the event of an emergency. That is why universities are required to include data on their Foundations as part of their financial statements.

Up to this point we have looked at all the major components in the balance sheet (statement of net position) adjusting for the impacts of accounting changes with respect to retiree healthcare and Pensions. These adjustments are important in evaluating the financial health of an institution because the accounting changes for healthcare and pensions do not reflect the underlying performance of the University.

In looking at the balance sheet we have shown what makes up the \$1.3 billion in assets and deferred outflows, and the \$577.2 million in liabilities and deferred inflows (excluding the Foundation) and focused on how much of the \$598.1 million in adjusted net assets are true reserves. Finally, we evaluated the strength of those reserves relative to expenses and the level of debt to gauge the ability of the University to deal with unforeseen downturns in revenue. What we have shown thus far is that the University currently has a relatively high level of reserves relative to its expenses and debt.

Our analysis shows, the University of Toledo has a relatively strong balance sheet with growing levels of reserves. The levels of reserves give it a cushion to deal with unforeseen events.

The Income Statement

The second major financial statement is the statement of revenues, expenses and changes in net assets (change in net position) or the statement of activities. This financial statement shows how an institution's finances are changing over a period of time, namely a fiscal year that normally runs from July 1 to June 30 of the following year. Again, fiscal years are always associated with the calendar year in which the fiscal year ends. So, for example, from July 1, 2019 to June 30, 2020 is known as fiscal year 2020. This statement deals with flows (changes as opposed to levels) and measures how the college or university's revenues and expenses are changing over time. Figure 17 shows the basic structure of the statement of revenues, expenses and changes in net position at public universities and colleges.

There are two ways of keeping track of revenues and expenses. The cash method is the one most of us are familiar with. Using the cash method if a paycheck were deposited in a person's checking account on January 1, 2020 for work done in December of 2019, it would have been considered income for 2020. Similarly, if a person purchased a good or service and paid for it in December of 2019 but the good or service delivered in January 2020 it would have been considered an expense incurred in 2019.

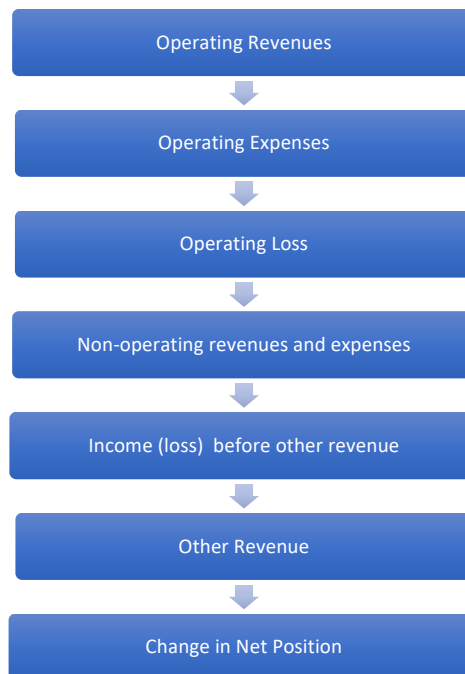


Figure 17.

Most businesses, including universities, account for revenues and expenses, using the **accrual method** of accounting. This means they book revenues and expenses in the year the good or service is delivered, which may differ from the year when cash is received. For example, a paycheck received on January 1, 2021 for work performed in December of 2020 would count as revenue in 2020. Similarly, an expense paid for in 2021 for a service delivered in 2020 would count as an expense in 2020, because that is when the good or service was delivered. Accrual accounting is used because it provides a more accurate picture of an institution's financial situation.

Revenue

Revenue is the inflow of resources to a university or college for the services it provides. Revenue at public universities and colleges is divided into "**operating revenue**" and "**non-operating**" revenue. Operating revenue comes primarily from student tuition and fees. Other sources of operating revenue are grants and contracts, sales, and auxiliaries. **Sales** occur when a university or college provides some sort of a service to the community and charges for offering that service. **Auxiliaries** are operations that generate revenue that are unrelated to the core mission of a university or college such as parking, intercollegiate athletics, running a student union, food service or running a bookstore.

Non-operating revenues include state appropriations, gifts and investment income. Recently, GASB has started counting Pell Grants as non-operating revenue, so at a number of institutions it appears that operating revenue from Federal grants declined. However, this reclassification has no effect on a university's bottom line; it simply involves moving a portion of federal grants and contracts to another section of the income statement (Statement of Revenues, Expenses and Change in Net Position).

When looking at investment income great care must be taken. Investment income included interest and dividends, but it also included capital gains and losses. Investments are valued at "fair market" value, which means when the stock market or bond prices go up the value of an institution's investments go up and when the stock market or bond prices go down the value of an institution's investments go down. In most cases, large swings in the value of investments are due to unrealized gains or losses, meaning that they are paper gains or losses.

For that reason, when calculating income (losses) before other revenue (“net income”) for universities or colleges, many bond rating services subtract the value of investment income and add 4% of the value of investments taken over a three-year rolling period. This provides a less volatile estimate of revenues from investments. Paper gains or losses are often quite large. For example, in 2008 and 2009 after the stock market crash associated with the great recession, many institutions showed significant losses i.e., they had a negative change in net assets and administrator’s told faculty that the world was coming to an end. They used these losses to justify furloughs and cuts in benefits. Although the crash in 2020 was relatively short-lived it too did not stop administrators from claiming that they had lost reserves. However, on a cash basis almost all of these institutions cash inflows exceeded their cash outflows. In most cases, within two years, following the 2008-9 crash and mere months for the 2020 crash, these very same institutions had recouped all of their investment losses and in fact their investments reached new record levels.

Expenses

Expenses, for the most part, represent an outflow of resources from a university or college (costs incurred). There are operating and non-operating expenses. Operating expenses can be listed by **functional categories** or they can be listed as **natural categories** such as wages and benefits or purchases of goods and services. It is often the case that the “natural classification,” which contains personnel costs, are not reported in the main financial statements, but are reported in the notes to the financial statements. A Functional report of operating expenses includes instructional expenses, expenses for public service, administrative services such as academic support and institutional support, plant operations and maintenance, scholarships and fellowships, expenses for auxiliary operations and depreciation.

Table 10 below provides definitions of GASB aligned functional expenses from the Integrated Public Educational Data University (IPEDS).

Table 10
GASP Aligned Definitions of Functional Expenses From IPEDS

<p>Instruction:</p>	<p>A functional expense category that includes <u>expenses</u> of the colleges, schools, departments, and other instructional divisions of the institution and expenses for departmental research and public service that are not separately budgeted. Includes general academic instruction, occupational and vocational instruction, community education, preparatory and adult basic education, and regular, special, and extension sessions. Also includes expenses for both credit and non-credit activities. Excludes expenses for academic administration where the primary function is administration (e.g., academic deans). Information technology expenses related to instructional activities if the institution separately budgets and expenses information technology resources are included (otherwise these expenses are included in academic support). <u>GASB</u> institutions include actual or allocated costs for operation and maintenance of plant and depreciation.</p>
<p>Research:</p>	<p>A functional expense category that includes <u>expenses</u> for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. The category includes institutes and research centers, and individual and project research. This function does not include non-research sponsored programs (e.g., training programs). Also included are information technology expenses related to research activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support.) <u>GASB</u> institutions include actual or allocated costs for operation and maintenance of plant and depreciation.</p>
<p>Public Service:</p>	<p>A functional expense category that includes <u>expenses</u> for activities established primarily to provide non-instructional services beneficial to individuals and groups external to the institution. Examples are conferences, institutes, general advisory service, reference bureaus, and similar services provided to particular sectors of the community. This function includes expenses for community services, cooperative extension services, and public broadcasting services. Also includes information technology expenses related to the public service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in academic support). Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.</p>
<p>Academic Support:</p>	<p>A functional expense category that includes <u>expenses</u> of activities and services that support the institution's primary missions of instruction, research, and public service. It includes the retention, preservation, and display of educational materials (for example, libraries, museums, and galleries); organized activities that provide support services to the academic functions of the institution (such as a demonstration school associated with a college of education or veterinary and dental clinics if their primary purpose is to support the instructional program); media such as audiovisual services; academic administration (including academic deans but not department chairpersons); and formally organized and separately budgeted academic personnel development and course and curriculum development expenses. Also included are information technology expenses related to academic support activities; if an institution does not separately budget and expense information technology resources, the costs associated with the three primary programs will be applied to this function and the remainder to institutional support. Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.</p>

Table 11 (Continued)
GASP Aligned Definitions of Functional Expenses From IPEDS

Student Services:	A functional expense category that includes <u>expenses</u> for admissions, registrar activities, and activities whose primary purpose is to contribute to students emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instructional program. Examples include student activities, cultural events, student newspapers, intramural athletics, student organizations, supplemental instruction outside the normal administration, and student records. Intercollegiate athletics and student health services may also be included except when operated as self-supporting auxiliary enterprises. Also may include information technology expenses related to student service activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in institutional support.) Institutions include actual or allocated costs for operation and maintenance of plant, interest, and depreciation.
Institutional Support:	A functional expense category that includes <u>expenses</u> for the day-to-day operational support of the institution. Includes expenses for general administrative services, central executive-level activities concerned with management and long range planning, legal and fiscal operations, space management, employee personnel and records, logistical services such as purchasing and printing, and public relations and development. Also includes information technology expenses related to institutional support activities. If an institution does not separately budget and expense information technology resources, the IT costs associated with student services and operation and maintenance of plant will also be applied to this function.
Operation and Maintenance of Plant:	A functional expense category that includes <u>expenses</u> for operations established to provide service and maintenance related to campus grounds and facilities used for educational and general purposes. Specific expenses include utilities, fire protection, property insurance, and similar items. This function does include amounts charged to <u>auxiliary enterprises</u> , <u>hospitals</u> , and <u>independent operations</u> . Also includes information technology expenses related to operation and maintenance of plant activities if the institution separately budgets and expenses information technology resources (otherwise these expenses are included in <u>institutional support</u>). Institutions may, as an option, distribute <u>depreciation</u> expense to this function.
Auxiliaries:	Expenses for essentially self-supporting operations of the institution that exist to furnish a service to students, faculty, or staff, and that charge a fee that is directly related to, although not necessarily equal to, the cost of the service. Examples are residence halls, food services, student health services, intercollegiate athletics (only if essentially self-supporting), college unions, college stores, faculty and staff parking, and faculty housing. Institutions include actual or allocated costs for operation and maintenance of plant, interest and depreciation.
Scholarships & Fellowships:	Outright grants-in-aid, trainee stipends, tuition and fee waivers, and prizes awarded to students by the institution, including Pell grants. Awards to undergraduate students are most commonly referred to as "scholarships" and those to <u>graduate students</u> as "fellowships." These awards do not require the performance of services while a student (such as teaching) or subsequently as a result of the scholarship or fellowship. The term does not include <u>loans to students</u> (subject to repayment), <u>College Work-Study Program (CWS)</u> , or awards granted to a parent of a student because of the parent's <u>faculty</u> or staff status. Also not included are awards to students where the selection of the student recipient is not made by the institution.

Depreciation and other Non-Cash Expenses

Historically (pre GASB-34), universities and colleges did not account for depreciation of fixed assets. Therefore, at the end of a fiscal year if revenues and other additions exceeded expenditures, universities experienced an increase in “fund balances.” An increase in fund balances was the equivalent to an increase in net position (increase in net assets) except that net position (net assets) also account for depreciation.

When colleges or universities purchase a fixed asset that will be used over a long period of time, the amount of money they spend on construction is not considered an expense on the income statement. What universities and colleges do is to break up the money they spend on construction and renovation by allocating that expenditure over a fixed period of time. The amount of time depends on the particular type of asset being purchased. The expenditure on a building is typically allocated as an expense over a 30-year period. The allocation of this expenditure over time is known as **depreciation**. Thus, depreciation is a way of allocating the cost of fixed assets over the useful life of those assets. It is an expense and therefore it reduces the net assets of a university or college.

Depreciation is an expense, but it is a non-cash expense. Depreciation is a way of allocating the cost of fixed capital over the useful life of an asset. In theory, the cost related to the use of a fixed asset in a given year depends on the wear and tear on fixed assets. It is important for any business to consider the cost of producing a good or service so that it can charge a price for the good or service that at a minimum covers the cost of production. However, unlike other expenses, depreciation does not involve making cash payments to some entity external to a college or university. When an institution has an expense for wages or utilities it writes a check to cover those expenses, which reduces a college or university’s cash holdings. When a college or university claims depreciation as an expense, it reduces its net income or the change in net assets on paper but there is no actual outflow of cash. So, it is possible for an institution to have losses every year but still but still meet all of its financial obligations as long as those losses do not exceed depreciation expenses.

When a university or college puts up a building it writes a check to cover the cost of construction. That represents a cash outflow, but it is not an expense. It is characterized as a capital expenditure, which is not the same as an every-day operating expense. The reason for this different treatment is that a building is an asset that will last for a number of years. When a building is acquired, the cost is not counted as an expense; the depreciation on the building is counted as an expense over the life of the building, usually many years. What depreciation does is to allocate the cost of construction, as an expense, allegedly over the useful life of the asset. However, if you look at actual depreciation schedules you will notice that there are assets that are fully depreciated, but they are still in use. The day that a building becomes fully depreciated does not mean it is ready to be condemned.

Depreciation in the for-profit sector is an important tool for businesses to reduce their tax liability. As an expense, it reduces their net income and hence reduces their tax liability. Most depreciation schedules are not necessarily related to the actual useful life of an asset but are artifacts of the tax code (technically called MACRS for modified accelerated cost recovery system). For example, there are different methods of depreciation, straight-line, sum of years, reducing balance and units of activity. The total amount that is depreciated (expensed) over the “life of the asset” is the same, but some methods allow for even levels of expenses over the life of the asset, while others allow for larger expenses in the beginning and smaller expenses, as the asset gets closer to being fully depreciated. For-profit corporations use different depreciation schedules to try and maximize tax avoidance. Of course, this is not a problem for universities, as they generally have no tax liabilities and so most use straight-line depreciation.

It is important to understand that depreciation is calculated based on the book value or the historic cost of purchasing an asset. This means that this expense does not consider actual replacement cost or the actual cost of renovations.

Public sector non-profits, governed by the Governmental Accounting Standards Board (GASB), did not start accounting for depreciation until 2002.

Recently a number of university and college CFOs have started advocating, “fully funding depreciation.” What does this mean? In the past, when universities developed budgets (plans for spending), they ignored depreciation. **“Fully funding depreciation”** just means adding depreciation as an expense when developing a budget. If there is no additional revenue added to the budget, adding an additional expense just means reallocating resources – in other words, cutting certain expenses with the goal of building reserves.

“Fully funding depreciation” is just a subterfuge to disguise the fact that a university or college administration is simply making a choice about resource allocation. Politically, if the President announces we have no money for raises because we want to build our reserves, faculty are likely to challenge the assertion that a university or college cannot afford raises. However, if the President can simply say, in our budget revenues equal expenses and without additional revenue there is no money for faculty raises, faculty are more willing to accept this bad news. Sound familiar?

Adding depreciation to the budget artificially adds expenses and amounts to a shell game to hide the fact that the administration has simply made a conscious decision that building reserves for the future is more important than paying faculty and other employees in the present.

By focusing on fully funding depreciation or “deferred maintenance,” administrators are in essence choosing buildings over people.

There are additional problems with adding depreciation to a budget. First, the current funds budget is supposed to be an operating budget. Most businesses have an operating budget and a capital budget. The operating budget deals with day-to-day operations. The capital budget is a plan for how to purchase new capital assets or renovate existing assets, when they have reached the end of their useful life. Adding depreciation expenses to a budget is just a way of reducing planned spending in other areas such as instruction, because all operating budgets ultimately need to be balanced. Mixing the operating budget and the capital budget together however is not a standard business practice and makes little sense.

There is a reason that most businesses and governments (here the federal government is an exception) separate their operating budget from their capital budget. One reason is that operations need to be funded out of current revenue, i.e., one cannot borrow money to fund current operations on an ongoing basis. However, borrowing is typically an option to fund capital expenditures. Another reason not to mix the two together is that the state provides some funding in the form of a “state appropriation” for operations and it also has a separate “capital appropriation”. Capital spending can also be financed by using reserves, borrowing or through the receipt of capital gifts.

At a small number of select universities and colleges with large endowments, public and private alike, capital expenditures are largely funded from endowments or donated funds. However, at most public universities, capital gifts tend to be smaller, and most capital funding comes from borrowing or capital appropriations.

Other non-cash expenses can also distort the actual health of an institution. In a for-profit business it is more important that any post-retirement benefits be funded by assets. Post-retirement benefits are a liability because a business or institution has promised to pay these benefits in the future. As long as the benefits are not too large relative to overall expenses and the institution or business continues to exist it can meet its obligations from current expenses. This is a pay as you go situation.

If a business or institution were to go bankrupt having not set aside sufficient assets to meet future claims (liabilities), then retirees would lose some or all of their retirement benefits. However, no public institutions of higher education have gone bankrupt since they started offering post-retirement benefits and many have post-retirement benefits that are totally unfunded i.e., no assets have been set aside to meet future obligations. Forcing public institutions to abandon pay as you go is simply a pretense for cutting public pensions and post-retirement health benefits.

Finally, the changes brought about by GASB 68 and GASB 75 have distorted the reporting of functional expenses. As a result, unless an institution chooses to report functional expenses adjusted for GASB 68 and GASB 75, it is impossible to make historical comparisons of functional expenses, e.g., answer the question what percentage of operating expenses go to instruction v. the percentage that goes to institutional support (administration). Also, even before the implementation of GASB 68 and GASB 75 many institutions started moving certain expenses into the instruction category, which has also made comparisons over time problematic. As a result, in this report to get a sense of how resources are being allocated we will use data from IPEDS on wages and salaries in the functional areas to get a sense of how the allocation of resources is changing over time. Wages and salaries are pure numbers and are what get reported on W-2 forms.

Operating Losses

The difference between operating revenues and operating expenses is known as the operating loss. In publicly funded or assisted institutions, the difference between operating revenues and operating expenses will almost always be negative. This is because public institutions of higher education rely on state appropriations (some more than others; in Midwestern states, these appropriations are less than 1/3 of total revenues; in California, they are more than 1/2), which are not counted as part of operating revenue. This is simply an accounting quirk. If an administrator claims that a university or college is running an operating loss, faculty members should be aware of the fact that almost all public institutions run operating losses and these losses in and of themselves are meaningless.

Income (Loss) before Other Revenues

The difference between non-operating revenues and non-operating expenses is known as net non-operating revenues. The sum of operating losses and net non-operating revenues is known as income (loss) before other revenue and can be referred to as “net income.” Net income can be an important indicator of how well a university or college is performing financially. Net income excludes revenue that a university receives for capital, either in the form of capital gifts, capital appropriations or donations to an endowment. However, it is still not the best indicator of how an institution is doing with respect to its operations. The reason is that depreciation, which we discussed earlier is a non-cash expense, and at the end of the day the thing that matters most is the amount of cash coming into an institution and the amount of cash flowing out.

“EBIDA”

An important number that can be derived from income(loss) before other revenue is earnings before interest, depreciation, and amortization (EBIDA). To calculate EBIDA we start with the institution’s income (loss) before, we add depreciation and interest. However, it is important to remember that the implementation of GASB 68 and 75 distort expenses and reported EBIDA may not be the best measure of performance. In this case an accurate measure of EBIDA should use total expenses adjusted for GASB 68 and 75. The one shortcoming of EBIDA is that it still reflects unrealized gains and losses in investment income.

Changes in Net Assets

There are three other major sources of revenue for colleges and universities. These are capital appropriations, capital grants and gifts and additions to permanent endowments. These sources of revenue are restricted and either the corpus (principal) cannot be spent or the funds are earmarked specifically for capital projects and as such cannot be used to support salary and benefits directly. Nevertheless, when institutions receive capital appropriations and gifts, it frees up funds generated through operations which otherwise would have to be used to support capital projects. Therefore, funding for capital projects, whether by state appropriation or by gift, is an important source of revenue. Unfortunately, capital appropriations and gifts tend to be lumpy (high in some years, very small in others) and so it may be difficult to count on them as part of a regular revenue stream.

The sum of Income (losses) before other revenue (“net income”) along with capital appropriations and gifts and increases to permanent endowment is equal to the increase or decrease in net assets. The **change in net assets (change in financial position)** is in effect the bottom line for an institution in a given year. If there is an increase in net assets, the flow of revenue into the institution has been greater than expenses and if there is a decrease in net assets the institution has experienced a loss. However, it is important to remember that this measure counts revenue that cannot be used for operations and losses can reflect non-cash expenses such as unrealized losses on investments, disposal of assets and depreciation.

- Change in net assets = Total Revenue – Total Expenses
- Total Revenue = Total Expenses + Change in Net Assets

Another impact of GASB 68 and GASB 75 is that they affect the change in net position. An increase in a liability, in this case the pension liability, is treated as an expense in accrual account. To calculate an adjusted change in net position, calculate the net position in year t (investment in capital, net + restricted non-expendable net assets + restricted expendable net assets + adjusted unrestricted net assets) and subtract adjusted net assets from year t-1.

- Adjusted Change in Net Assets = Adjusted Net Assets (t) – Adjusted Net Assets (t-1)
- Adjusted Change in net assets = Total Revenue – Adjusted Total Expenses
- Adjusted Total Expenses = Total Revenue – Adjusted change in net assets

Total Revenue and Total Expenses

Table 11 shows the consolidated position of the University for the years 2007-2022. Figure 18 shows total revenue and total adjusted expenses for the University.

Table 11. Revenues, Adjusted Expenses and Adjusted Change in Net Assets

Year	Total Revenue	Total Adjusted Expenses	Adjusted Change in Net Assets	Net Asset Ratio
2007	\$ 713,694	\$ 683,752	\$ 29,942	4.20%
2008	\$ 734,894	\$ 730,576	\$ 4,318	0.59%
2009	\$ 746,767	\$ 780,436	\$ (33,669)	-4.51%
2010	\$ 836,666	\$ 792,172	\$ 44,494	5.32%
2011	\$ 916,353	\$ 841,442	\$ 74,911	8.17%
2012	\$ 864,156	\$ 859,071	\$ 5,085	0.59%
2013	\$ 880,187	\$ 875,038	\$ 5,149	0.58%
2014	\$ 882,753	\$ 858,774	\$ 23,979	2.72%
2015	\$ 891,305	\$ 968,504	\$ (77,199)	-8.66%
2016	\$ 912,457	\$ 932,631	\$ (20,174)	-2.21%
2017	\$ 918,121	\$ 890,868	\$ 27,253	2.97%
2018	\$ 896,747	\$ 916,946	\$ (20,199)	-2.25%
2019	\$ 892,900	\$ 938,267	\$ (45,367)	-5.08%
2020	\$ 888,400	\$ 925,032	\$ (36,632)	-4.12%
2021	\$ 1,046,461	\$ 923,807	\$ 122,654	11.72%
2022	\$ 988,205	\$ 1,014,880	\$ (26,675)	-2.70%

We can see that generally total revenues have been trending up along with total expenses. In 9 of 16 years total revenues exceeded total expenses and in the other 7 years total expenses were greater than total revenues.

Figure 18. Total Revenue and Adjusted Expenses



Revenue

Next, we look at the major sources of operating revenues. These are shown in Figure 19.

Hospital revenues rose between 2007 and 2017 and then started declining. Although they did increase significantly in 2022, and presumably this increase in 2022 was due to COVID-19. In addition to hospital revenues there are also other revenues related to the medical school and the operation of the hospital. There are other patient services revenue which the University started recording in 2011. That year it was \$63.9 million. It rose to \$83 million in 2021 and then dropped to \$76.3 million in 2022.

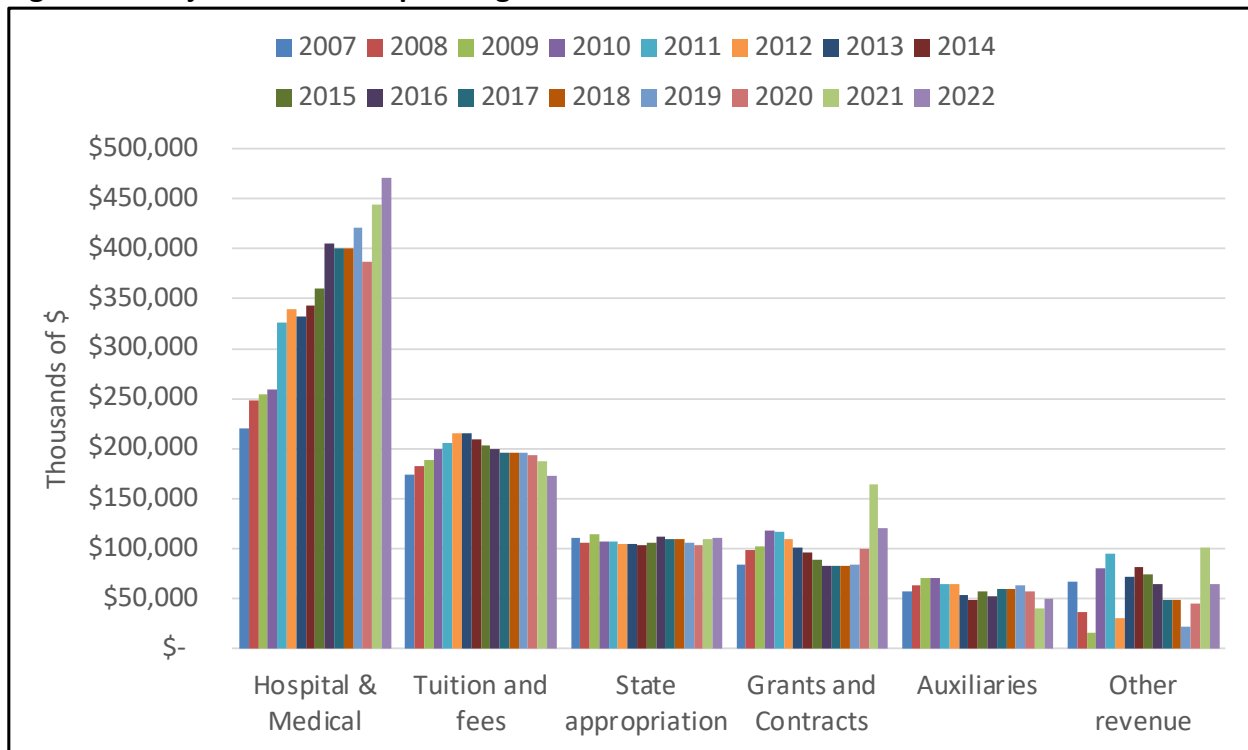
Tuition revenues rose from 2007 until 2012. They were flat in 2013 and then started declining until 2017. There was a small increase in tuition revenue in 2017 and then it started declining again. In 2007 tuition and fees were \$173.7 million and \$172.5 million in 2022.

A second major source of revenue is the state share of instruction. The state share of instruction was \$110.9 million in 2007. It rose to \$114.5 million in 2009 and then declined to \$103.4 million in 2014. It then rose for the next three years reaching \$112.1 million in 2017 and then declined to \$103.9 million in 2020. Finally in 2021 it went up to \$109.5 million and in 2022 it was \$110.7 million, which is still slightly below was it was in 2007.

Federal research grants and contracts are also important sources of revenue. They declined from \$35.2 million in 2008 to \$25.9 million in 2016. We omit 2007 because in 2007 all Federal grants (exchange and non-exchange) were included in the \$49.3 million. So, this number includes both research and Pell grants as well as any other Federal financial aid money. Since 2016 there has been an increase in Federal research grants and contracts and in 2022, they were \$44.4 million, which is still lower than they were in 2007. Federal research grants along with State grants and contracts and private grants and contracts are shown in Figure 20. State and Private grants and contracts have been declining.

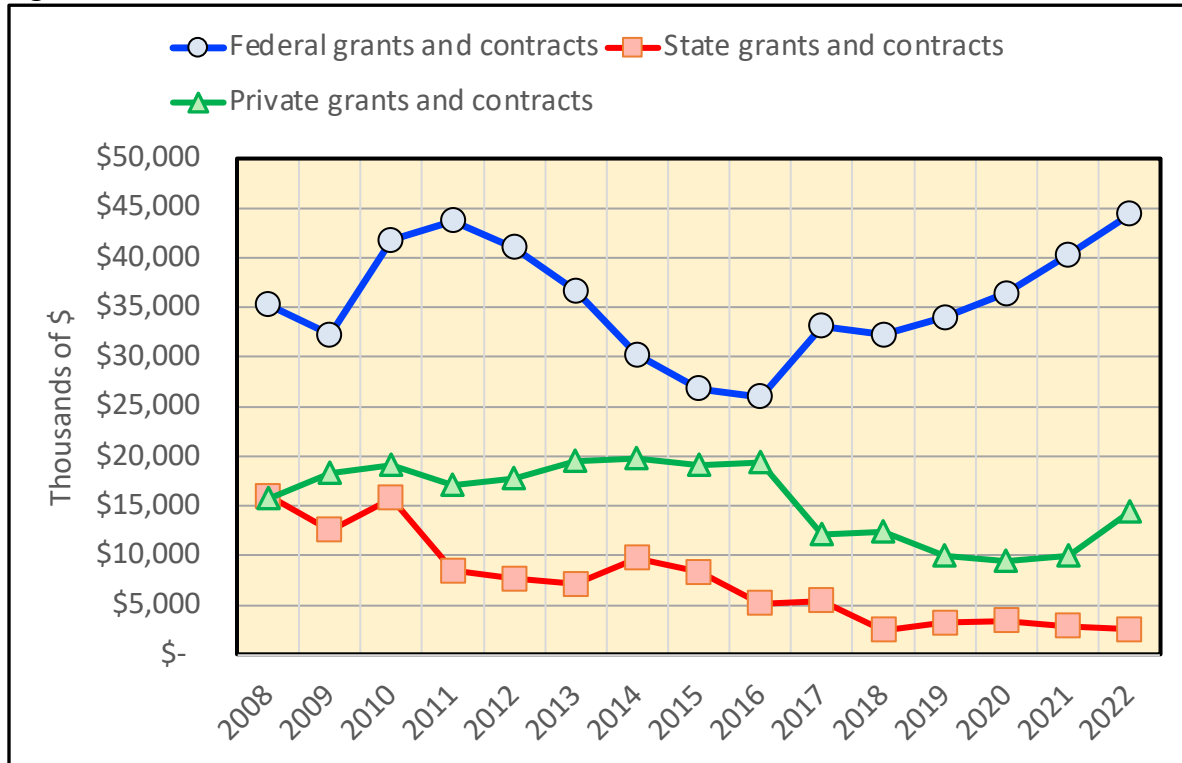
There are also other Federal and state non-exchange grants that fall under the category of “non-operating revenues”. Federal non-exchange grants are primarily Pell grants and state grants that provide financial aid to students are also non-exchange grants. The term non-exchange grant means grants are given but nothing is received by the grantor in exchange i.e., there is no research report or product that results from the grant. State non-exchange grants went from \$16 million in 2008 to \$21 million in 2009 and then declined to \$11.8 million in 2010. Since 2021 they have basically been flat and were only \$11.2 million in 2022. Federal non-exchange grants (mostly Pell grants) increased from \$10.8 million to 34.4 million in 2011. Then they declined to \$21.5 million in 2017 and then rose to \$38.9 million in 2020. In 2021 they jumped to \$99.7 million with most of the increase coming from CARES Act money for COVID-19 relief and was \$47.1 million in 2022 with a large portion also coming from CARES Act funding. The light green lines for 2021 in Figure 19 reflect COVID-19 relief.

Figure 19. Major Sources of Operating Revenue



A final major area of revenue is from auxiliary operations. Auxiliary operations are businesses run by the University that are not directly related to the mission of the institution. Major auxiliaries are parking, dormitories, food service, vending, the bookstore and intercollegiate athletics. Auxiliary revenues increased from \$57.6 million in 2007 to a high of \$70.8 million in 2010. They declined to \$49.4 million in 2014 and they increased to \$63.3 million in 2018. They declined to \$40.1 million in 2021 and then increased to \$50.2 million in 2022. Auxiliaries in general were hit hard by the COVID-19 pandemic since most activity on campus was suspended for more than a year.

Figure 20. Federal, State and Private Research Grants & Contracts



In the last three years the University has also received COVID-19 relief from the CARES Act which created emergency grants for higher education through the Higher Education Emergency Relief Fund (HEERF). In 2020 UT received \$15.3 million, in 2021 they received \$79.1 million and in 2022 they received \$27.8 million, a total of \$122.2 million over three years.

Expenses

Analyzing expenses has become more difficult with GASB 68 and GASB 75. To understand why this is the case we need to look at how GASB 68 and GASB 75 affect the calculation of expenses. When there is an increase in an unfunded liability either in the pension or in OPEB it leads to a reduction in unrestricted and hence total net assets, all other things equal. But remember the change in net assets is also the difference between total revenue and total expenses. On rare occasions there is a change in assets which could affect revenue but in reality most of the changes in the balance sheet are caused by GASB 68 and GASB 75 on the liabilities side of the ledger. This means that when there is an increase in an unfunded liability on the balance sheet it shows up as an increase in expenses on the income statement. If there is a reduction in the unfunded liability it shows up as a reduction in expenses. However, these increases or decreases in expenses are not actual cash expenses i.e., the University is not required to write a check to cover an increase in these expenses nor does it write fewer checks if these expenses go down.

To clearly illustrate this problem Figure 21 shows salaries and benefits as an expense from the Statement of Revenues, Expenses and Change in Net Position (Income Statement). The salary numbers are not impacted by GASB 68 and GASB 75, but the benefit numbers are affected by GASB 68 and GASB 75. In 2021 benefits expenses were negative, which of course makes no sense. Figure 22 shows payments to employees and salary expenses. Salary expenses are what get reported on W2 forms and are unaffected by GASB 68 and GASB 75 and so they follow the pattern of cash outlays i.e., payments to employees. The difference between the two bars represents actual cash outlays for benefits.

Figure 21. Salaries and Benefits Report as Expenses

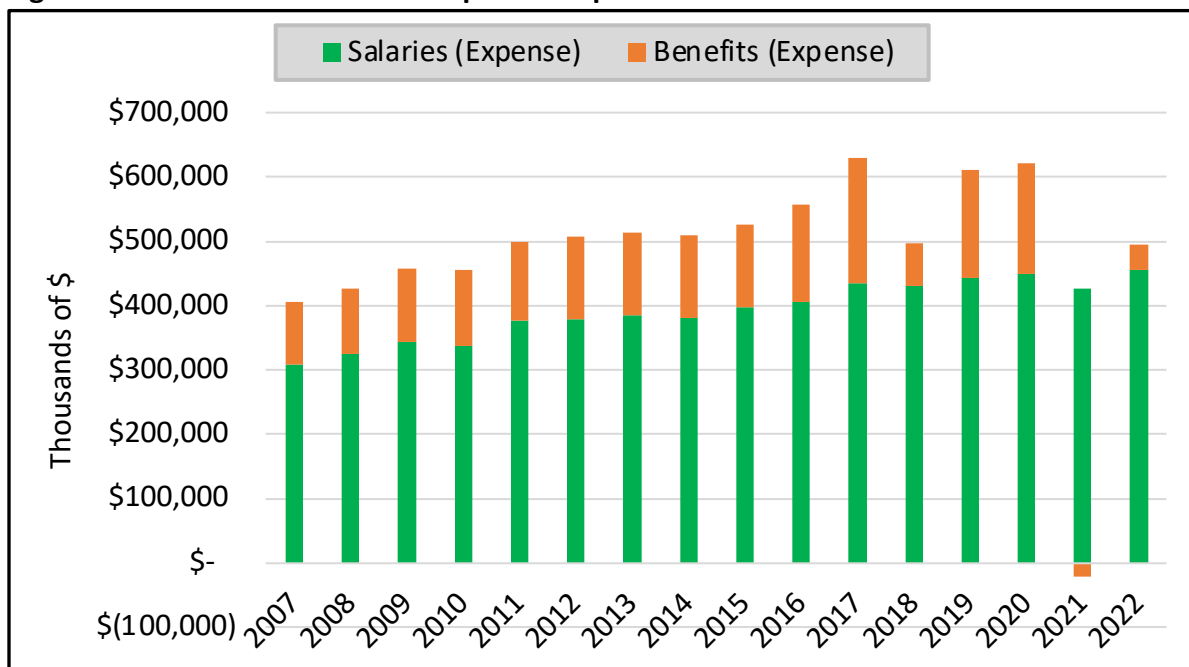
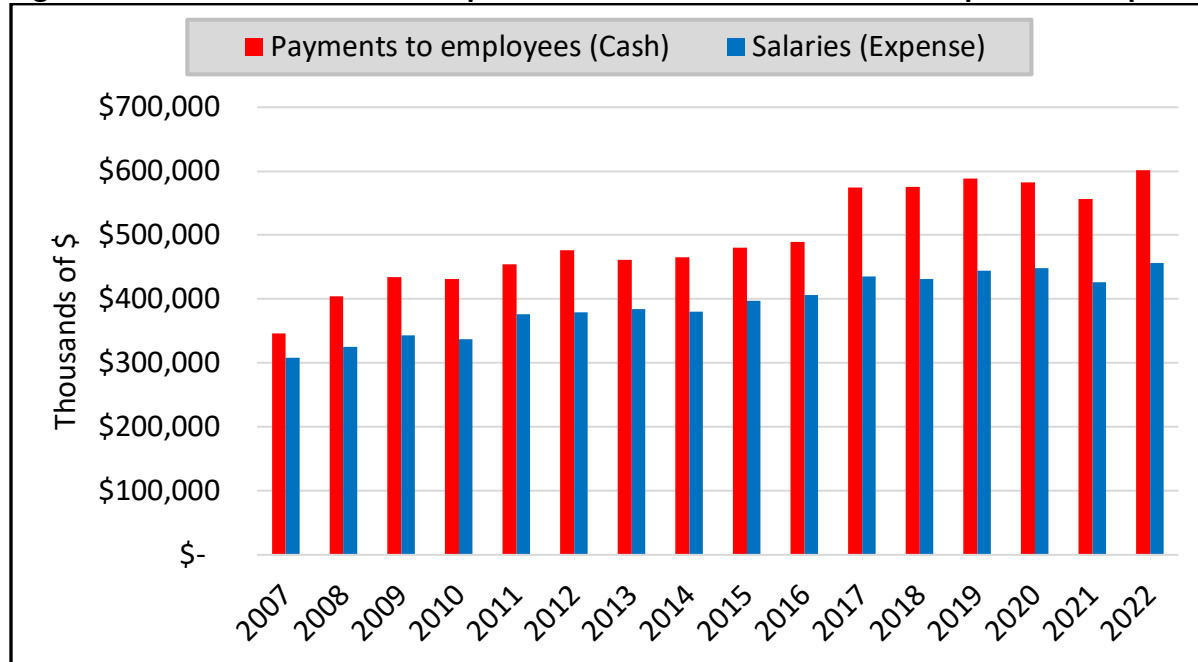


Figure 22. Salaries and Benefits Reported Cash Outflows and Salaries Reported as Expenses



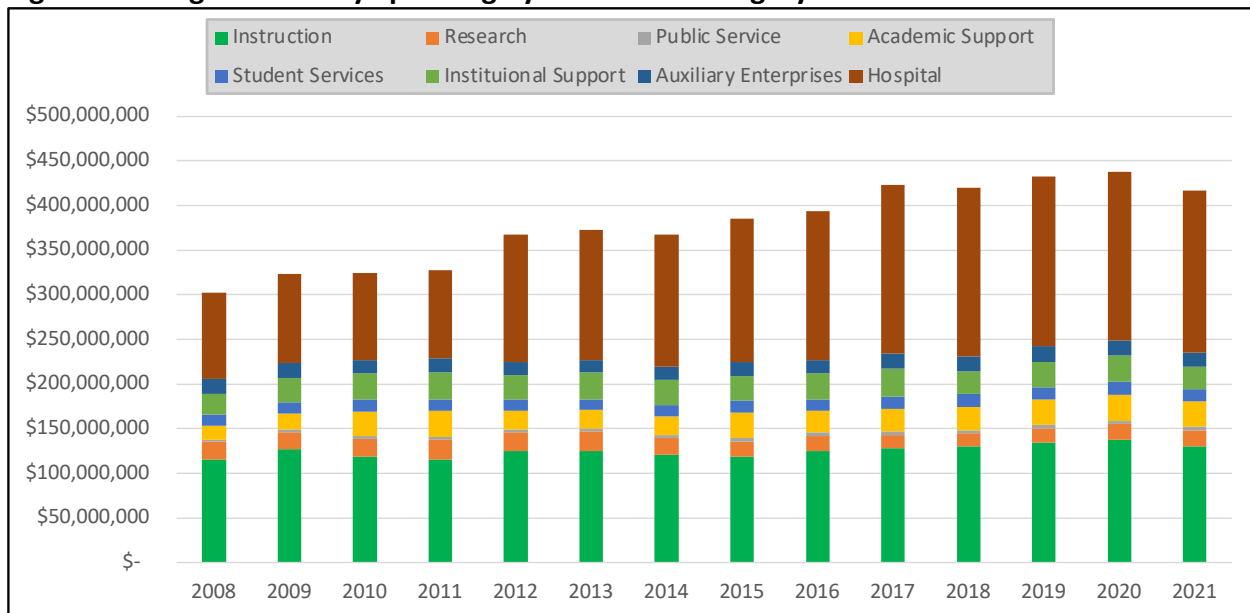
Since GASB 68 and 75 distort the actual expenses, it is hard to rely on the reported expenses by functional category. The distortions that GASB 68 and 75 affect benefit expenses but not salary expenses. Therefore, to get an idea of how resources are being allocated across the University we will look at wage and salary data that the University reports to IPEDS. First, we show total wages and salaries reported for eight functional areas, including the hospital. This is shown in Figure 23 for the period 2008-2021. Data for 2007 was omitted because the University did not report hospital wages and salaries to IPEDS that year. Also, it should be noted that in 2009 the University did not report wages and salaries for institutional support for IPEDS, so we estimated those wages and salaries by taking the midpoint between 2008 and 2010.

One of the things we can see is that wages and salaries for the hospital dwarf wages and salaries for most of the other functional areas. Before 2012 wages and salaries for hospital were smaller than wages and salaries for instruction. However, between 2011 and 2012 wages and salaries paid for hospitals increased 44% and since then have been growing rapidly. Between 2012 and 2021 wages and salaries for hospitals grew 27%.

In contrast wages and salaries for instruction grew 3.8% between 2012 and 2021 and fell 5.6% while overall spending in the eight functional categories fell 4.8% in 2021.

Since 2012 public service spending has grown the most up 35.6%, although in absolute terms it represents a relatively small expense. Three other areas that have grown substantially since 2012 are academic support up 35.6%, student services up 14.4%, and auxiliary spending up 11.3%.

Figure 23. Wage and Salary Spending by Functional Category



Next, we look at the share of spending on wages and salaries without the hospital which will make it easier to compare spending at UT to other universities without hospitals. Figure 24 shows the share of spending on wages and salaries for seven functional areas (excluding hospital wages and salaries).

Although there is some variation in the share of salaries going to instruction, excluding hospital wages and salaries, in general faculty wages and salaries have been between 52% and 55% of total wages and salaries. Research salaries were about 9.5% and dipped down as low as 6.5% in 2018 and 2019 before rising to 7.8% in 2021. There appears to have been some volatility in the share of wages and salaries going for academic support. It was at a low of 7.7% in 2008 and increased to a high of 13% in both 2011 and 2015 but ended 2021 at 11.9%. Spending on student services has been stable around 6%. Wages and salaries for institutional support rose from 11.3% in 2007 to 13.7% in 2017 and then declined to 11.9% in 2021. Finally, the share of wages and salaries going to auxiliaries was 8.5% in 2007, fell to a low of 6.2% in 2013 and then rose to 7% in 2021.

The impact of excluding hospital wages and salaries from the analysis above has a profound effect on the analysis of the data in Figure 24. Including hospital wages and salaries would have caused the share of all seven functional categories to fall between 2008 and 2021 because of the huge increases in wages and salaries going to hospital employees. This can be

seen in Figure 25 where we include the share of wages and salaries going to hospital employees.

Figure 24. Allocation of Wages and Salaries Excluding Hospital Employees

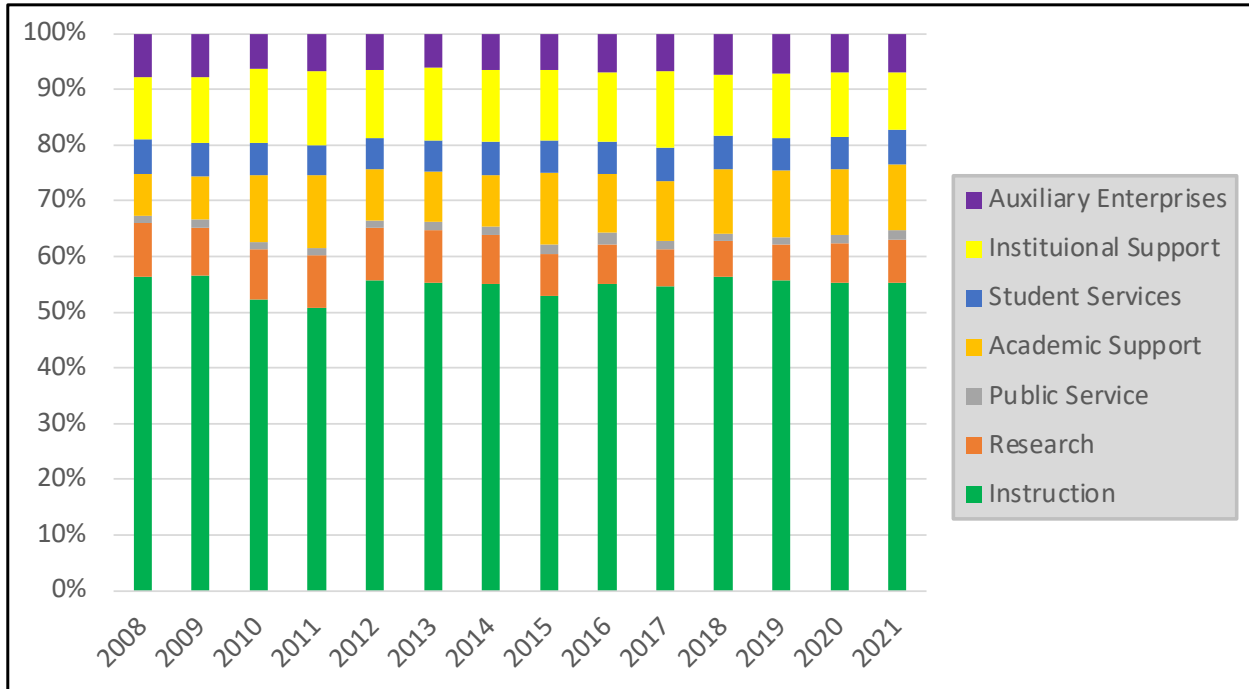
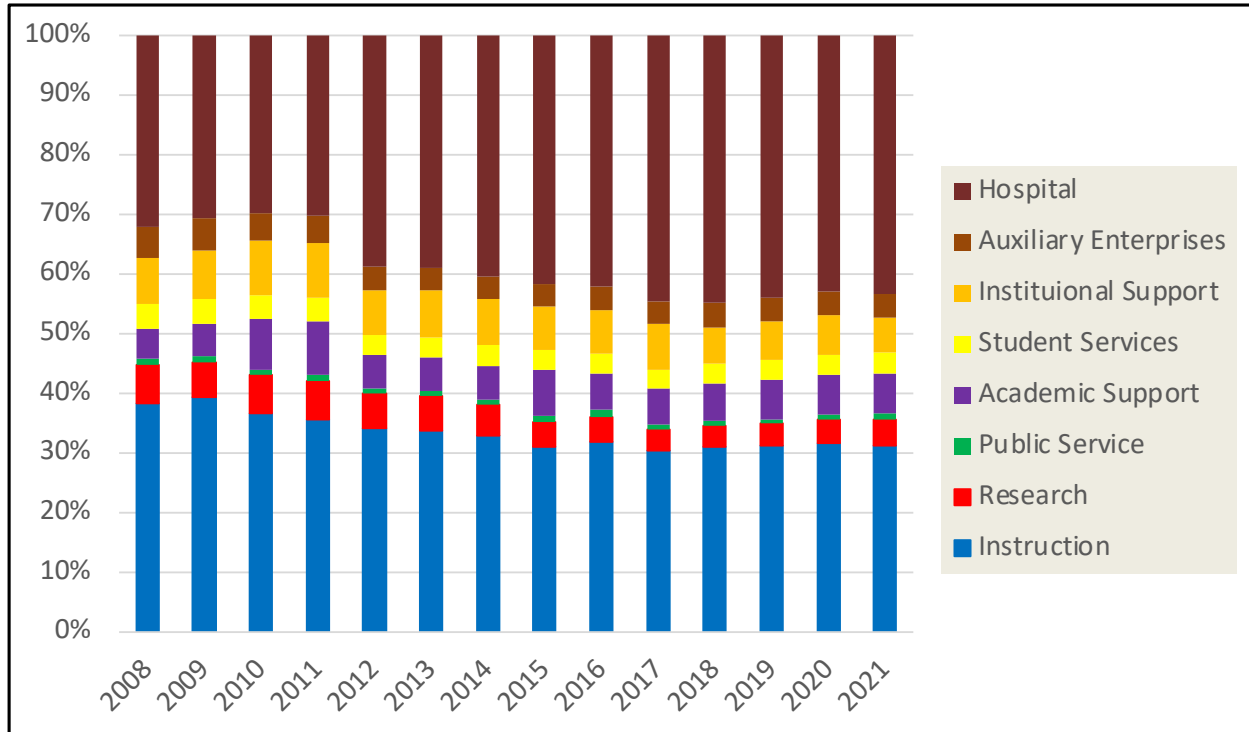
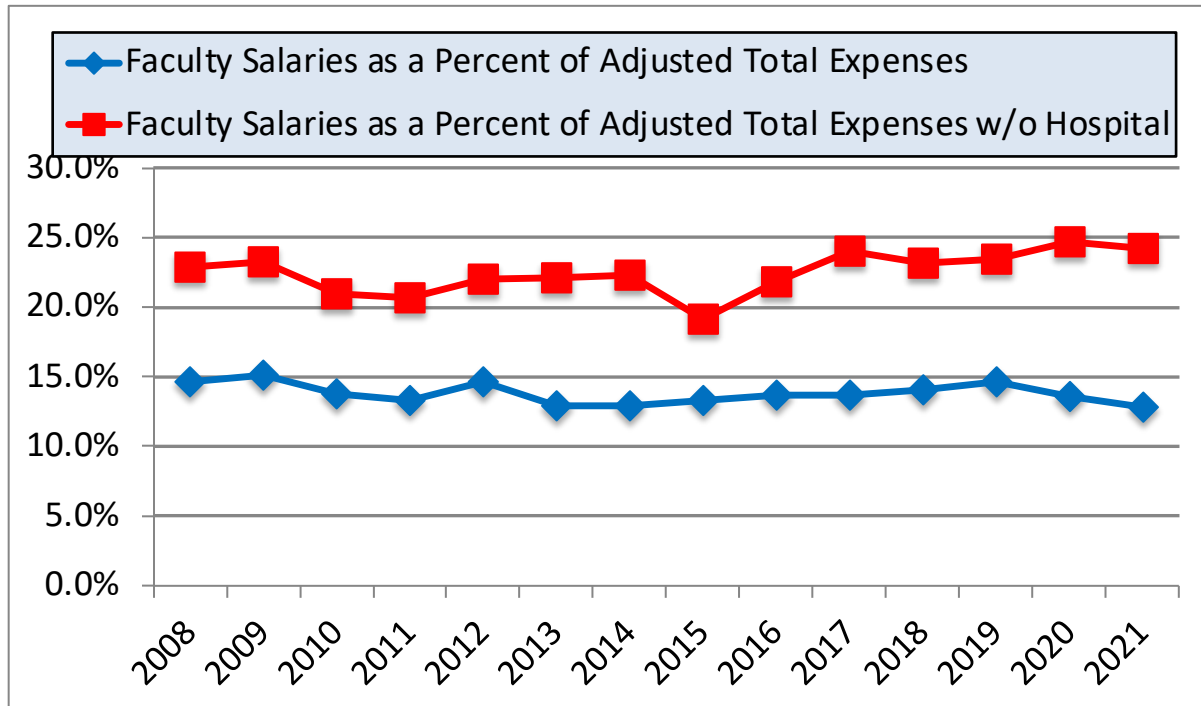


Figure 25. Allocation of Wages and Salaries Including Hospital Employees



However, it is important to remember that instructional salaries include non-bargaining unit faculty, e.g., part-time faculty. Instructional salaries also include money paid for teaching overloads as well as summer school. Figure 26 shows instructional salaries as a percent of total adjusted expenses. Without the hospital instructional salaries as a percent of adjusted expenses, salaries have risen but still account for slightly less than 25% of all adjusted total expenses. Including the hospital instructional salaries as a percent of adjusted expenses have declined slightly and are about 12.8% of total adjusted expenses including hospital expenses.

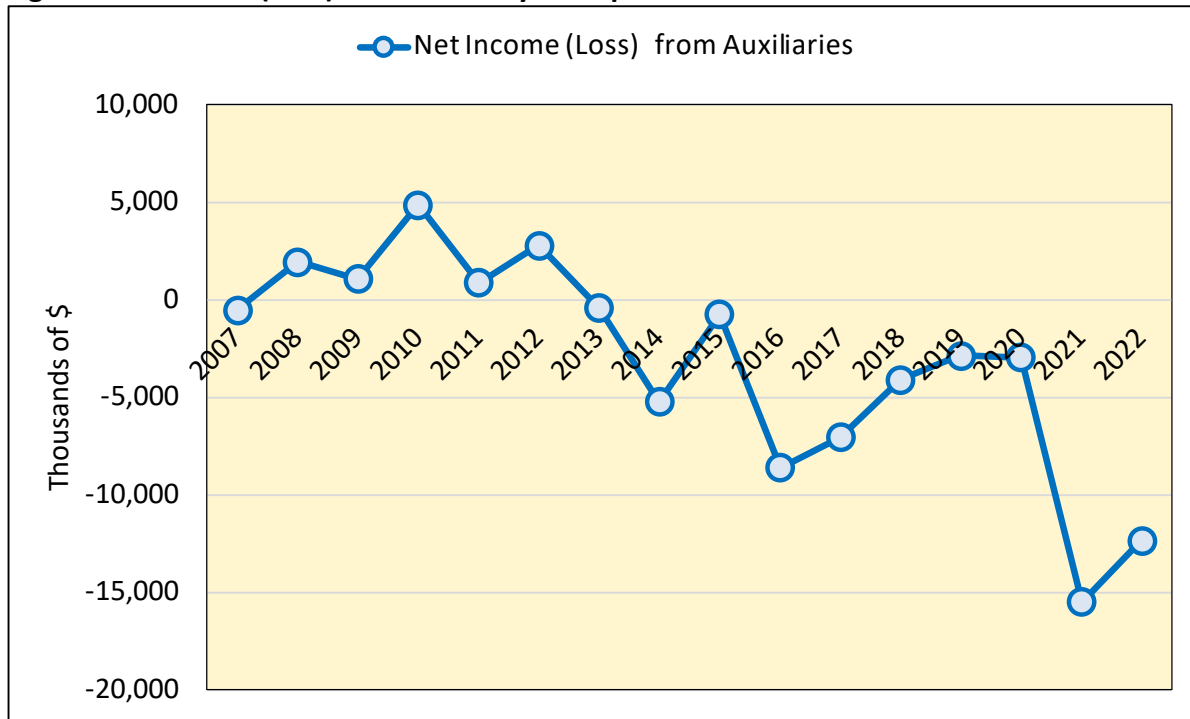
Figure 26. Faculty Salaries as a Percent of Adjusted Total Expenses



Next, we look at spending on auxiliary expenses. Auxiliaries are any operations that are run by the University that are not related to the primary mission of the institution. The main auxiliary operations at the University are parking, housing, vending, bookstore, housing, food services and intercollegiate athletics. In general, auxiliaries should sit on their own bottom, i.e., they should at a minimum break even and in some cases certain auxiliaries may even add net income to the University.

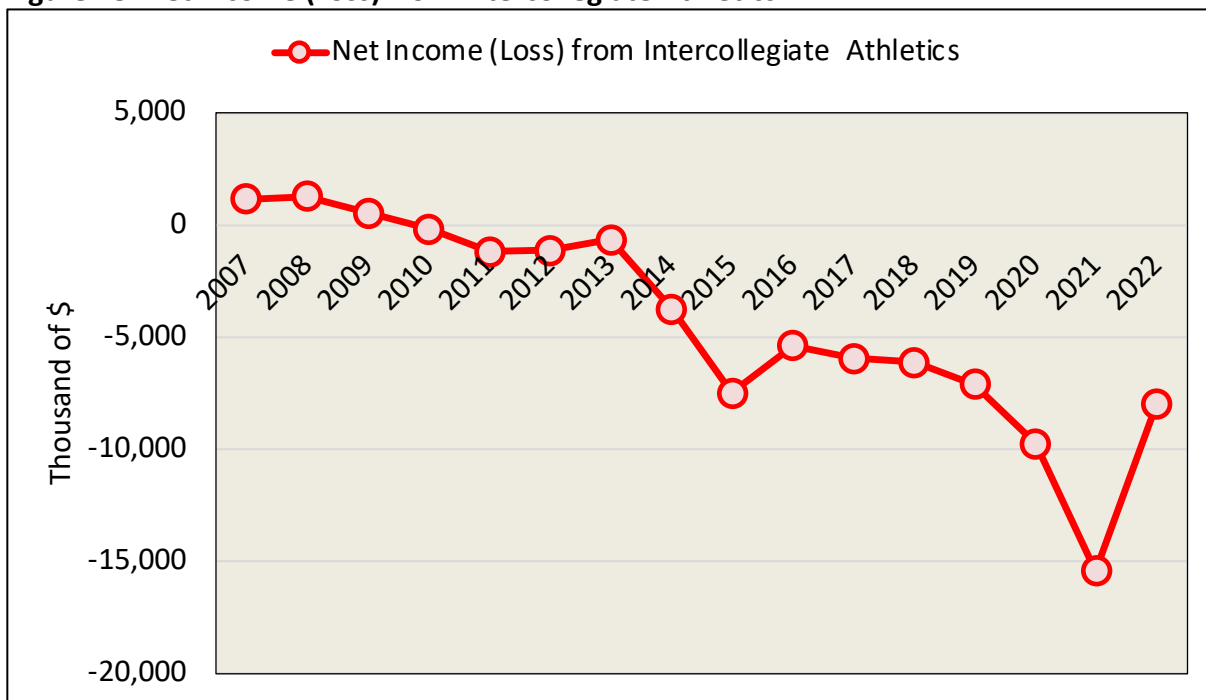
Figure 27 looks at the difference between revenues generated by auxiliaries and expenses of auxiliary enterprises. Here we can see that auxiliary enterprises at the University were either making a small amount of money or breaking even between 2007 and 2013. After 2013 auxiliaries have consistently lost money. The extreme losses in 2021 and 2022 are most likely related to COVID-19 which had a major impact on dormitories, food service and parking when the campus was shut down.

Figure 27 Net Gain (Loss) from Auxiliary Enterprises



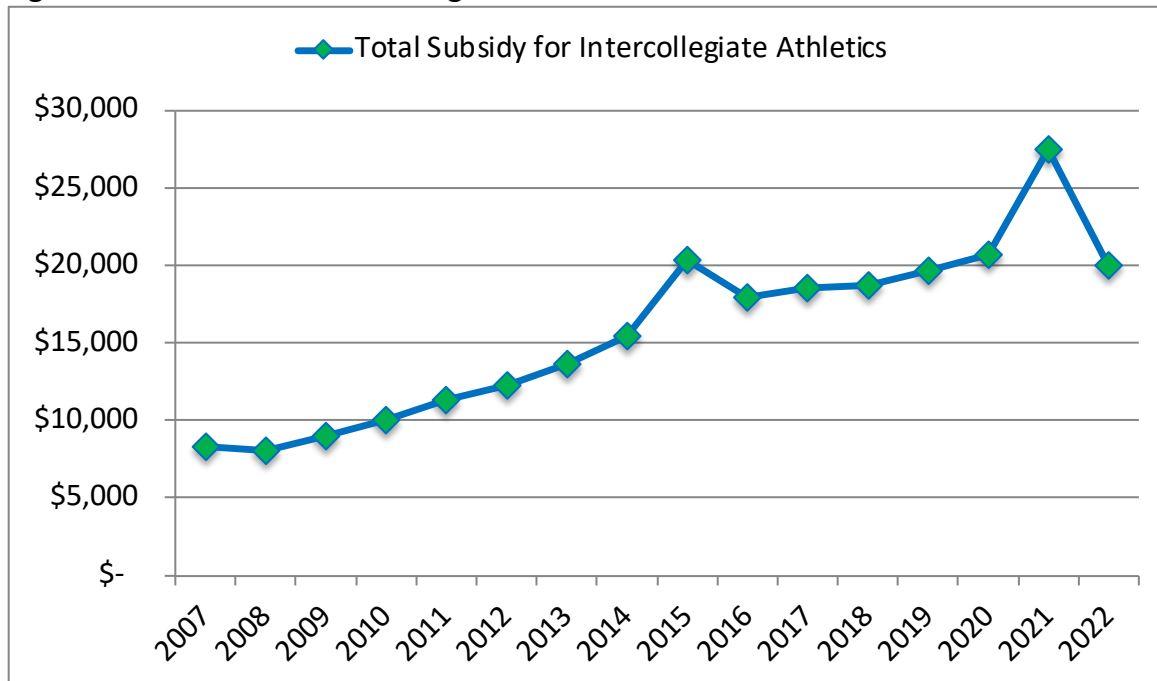
However, the main reason for losses in auxiliary enterprises at the University is intercollegiate athletics. Figure 28 shows the steadily growing losses from intercollegiate athletics.

Figure 28. Net Income (Loss) from Intercollegiate Athletics



However, the losses themselves are only part of the story. The losses are the difference between revenues and expenses. But nearly half of the revenue for intercollegiate athletics comes from student fees and direct institutional support. And even with all this support intercollegiate athletics still runs a deficit. This deficit is just a hidden subsidy. Figure 29 shows the total subsidy needed to offset the losses from intercollegiate athletics.

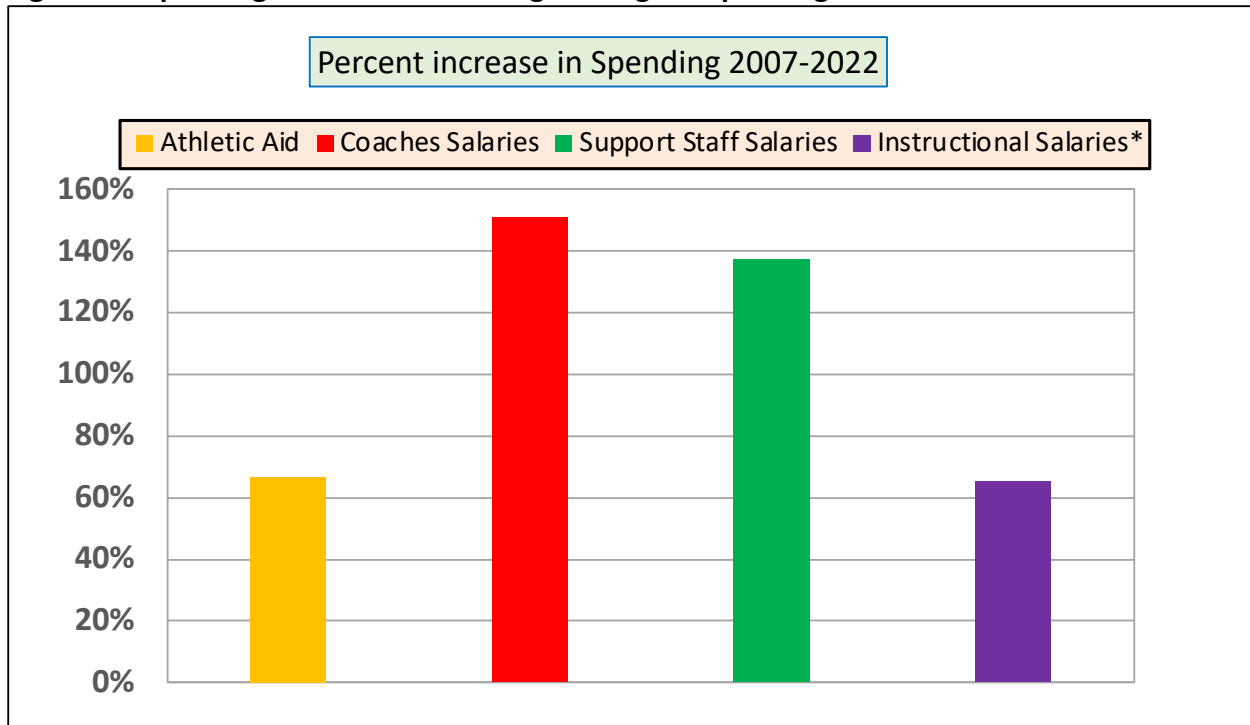
Figure 29. Subsidies for Intercollegiate Athletics.



Now you might be saying to yourself at this point, well a large part of that subsidy goes to pay for athletic student aid and surely that is a good thing. Figure 30 looks at some of the spending priorities at University of Toledo. It compares the percentage change in spending between 2007 and 2022 for several categories related to intercollegiate athletics and spending on salaries instruction.

Between 2007 and 2022 athletic student aid for intercollegiate athletics increased 67%, and salaries for instruction increased 65%. Meanwhile, spending on coaches' salaries went up 151% and administrative salaries for intercollegiate athletics went up 137%. So, who really benefits from intercollegiate athletics? In 2022 only \$0.28 of every \$1 spent on intercollegiate athletics went to student athletes. So, it appears that most of that subsidy goes to coaches' salaries and administrative salaries along with paying for travel, hotels, meals i.e., we are subsidizing private businesses for goods and services we purchase for the athletic programs. And who paid for that subsidy? The answer is other University of Toledo students who on average paid \$1,172 of their tuition and fees in 2022 to support intercollegiate athletics.

Figure 29. Spending Priorities: Percentage Change in Spending 2007-2022



*Instructional salaries 2007-2021

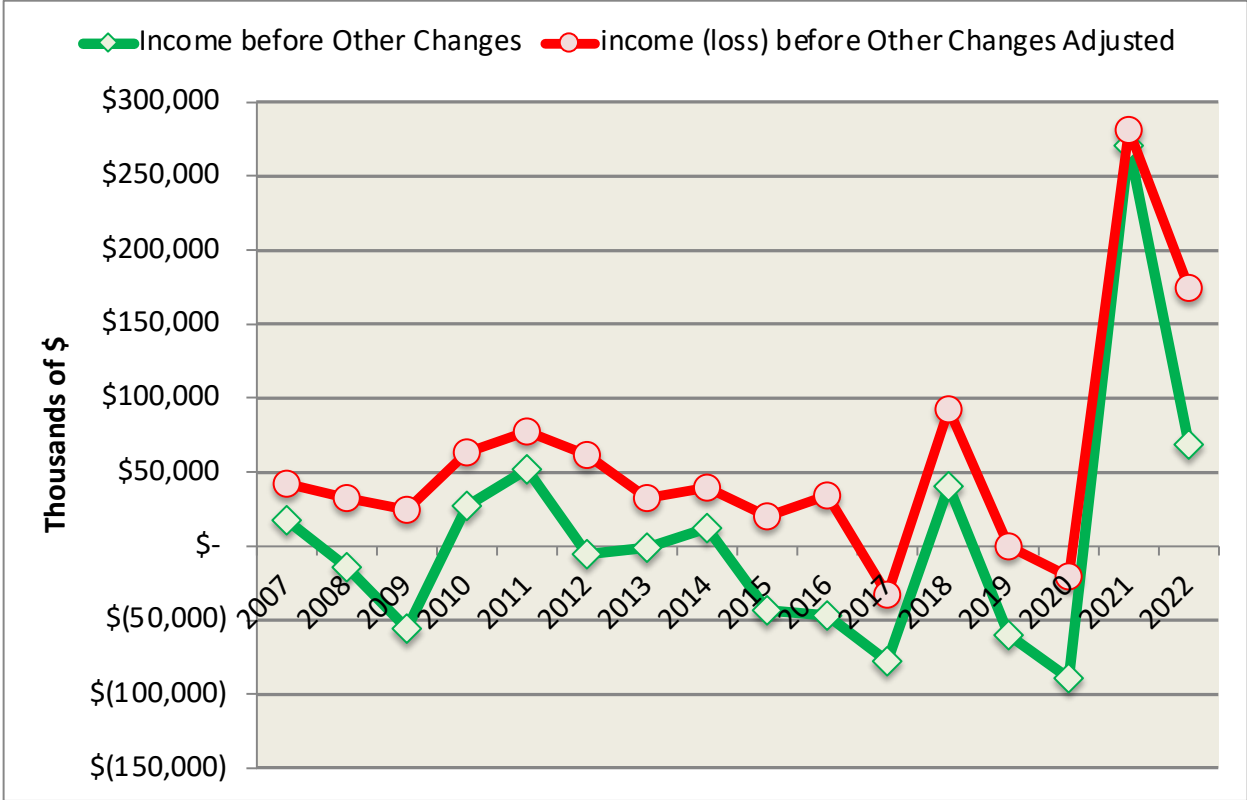
Income (loss) Before Other Revenue

The University's income (loss) before other revenue takes operating revenues and subtracts operating expenses and adds non-operating revenues (expenses). It represents net income generated from operations. **It is important to note that even in cases where this is negative there may not be cause for alarm if the loss is due to unrealized losses on investments or to depreciation.** Net income adjusted for non-cash expenses takes operating revenue (which excludes capital appropriations, capital gifts and contributions to endowment) and subtracts operating expenses (excluding non-cash expenses like depreciation, amortization and unrealized gains and losses on investments). Figure 30 shows the income (loss) before other changes and net income adjusted for non-cash expenses. The adjustment is made by adding depreciation and smoothing fluctuations in investment income by subtracting actual investment income and replacing it by a fixed return on investment that generates the same overall investment income over the period from 2007-2022. That return was 4.65%. Net income adjusted for non-cash expenses is a reasonable approximation of operating cash flows, which we will examine in detail later in this report.

Rather than having net income losses in 9 out of 16 years the adjusted net income shows losses in just three years, 2017, 2019 and 2020. And it should be noted that 2019 was for all intents and purposes a break-even year since the loss was just \$75,000. In 2017 the loss appears to be the result of a large increase in salaries and benefits. In 2020 the loss appears to have been caused by a large drop in hospital revenues. It should also be noted that the surge in

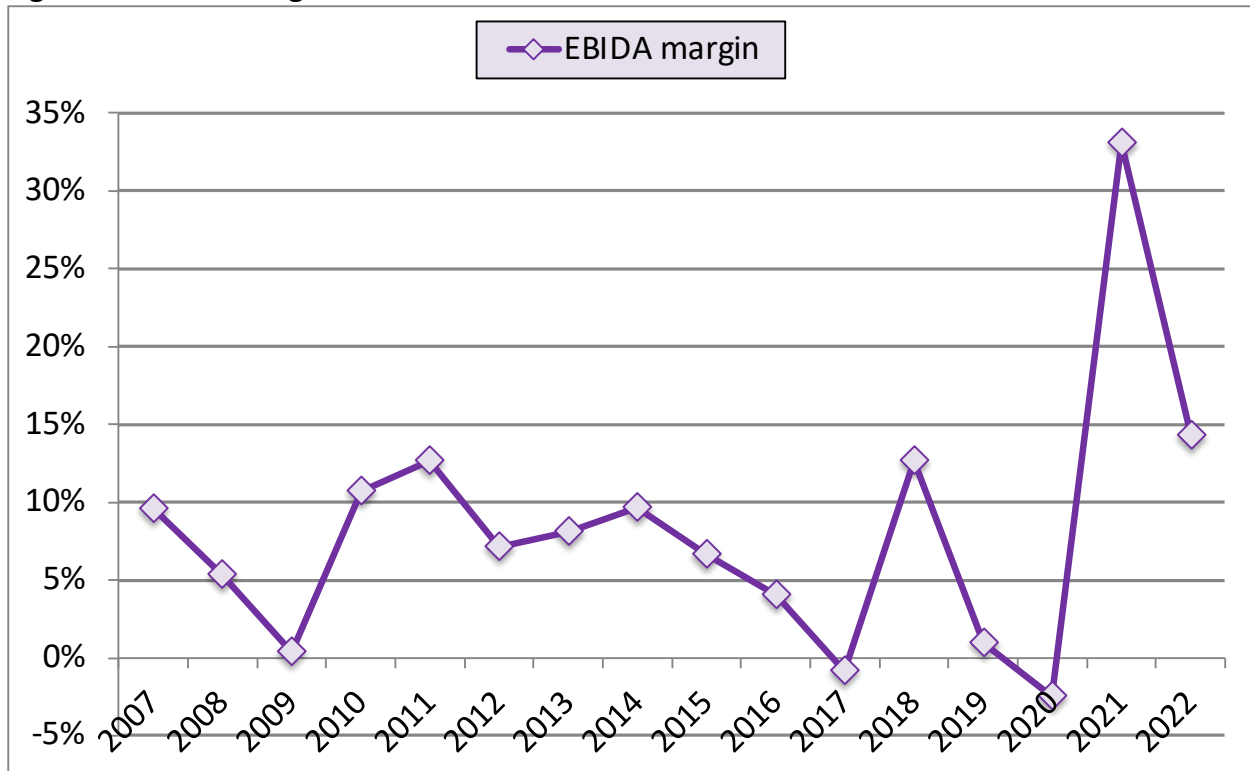
adjusted net income is clearly overstated in 2021 and 2022 due to understating true benefit costs because of GASB 68 and 75 adjustments. In 2021 the University shows benefit costs as being negative, which is of course impossible and in 2022 they show benefit costs of just \$38.7 million compared to benefit costs in 2014 (pre-GASB 68 & 75) of \$130 million. Without more detailed information on true benefit costs, it is impossible to get totally accurate estimates of net income.

Figure 30. Net Income



As mentioned earlier more and more analysts are looking at earnings before interest, depreciation and amortization (EBIDA). EBIDA is more closely related to operating cash flows although it still considers change in unrealized gains and losses in investment, which like depreciation are non-cash revenues and expenses. Figure 31 shows EBIDA margins for the University from 2007-2022. The EBIDA margin is calculated by dividing EBIDA by operating revenues, which include all revenue, except capital appropriations and capital grants because they are not regular sources of revenue and cannot be used for operations.

Figure 31. EBIDA Margins



The EBIDA margin shows the volatility caused by the Great Financial Crisis (GFC) in 2008 and 2009 and the subsequent recovery by 2010 and 2011. After that we see margins spiking in 2011 and then a period of solid returns from 2012-2016. As noted earlier the negative margin in 2017 was because of an unusually large increase in salaries and wages as well as benefits and the 2020 negative margin was due to a large decline in hospital revenue. And the same caveats apply to the 2021 and 2022 margins as applied to the adjusted net income with respect to understating benefit expenses due to GASB 68 and 75.

Change in Net Assets (Net Position)

So far, we have looked at revenues used in operations and operating expenses. Now we turn to the difference between revenues and expenses which is the change in net assets or the change in net position. But before we do look at the change in net position, we need to recognize that there is additional revenue and some expense that figure into the University's bottom line.

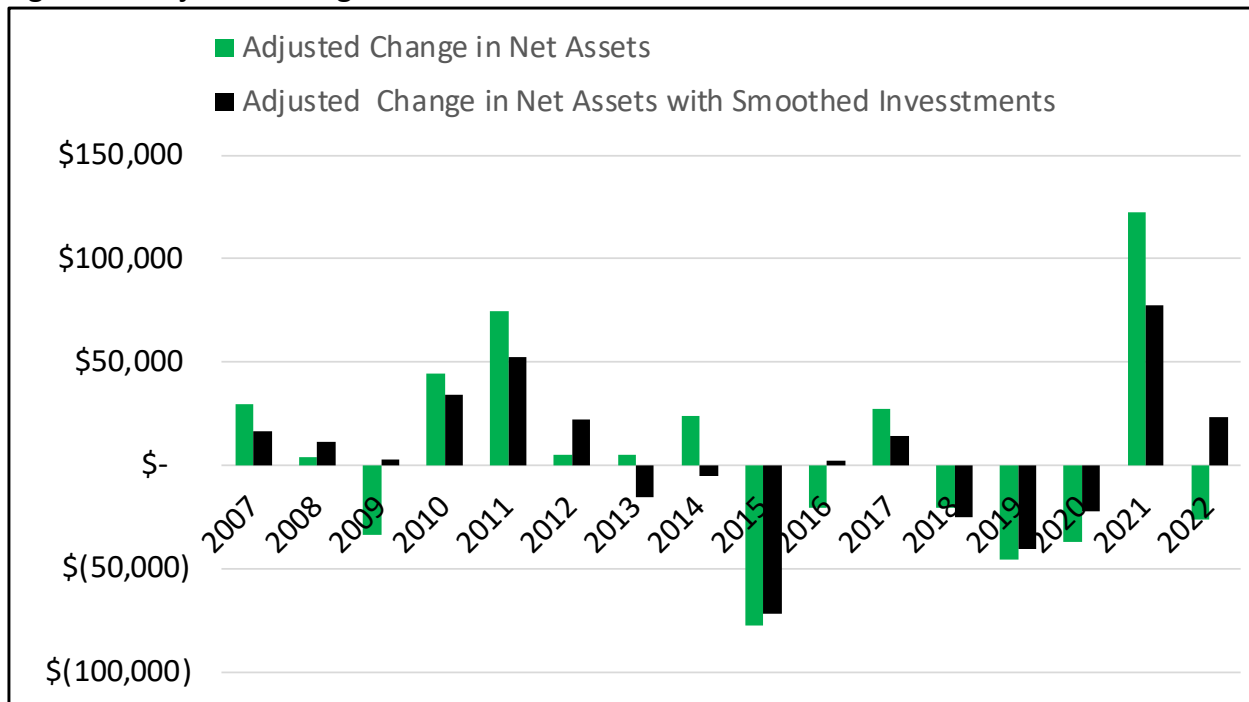
The revenue in the financial statement is broken out into operating revenue and non-operating revenue. Most of what is in non-operating revenue is in fact revenue that is used in operations and is only classified as non-operating because it is revenue that the University receives that is not in exchange for services. So technically the state appropriation or Pell grants are not operating revenue, but this is really a difference without a distinction.

We also have not discussed some expenses that fall into the non-operating category, those being interest on debt, and loss on disposal of capital assets. It is also possible for universities to show unrealized gains and losses on investments. For the University of Toledo its investment revenue has been positive in five of the last six years, but investment income has been volatile. Loss on disposal of assets is a non-cash loss whereas interest payments on debt involve the transfer of cash and is not considered an operational expense because this comes from financing capital outlays.

That brings us to three other forms of revenue that figure into the bottom line but are not used for operations. Those forms of revenue relate to capital spending and contributions to the University’s endowment. With respect to capital spending we have capital appropriations, money given by the state to the University for construction and capital grants and gifts, money that is donated to the University for capital projects. Finally, we have money that is given to the University’s endowment.

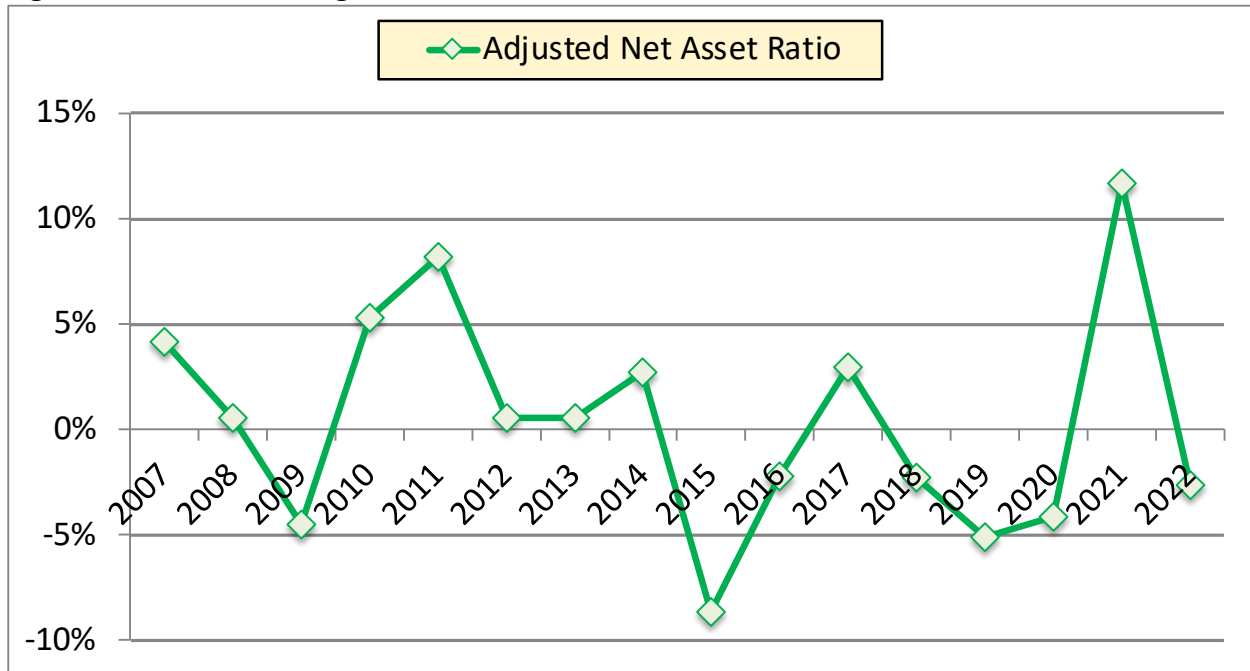
The change in net assets or change in net position is the difference between all of the revenue that flows into the University minus all of the expenses, in the current year. Figure 32 shows the adjusted change in net position as well as the adjusted net position using smoothed investment income. Both series follow the same pattern. But the smoothing reduces the positive changes. There are several reasons to believe that the change in net assets is not really the best indicator of performance, but we report on it here because it is used in the SB-6 scores for all Ohio universities.

Figure 32. Adjusted Change in Net Position



Net asset margins measure the change in net position as percentage of total revenue. It is important to look at these margins because the raw numbers alone do not tell the whole story. Margins are shown in Figure 33. Every industry has standards or norms for what constitutes good net income margins. In higher education, Margins for changes in net assets (net position) that are in the range of 1%-2.9% are considered good, margins that are in the 3%-4.9% are very good and margins above 5% are outstanding. These margins are used in some summary indices so they can be important.

Figure 33. Net Asset Margins



The Cash Flow Statement

Universities use a system of accrual accounting, which means they book revenues when they earn them and book expenses when they are incurred. However, recognizing revenue is not always the same as collecting cash. For example, a university may send a bill to a student for tuition but not immediately collect the money that is owed. This shows up on the university's balance sheets as an increase in accounts receivable and is booked on the statement of revenues, expenses and changes in net position as revenue. While the college shows an increase in revenue it does not actually have more cash. Hence the role of the cash flow statement is to show the inflows and outflows of cash.

The Statement of Cash Flows at public colleges and universities has four major components (See Figure 34). First, cash flows from operations, which includes inflows in the form of tuition and fees, grants and contracts, sales and services and outflows in the form of payments to employees, suppliers and students. The second major component is cash flows from non-capital financing activities. The most important item in this category is state appropriations. Also, now shown in this category are Federal direct lending receipts and Federal direct lending disbursements as well as gift and grants for non-capital purposes. Third are cash flows from capital and related financing activities which include inflows in the form of capital appropriations and capital grants and outflows in the form of purchases of capital assets as well as outflows for principal and interest payments. Finally, there are cash flows from investing activities such as the purchase and sale of investments and interest received on investments.

The cash flow from operations shows the actual inflow and outflow of resources used to fund the operation of a college or university. Operating cash flows can be calculated directly by counting all inflows and outflows of cash (the direct method) or they can be calculated indirectly starting with the change in net assets and adjusted for changes in assets and liabilities as well as considering other non-cash expenses as well as non-cash revenue such as paper gains on investments.

At public institutions **operating cash flow** is the sum of cash flows from operations plus cash flows from non-capital financing activities. One of the major differences between operating cash flows and income (loss) before other revenue (net income) is that net income includes depreciation as an expense. However, since depreciation is a non-cash expense it does not represent an outflow of cash i.e., it is an expense only on paper. Another non-cash expense is changes in unrealized gains and losses on investments. If the value of investments increases, say because stock prices rise, that is recorded in the income statement as revenue, even if the stocks have not been sold. Conversely, when the value of investments falls, say because the value of stocks has fallen, that gets recorded in the income statement as an expense. But in reality, these gains and losses are paper gains and losses and have little to do with how the institution is performing in the short run. Cash flows are also not subject to accrual adjustments and therefore are not affected by changes brought about by GASB 68 and GASB 75. So, looking at cash flows that are generated from operations is a more important indicator of performance

than say the change in net position and operating cash flow is one of the most important indicators of how a college or university is doing from a financial perspective.

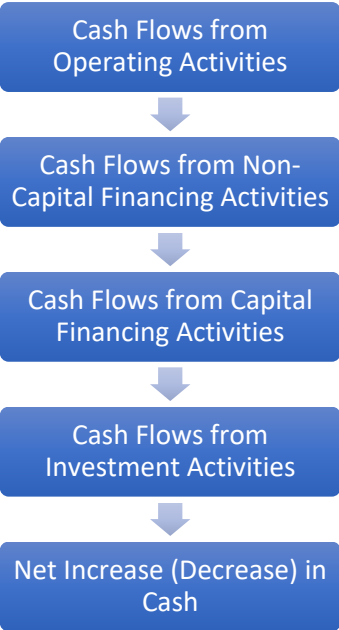


Figure 34.

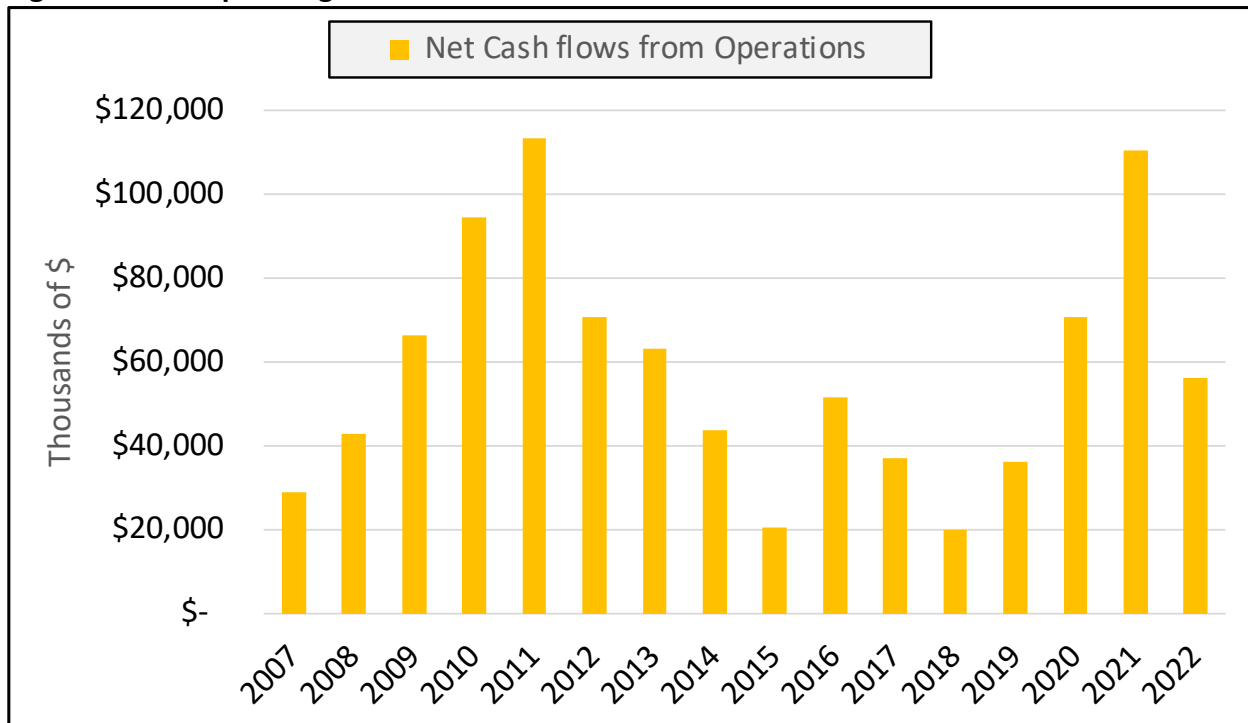
Table 16 below shows the Statement of Operating Cash Flows for the University from 2007-2022 and Figure 35 shows operating cash flows from 2007-2022. Operating cash flows can be defined in two ways: (I) operating activities plus net cash provided by non-capital financing activities or (II) operating activities plus net cash provided by non-capital financing activities minus interest payments on debt plus investment income. In this report we are using definition (I) for cash flows.

The University has had positive operating cash flow every year between 2007 and 2022. The best way to evaluate cash flows is to look at the cash flow margin, which is the ratio of operating cash flow to revenue from operations. Revenue from operations excludes revenue from capital appropriations, capital gifts and grants.

Table 16. Operating Cash Flows

Years	Cash Inflows I	Cash Outflows	Net Cash flows from Operations	Operating Revenue	Cash Flow Margin
2007	\$ 778,295	\$ (749,231)	\$ 29,064	\$ 685,540	4.24%
2008	\$ 822,382	\$ (779,647)	\$ 42,735	\$ 716,694	5.96%
2009	\$ 924,521	\$ (858,277)	\$ 66,244	\$ 720,439	9.19%
2010	\$ 978,249	\$ (883,898)	\$ 94,351	\$ 805,117	11.72%
2011	\$ 1,000,724	\$ (887,276)	\$ 113,448	\$ 887,332	12.79%
2012	\$ 962,006	\$ (891,161)	\$ 70,845	\$ 835,330	8.48%
2013	\$ 938,938	\$ (875,727)	\$ 63,211	\$ 837,459	7.55%
2014	\$ 915,360	\$ (871,757)	\$ 43,603	\$ 855,520	5.10%
2015	\$ 918,043	\$ (897,603)	\$ 20,440	\$ 866,410	2.36%
2016	\$ 963,342	\$ (911,856)	\$ 51,486	\$ 886,725	5.81%
2017	\$ 1,057,286	\$ (1,020,137)	\$ 37,149	\$ 889,670	4.18%
2018	\$ 1,020,262	\$ (1,000,151)	\$ 20,111	\$ 867,785	2.32%
2019	\$ 1,067,560	\$ (1,031,320)	\$ 36,240	\$ 888,343	4.08%
2020	\$ 1,078,071	\$ (1,007,260)	\$ 70,811	\$ 856,344	8.27%
2021	\$ 1,092,006	\$ (981,666)	\$ 110,340	\$ 1,028,330	10.73%
2022	\$ 1,111,327	\$ (1,055,195)	\$ 56,132	\$ 964,263	5.82%

Figure 35. Net Operating Cash Flows



According to Moody’s criteria for evaluating higher education, cash flow margins between 1% but less than 4.5% are considered fair, margins between 4.5% and less than 9% are considered good and margins between 9% and less than 15% are considered very good.

Figure 36. Cash Flow Margins

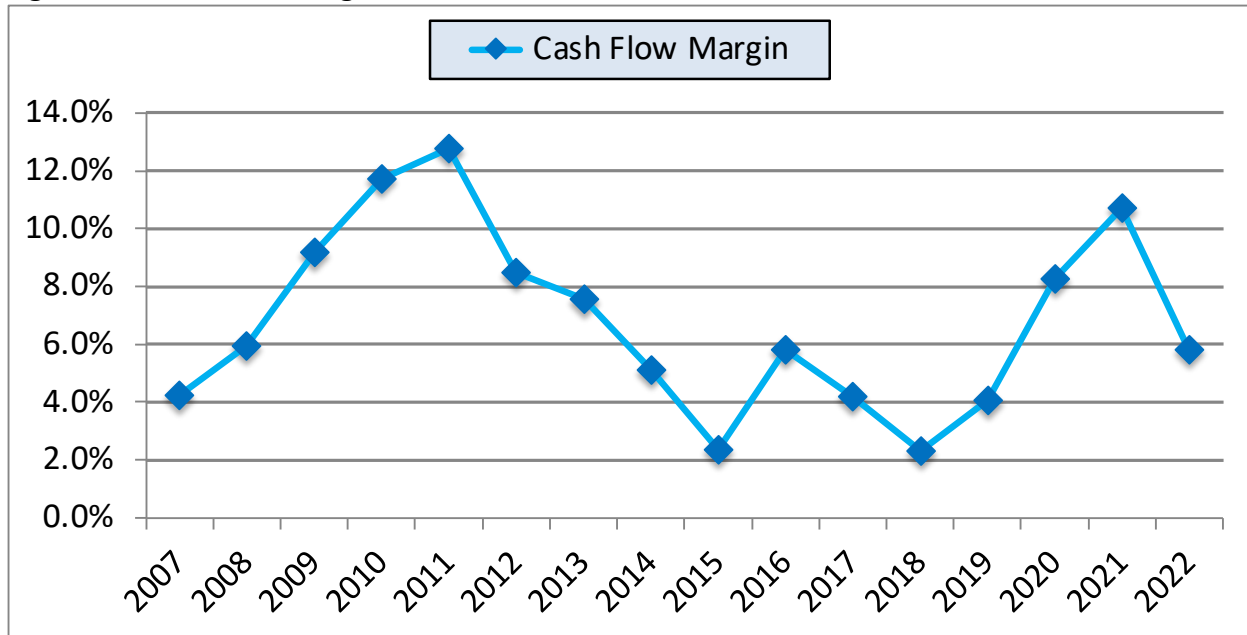


Figure 36 shows cash flow margins. The cash flow margin is one of the key indicators used by Moody’s and other credit rating agencies when looking at the financial health of an institution. For 5 of the last 16 years UT has a cash flow margin that was fair. In 7 of the last 16 years UT had cash flow margins that were good and for 4 of the last 16 years UT’s cash flows were very good. Over the last 16 years the average cash flow margin was 6.8% and the median cash flow ratio was 5.9% putting UT’s performance solidly in the good range.

Enrollment and Faculty

In this section of the report, we look at trends in enrollment and what has been happening to the number of faculty. Table 17 shows what has been happening to enrollment, broken down by full-time undergraduate, part-undergraduate, full-time graduate and part-graduate.

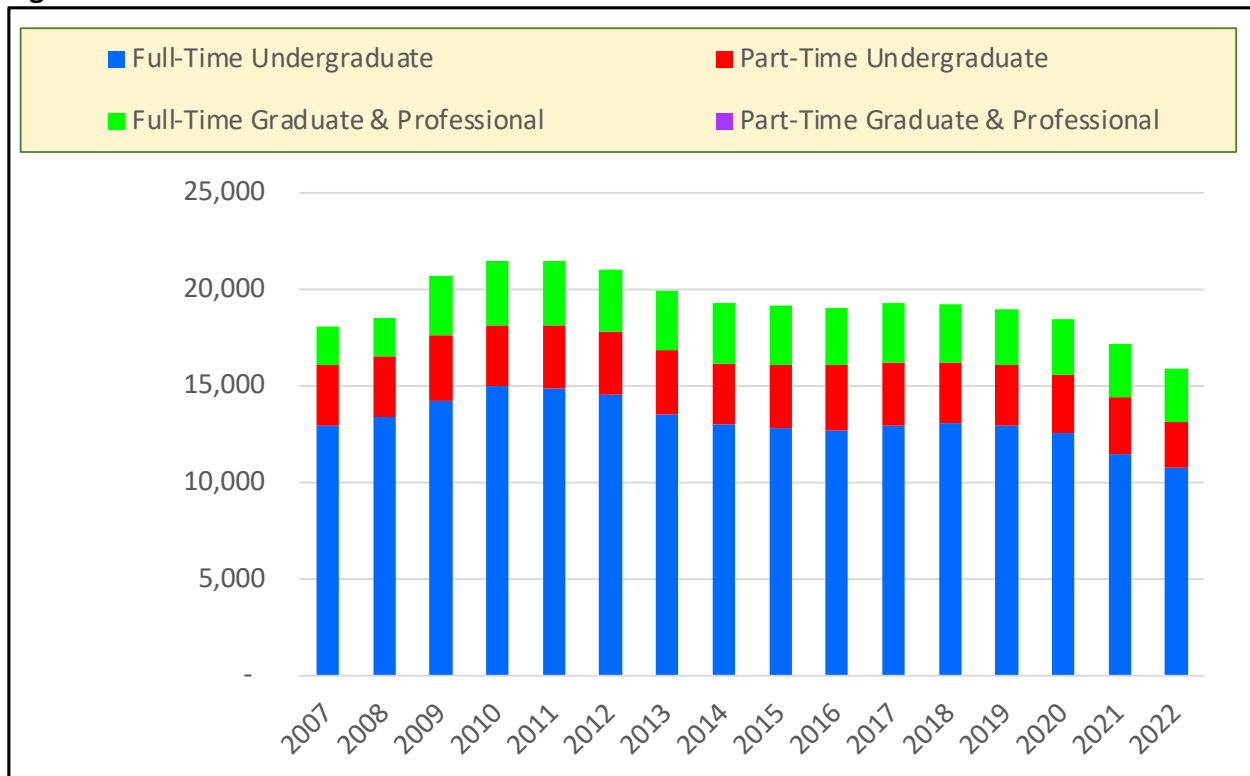
Full-time undergraduate enrollment rose from 2007 to 2010 peaking at 14,968 students. Since 2010 full-time undergraduate enrollment has been declining and was down to 10,738 students in 2022. Part-time undergraduate enrollment has had some ups and downs averaging about 3,230 students between 2007 and 2019. But since 2019 it appears that part-time undergraduate enrollment is declining and was down to 2,423 students in 2022.

Table 17. Enrollment

Year	Full-Time Undergraduate	Part-Time Undergraduate	Total Undergraduate	Full-Time Graduate & Professional	Part-Time Graduate & Professional	Total Graduate & Professional	Total
2007	12,958	3,109	16,067	2,001	1,306	3,307	19,374
2008	13,394	3,133	16,527	1,976	1,264	3,240	19,767
2009	14,199	3,392	17,591	3,132	1,613	4,745	22,336
2010	14,968	3,172	18,140	3,307	1,617	4,924	23,064
2011	14,883	3,247	18,130	3,347	1,608	4,955	23,085
2012	14,517	3,327	17,844	3,163	1,603	4,766	22,610
2013	13,519	3,318	16,837	3,099	1,517	4,616	21,453
2014	13,040	3,113	16,153	3,139	1,451	4,590	20,743
2015	12,806	3,284	16,090	3,097	1,439	4,536	20,626
2016	12,713	3,351	16,064	2,996	1,317	4,313	20,377
2017	12,936	3,287	16,223	3,094	1,298	4,392	20,615
2018	13,056	3,138	16,194	3,042	1,279	4,321	20,515
2019	12,941	3,124	16,065	2,918	1,254	4,172	20,237
2020	12,548	3,020	15,568	2,898	1,228	4,126	19,694
2021	11,447	2,959	14,406	2,750	1,163	3,913	18,319
2022	10,738	2,423	13,161	2,706	1,112	3,818	16,979

Graduate enrollment peaked in 2011 at 4,955 students and has declined to 3,818 students in 2022. Total enrollment also peaked in 2011 and has been declining since then ending 2022 at 16,979.

Figure 37. Total Enrollment



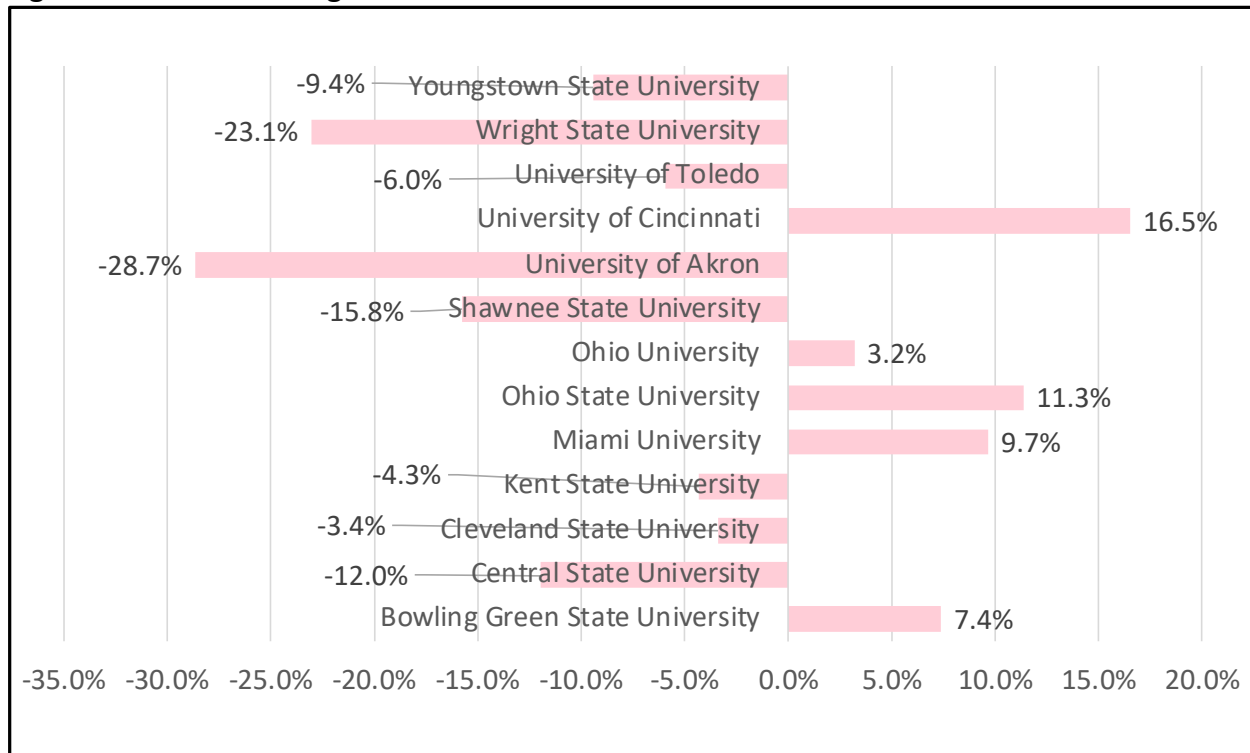
Clearly the trend of declining enrollment is concerning but it is important to put it in the context that enrollment in higher education in Ohio has been declining, with some of the decline due to demographic changes but it has also been exacerbated by a lack of state support for higher education which has driven up tuition and forced many students to take on crushing levels of debt.

Finally, to better understand the reasons for the decline in enrollment at UT we look at the decline in enrollment compared to changes in enrollment at other state universities in Ohio. We know that the population of traditional aged students (18-24) is declining in Ohio, and we know that Ohio provides relatively little support for higher education so it should not surprise us that overall enrollment at state universities in Ohio is going down. But some institutions have still managed to increase enrollment and other have seen relatively small declines.

In Figure 38 we start by calculating the overall percentage decline in enrollment for the State and then subtracting that percentage decline from the actual change in enrollment. For example, if the average decline in enrollment is -7% and the decline in enrollment at a particular institution is -7% if we subtract, we get 0%. This means that the decline in enrollment at this institution is attributed to the overall decline in enrollment in the State. Take a case where an institution increases its enrollment by 2% while the average decline is 7%. In this case, 2% minus -7% is 9%, which means the institution outperformed the average in the state by 9%. In contrast if an institutions enrollment went down -14% then when we subtract -7% we get -7% which means this institution underperformed the state average by 7%.

What we see in Figure 38 is that institutions like Ohio State, University of Cincinnati, Miami University, Ohio University and Bowling Green State University all outperformed. In contrast Kent State University and other regional state universities as well as Ohio's two smallest state universities all underperformed. The two institutions that clearly stand out are the University of Akron and Wright State University. The University of Toledo had -6% putting it in second place behind Cleveland State among the regional universities. But it still underperformed relative to the state average.

Figure 38. Relative Changes in Enrollment at State Institutions in Ohio 2013-2022



Next, we look at the number of faculty and other employees at the University. We are limited in looking at these years because of changes in how IPEDS classifies various occupations in higher education.

First, we look at faculty. Figure 41 shows the decline in full-time faculty and Figure 42 the percentage change in full-time faculty. Table 18 shows both full-time and part-time faculty at the University of Toledo from 2013-22.

The number of Professors increased 5% but given what has been happening in the other tenured and tenure track ranks this is just an indication that the University has not stopped promoting people to the rank of Professor. Below the rank of Professor, Associate Professors declined 36.9% and Assistant Professors declined 20.8%. Thus, the ranks of tenured and tenure track faculty are being decimated. Instructors have declined by 32%, although they are the smallest group of full-time faculty. Lecturers, the largest group of full-time non-tenure track faculty had the smallest decline at 3%.

Table 18. Full-Time and Part-Time Non-Medical School Faculty

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	% Change
Professor	179	175	183	165	166	185	225	232	192	188	5.0%
Associate Professor	233	221	228	210	205	206	184	169	147	147	-36.9%
Assistant Professor	155	140	115	136	145	132	127	145	119	105	-32.3%
Instructor	24	21	24	25	26	25	20	26	24	19	-20.8%
Lecturer	151	155	160	167	172	155	162	161	155	146	-3.3%
Total	742	712	710	703	714	703	718	733	637	605	-18.5%
Part-Time Faculty	349	285	315	318	345	335	345	311	218	264	-24.4%

Figure 41. Full-Time Faculty

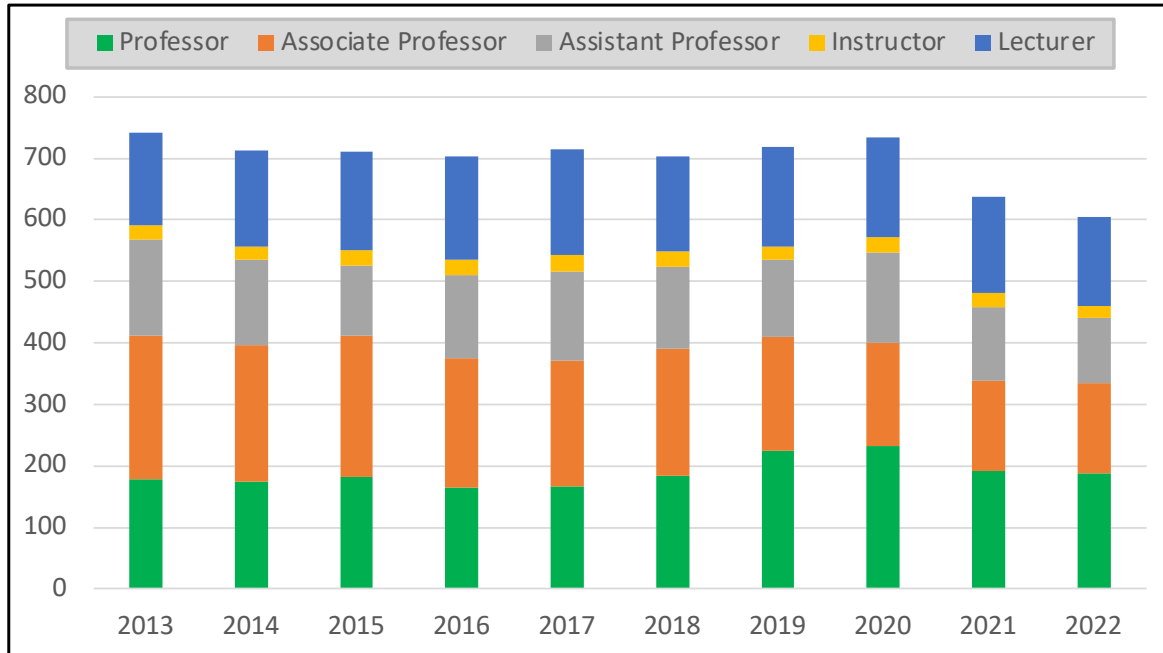
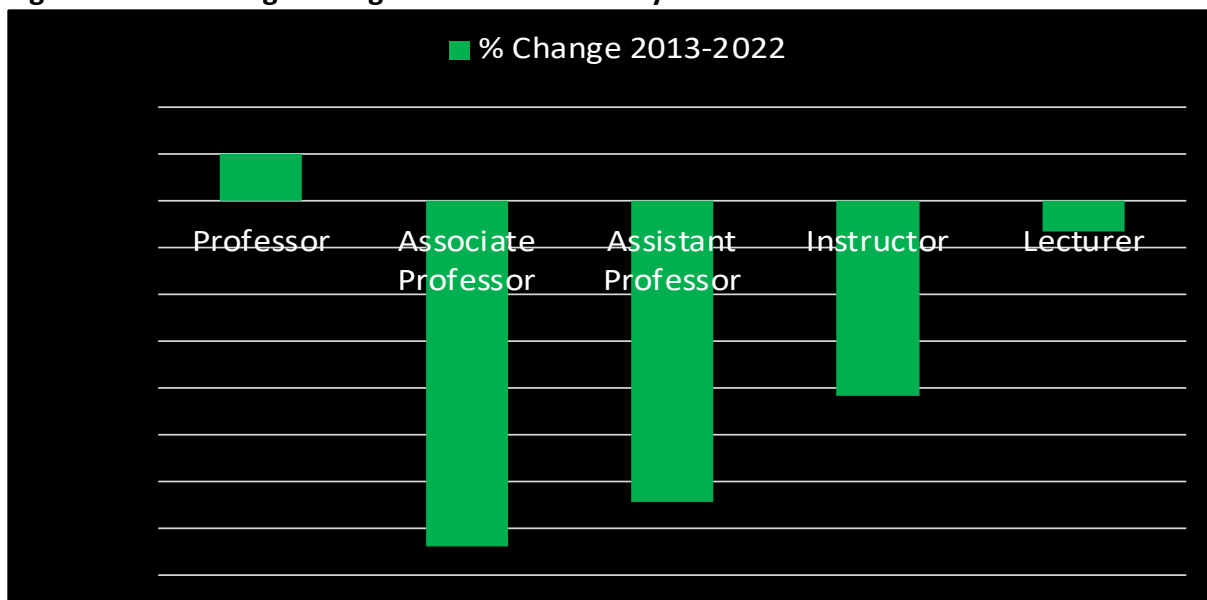
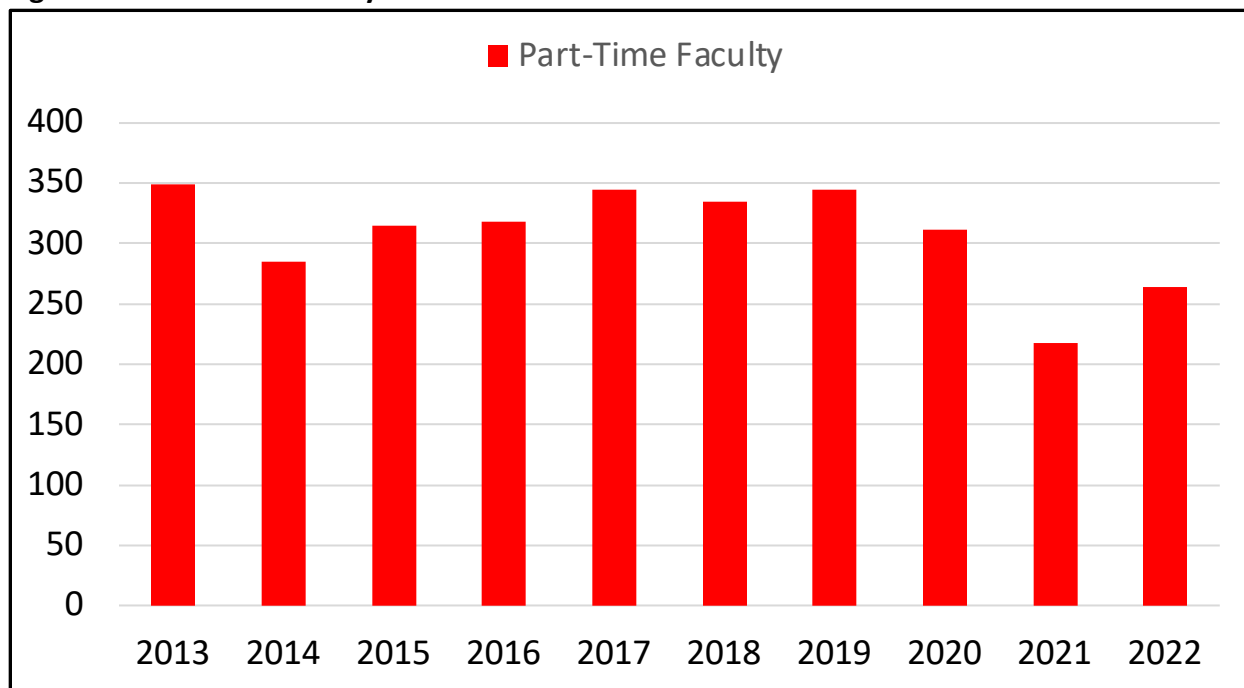


Figure 42. Percentage Change in Full-Time Faculty



Turning to part-time faculty, their numbers have also declined from 349 in 2013 to 264 in 2022, a decline of 24.4%, which matches the decline in enrollment over this period. It is also notable that the number of part-time faculty also declined sharply in 2021, which was presumably related to the pandemic, and it shows the precarity of the part-time faculty. These declines are shown in Figure 43.

Figure 43. Part-Time Faculty

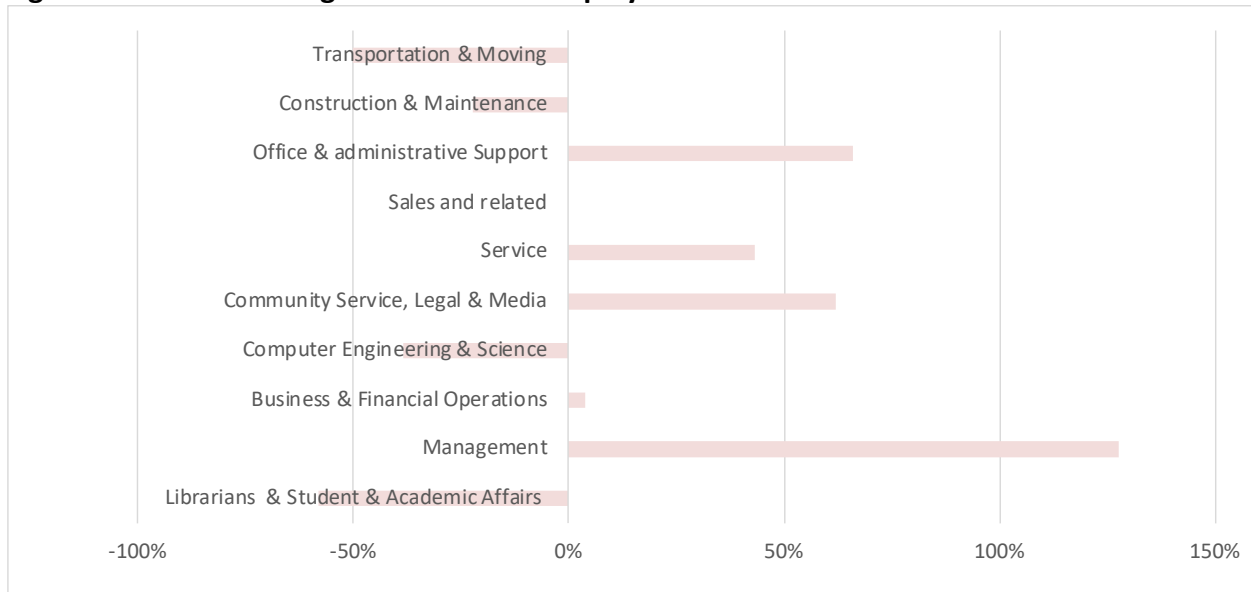


Next, we turn to comparing changes in the various categories of employees at the University. I have omitted healthcare practitioners because the University reported that it employed 391 in 2021 and then reported employing 1,248 in 2022 which would be a 218% increase in one-year and that seemed like it might be a mistake or the result of a change in reporting. The change in non-instructional full-time employees is shown in Table 19 along with percentage changes which are also shown by occupational category are shown in Figure 44.

Table 19. Full-Time Non-Faculty Employees (Excluding Health Practitioners)

Full-Time Non-Instructional	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	% Change
Librarians & Student & Academic Affairs	234	222	250	227	216	197	171	162	150	98	-58%
Management	155	156	168	155	146	139	137	194	206	353	128%
Business & Financial Operations	177	184	168	157	175	171	170	177	141	184	4%
Computer Engineering & Science	334	167	192	173	189	188	213	218	200	206	-38%
Community Service, Legal & Media	155	203	205	227	249	278	280	257	226	251	62%
Service	252	243	249	258	249	236	236	235	210	361	43%
Sales and related		1	1	1	2	1	1	1		4	
Office & administrative Support	276	269	274	259	262	237	265	258	243	458	66%
Construction & Maintenance	113	104	96	100	99	93	94	95	80	88	-22%
Transportation & Moving	16	11	10	10	10	9	8	10	5	8	-50%
Total	1,712	1,560	1,613	1,567	1,597	1,549	1,575	1,607	1,461	2,011	17%

Figure 44. Percent Change in Number of Employees



Here, not surprisingly we see the largest percentage increase is in management, which increased 128%. There were also large percentage increases in community service, legal and media which increased 62% and office and administrative support, which of course goes along with increases in management. Overall, again excluding health practitioners, non-faculty employment increased 17% in contrast to an 18.5% decline in full-time faculty and a 24% decline in part-time faculty. It is these types of changes that will exacerbate the declines in enrollment as students and their families figure out that the priorities of the institution appear to be misaligned with the primary mission of the instruction, teaching students and engaging in research and other scholarly activity.

Summary Indices

If the financial statements are like report cards, **summary indices** are like a GPA. These indices can be used to summarize the overall financial status of the institution.

One popular summary index is the composite index developed by Moody's for the Ohio Board of Regents (OBR), now the Ohio Department of Higher Education (ODHE) and can be found under [Campus Accountability](#) on the ODHE website. It has several shortcomings, but because of its importance in Ohio we report that index in this report.

The composite index used by ODHE assigns scores to three ratios and then uses a weighted average of those scores to create a composite index indicating the financial health of an institution. These scores are shown both including and excluding the impact of GASB 68 and GASB 75 (we use the latter).

The first is the ratio known as the viability ratio, which is the ratio of expendable net assets to long-term debt. The second ratio is the primary reserve ratio, which measures the ratio of expendable net assets to operating expenses and interest payments. The net asset ratio is the change in net assets divided by total revenues (operating and non-operating).

Scores for each of the three ratios are whole numbers from 0 to 5 with 5 being the highest score. The table below shows the how scores are assigned to each ratio. A weighted average of these scores is then used to calculate a composite index that reflects the overall financial health of the institution. The weights used by ODHE are 50% for the primary reserve score, 30% for the viability score and 20% for the net asset score. Assigning the smallest weight to the net asset score is recognition of the fact that there is significant variability in the change in net assets for many institutions largely due to fluctuations in the value of investments and fluctuations in capital appropriations.

Under Ohio law an institution with a composite index of 1.75 or less for two consecutive years will be placed on fiscal watch. This allows the governor to replace trustees and in effect put an institution in receivership.

Although SB 6 index used by the Ohio Board of Regents is a good index it does have certain deficiencies. The three main deficiencies of this index are that it uses a step function for scoring, so that relatively small changes in any ratio can cause a particular score to jump up or down, it gives a too high a weight to the primary reserve ratio and totally ignores cash flows. With increasing volatility in financial markets, changes in the market value of investments have caused increased volatility in the change in net assets. However, in many cases these changes in net assets reflect only unrealized gains and losses in investments.

Table 20. Scoring for SB-6 and Fichtenbaum-Bunsis Index

	0	1	2	3	4	5
Viability Ratio	< 0	0 to .29	.30 to .59	.6 to .99	1.0 to 2.5	> 2.5 or N/A
Primary Reserve Ratio	< -.1	-.1 to .049	.05 to .099	.10 to .249	.25 to .49	.5 or greater
Cash Flow Ratio	< -.05	-.05 to 0	0 to .009	.01 to .029	.03 to .049	.05 or greater
Net Asset Ratio	< -.05	-.05 to 0	0 to .009	.01 to .029	.03 to .049	.05 or greater
	0	1	2	3	4	5
Viability Ratio	< 0	0 to .29	.30 to .59	.6 to .99	1.0 to 2.5	> 2.5 or N/A
Primary Reserve Ratio	< -.1	-.1 to .049	.05 to .099	.10 to .249	.25 to .49	.5 or greater
Cash Flow Ratio	< -.05	-.05 to 0	0 to .009	.01 to .029	.03 to .049	.05 or greater
Net Asset Ratio	< -.05	-.05 to 0	0 to .009	.01 to .029	.03 to .049	.05 or greater

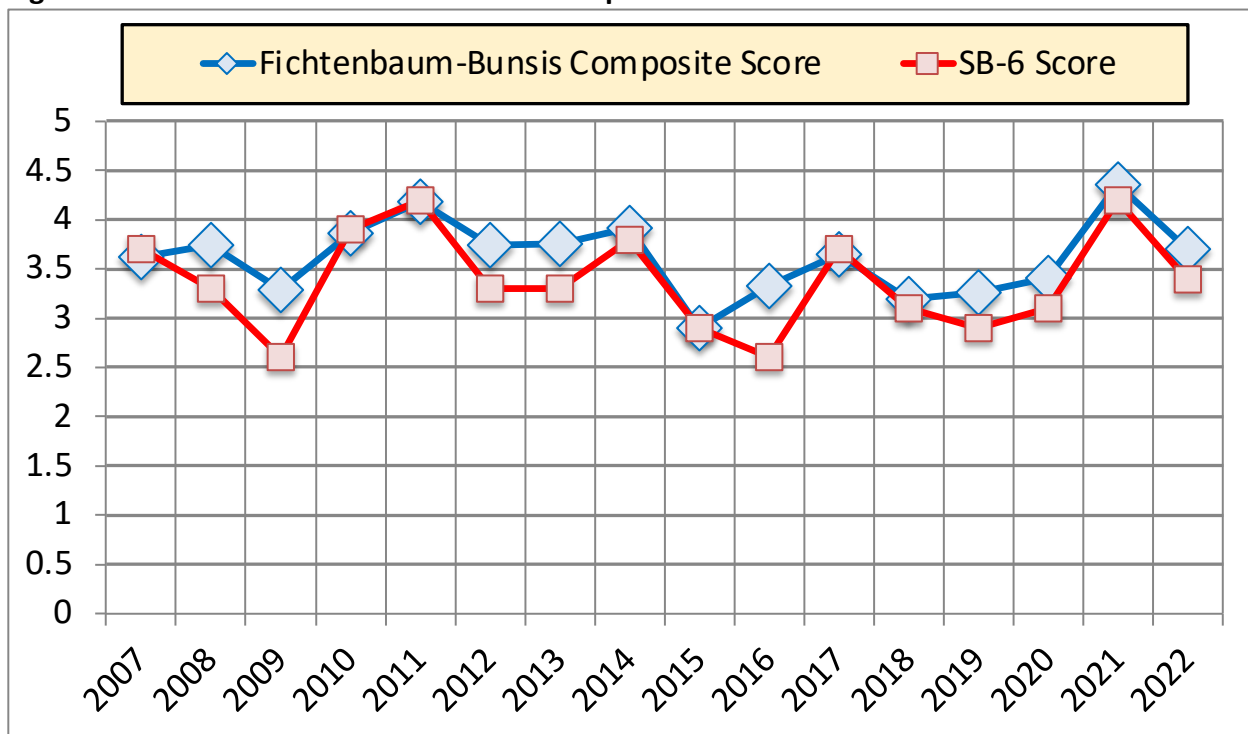
Next, we present an index developed by the author and Howard Bunsis a Professor of Accounting at Eastern Michigan University. During the financial crisis we realized that the ODHE composite index had two major problems that distorted the true performance of institutions. First was the overreliance on the change in net assets (change in net position) and omitting any indicator of cash flows. Second was the use of only 6 scores meant that a small change in an indicator could cause a score to change dramatically. We developed our own composite index by incorporating cash flows into our index using four ratios and used a piecewise continuous function, to map the ratios into scores, eliminating threshold effects i.e., a jump in score caused by a small change in a ratio. Thus, our Fichtenbaum-Bunsis index lessened the effects of volatility in financial markets by including a cash flow ratio giving a better indicator of financial performance and we used this index as well in previous reports.

The scores for each ratio are assigned making use of the scores in Table 20 and a piecewise continuous function, so that small changes in ratios are reflected in small changes in scores. In addition, Fichtenbaum-Bunsis index lessens the effects of volatility in financial markets by including a cash flow ratio. The viability ratio is given a weight of 22.5%, the primary reserve ratio a weight of 45%, the cash flow ratio a weight of 20% and the net asset ratio a weight of 12.5%. Table 21 shows the key ratios and scores for the SB-6 and Fichtenbaum-Bunsis Scores for the years 2013-2022 and Figure 45 shows the summary scores for both indices from 2007-2022.

Table 21. Fichtenbaum-Bunsis Scores and SB-6 Scores

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fichtenbaum-Bunsis Scores										
Viability Score	3.330	3.516	3.036	2.916	3.248	3.416	3.392	3.243	3.754	3.677
Primary Reserve Score	3.892	3.991	3.503	3.467	3.696	3.696	3.615	3.554	4.199	3.963
Cash Flow Score	5.000	4.548	3.180	4.903	4.088	3.159	4.040	5.000	5.000	4.834
Net Asset Score	2.085	3.358	0.000	1.058	3.484	1.050	0.484	0.675	5.000	0.969
SB-6 Scores										
Viability Score										
Primary Reserve Score										
Net Asset Score										
Fichtenbaum-Bunsis Composite Score	3.76	3.92	2.90	3.33	3.65	3.19	3.26	3.41	4.36	3.70
SB-6 Score	3.70	3.30	2.60	3.90	4.20	3.30	3.30	3.80	2.90	2.60

Figure 45. SB-6 and Fichtenbaum-Bunsis Composite Scores

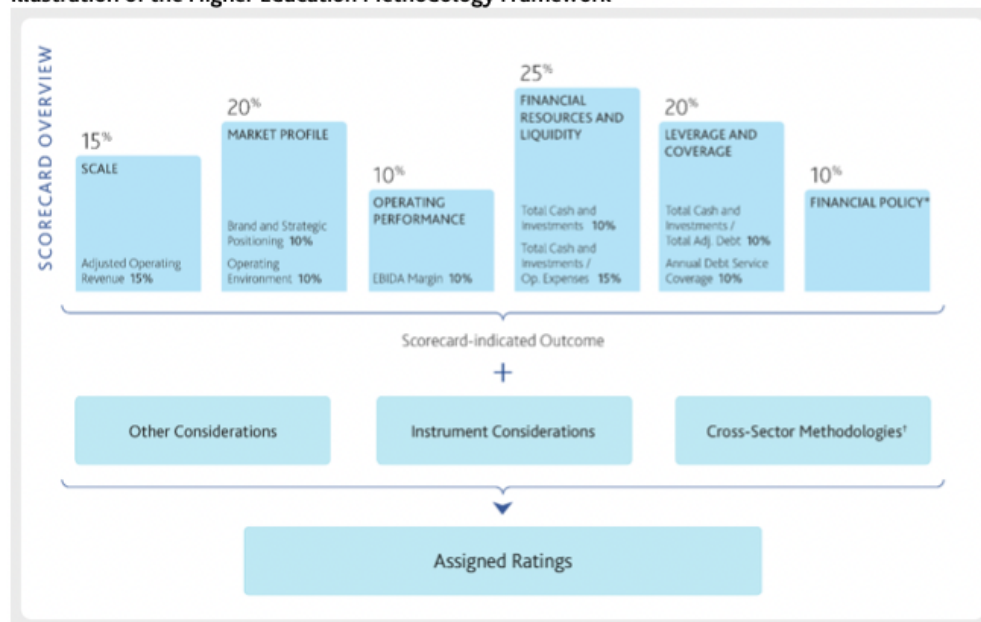


Here we can see in Figure 45 that the SB-6 score is more volatile and is generally a little lower. It shows sharper declines in the GFC, than the Fichtenbaum-Bunsis score, driven by changes in net assets. Using cash flow shows that a large portion of the downturn was due to unrealized losses on investments. The reason the Fichtenbaum-Bunsis score is generally higher is due the fact that in de-emphasizes the net asset score and introduces the cash flow score. The performance of the University of Toledo’s cash flow score is consistently better than its net asset score. Over the last 16 years the SB-6 score has averaged 3.38 and the Fichtenbaum-Bunsis score has averaged 3.62 both of which are good solid scores.

Moody's Score Card

Several years ago, Moody's created a new score card to measure financial performance that corresponds with the credit ratings that it gives to various public and private institutions of higher education. Initially the score card considered four broad areas of performance: 1) market profile, 2) operating performance, 3) wealth and liquidity and 4) Leverage. Each of these categories was then broken down into 10 sub-factors. However, in 2021 Moody's changed its methodology and it now has six categories 1) Scale, 2) Market Profile, 3) Operating performance, 4) Financial Resources and Liquidity, 5) Leverage and Coverage and 6) Financial Policy shown in Figure 46. Again, no summary index is perfect. The Moody's Score Card has been through a couple of iterations and in its latest form uses three qualitative variables whereas in its initial form it used just one qualitative variable. In that respect the Moody's Score Card introduces a large element of subjectivity. However, in its latest iteration, the quantitative variables are no longer subject to threshold effects, which represents a significant improvement.

Illustration of the Higher Education Methodology Framework



* This factor has no sub-factors.

† Some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's related publications" section.

Source: Moody's Investors Service

Figure 46

Each sub-category in Figure 46 is given a score that corresponds to 8 broad ratings categories shown in Figure 47a for qualitative factors and 47b for quantitative factors.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

Figure 47a

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
0.5-1.5	1.5-4.5	4.5-7.5	7.5-10.5	10.5-13.5	13.5-16.5	16.5-19.5	19.5-20.5

Source: Moody's Investors Service

Figure 47b

A linear function is used for the scoring of quantitative factors. This is like the piecewise linear function used in the Fichtenbaum-Bunsis Index that creates a continuous score by using a linear function between the points. Moody's ratios and factors are shown in Table 22 for the years 2007-2022

Then each score is multiplied by the weights in Figure 40 resulting in an average weighted factor score. The average weighted factor score is then mapped one of Moody's 20 credit ratings shown in Figure 48.

Table 22. Moody's Ratios and Factors

Moody's Ratios and Factors	2007	2008	2009	2010	2011	2012	2013	2014
Adjusted Operating Revenue	\$685.5	\$716.7	\$720.4	\$805.1	\$887.3	\$835.3	\$837.5	\$855.5
Brand & Strategic Positioning	5	5	5	5	5	5	5	5
Operating Environment	5	5	5	5	5	5	5	5
EBIDA Margin	10%	5%	0%	11%	13%	7%	8%	10%
Total Cash and Investments	\$281.9	\$244.0	\$167.6	\$230.1	\$304.9	\$314.9	\$306.3	\$318.6
Total Cash and Investments to Operating Expense	0.412	0.334	0.215	0.291	0.362	0.367	0.350	0.371
Total Cash and Investments to Total Adjusted Dek	1.015	0.919	0.663	0.779	1.060	0.952	0.938	1.019
Annual Debt Service Coverage	2.447	2.160	0.094	5.313	2.137	3.110	3.053	2.736
Financial Policy and Strategy	4	4	4	4	4	4	4	4
Moody's Ratios and Factors	2015	2016	2017	2018	2019	2020	2021	2022
Adjusted Operating Revenue	\$866.4	\$886.7	\$889.7	\$867.8	\$888.3	\$856.3	\$1,028.3	\$964.3
Brand & Strategic Positioning	5	5	5	5	5	5	5	5
Operating Environment	5	5	5	5	5	5	5	5
EBIDA Margin	6.6%	4.0%	-0.8%	12.7%	1.0%	-2.5%	33.1%	14.3%
Total Cash and Investments	\$277.2	\$395.2	\$447.5	\$433.6	\$432.5	\$421.9	\$492.8	\$549.2
Total Cash and Investments to Operating Expense	0.286	0.424	0.502	0.473	0.461	0.456	0.533	0.541
Total Cash and Investments to Total Adjusted Dek	0.930	1.325	1.510	1.529	1.582	1.554	1.734	1.874
Annual Debt Service Coverage	1.898	1.025	-0.242	3.893	0.366	-0.916	15.075	4.581
Financial Policy and Strategy	4	4	4	4	4	4	4	4

Figure 48. Scores and Credit Ratings

EXHIBIT 2

Scorecard Outcome

Scorecard Outcome	Aggregate Weighted Factor Score
Aaa	$x \leq 1.5$
Aa1	$1.5 < x \leq 2.5$
Aa2	$2.5 < x \leq 3.5$
Aa3	$3.5 < x \leq 4.5$
A1	$4.5 < x \leq 5.5$
A2	$5.5 < x \leq 6.5$
A3	$6.5 < x \leq 7.5$
Baa1	$7.5 < x \leq 8.5$
Baa2	$8.5 < x \leq 9.5$
Baa3	$9.5 < x \leq 10.5$
Ba1	$10.5 < x \leq 11.5$
Ba2	$11.5 < x \leq 12.5$
Ba3	$12.5 < x \leq 13.5$
B1	$13.5 < x \leq 14.5$
B2	$14.5 < x \leq 15.5$
B3	$15.5 < x \leq 16.5$
Caa1	$16.5 < x \leq 17.5$
Caa2	$17.5 < x \leq 18.5$
Caa3	$18.5 < x \leq 19.5$
Ca	$x > 19.5$

Moody's scores for the University have been flat which shows the University's financial position has been stable. However, it is increasing as shown in Figure 49. It is important to remember that with Moody's rating, lower scores are better and higher scores are worse, which is counter intuitive.

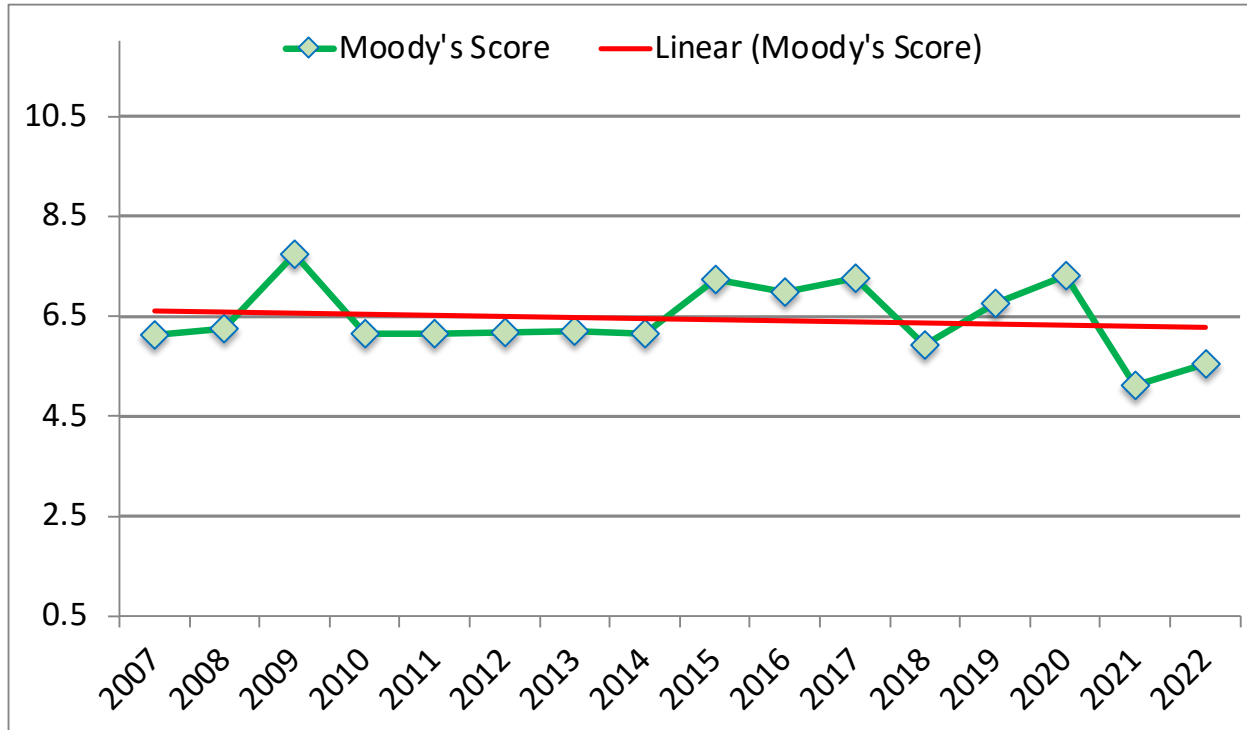
Table 23 shows the Moody’s scores and the predictive credit rating and while they do not exactly correspond to the actual credit rating, they are very close. It is also important to remember that Moody’s has changed its methodology for ratings over time, so earlier ratings using today’s methodology may not correspond exactly to the actual rating that Moody’s gave a particular institution in earlier years.

Table 23. Moody’s Scores and Predicted Credit Ratings

Year	Moody's Score	Moody's Credit Rating
2007	6.13	A2
2008	6.26	A2
2009	7.74	Baa1
2010	6.15	A2
2011	6.14	A2
2012	6.17	A2
2013	6.20	A2
2014	6.14	A2
2015	7.23	A3
2016	6.98	A3
2017	7.25	A3
2018	5.93	A2
2019	6.75	A3
2020	7.31	A3
2021	5.11	A1
2022	5.55	A2

Our analysis suggests that the University should have an A2 credit rating. A2 is the 6th highest of Moody’s scores. In looking at these predictive ratings it is important to note that Moody’s has changed its ratings methodology over the years and there is always a subjective element at play when Moody’s issues a credit rating. So, our predicted credit ratings may not always line up exactly with Moody’s actual credit ratings. But like any summary index, the most important thing to keep in mind are the changes in direction of the summary indicator which tells us whether financial conditions are improving, deteriorating or remaining stable.

Figure 49. Moody's Score Card for Higher Education



In its June 10, 2022, credit rating Moody's did in fact give the University of Toledo an A2 credit rating which is the 6th highest rating and changed their outlook from negative to stable. They cited "sound financial strategy". They also noted that the University had improved its "operating performance and liquidity" although they also mentioned the fact that the University had "ongoing revenue difficulties". They mention that management has developed a strategy to "reposition the clinical enterprise and strengthen the student pipeline." Finally, they note that to maintain this credit rating the strategies would have to be successfully implemented. The penultimate paragraph in their ratings rationale states:

The affirmation of the University of Toledo's A2 rating incorporates its important regional role as a large provider of public higher education and health care services. Sizeable wealth provides strong coverage of direct debt but considerably narrower coverage of adjusted debt including the unfunded pension liability. Recent years of asset appreciation drove a material strengthening in unrestricted liquidity contributing to significantly improved operating flexibility. While the university continues to implement strategies to improve the competitive profile at both the educational and clinical enterprises,

the ongoing student and patient demand headwinds will continue to strain revenue growth. Favorably, good budget discipline will help maintain fiscal balance and stable liquidity, even as federal pandemic aid ends and expense pressures materialize.

Summary and Conclusions:

Despite the challenges of declining enrollment, the University is in good financial condition and for the most part, its financial condition has been stable over the last 16 years. The University has adequate reserves, and it has solid cash flows. Most universities in Ohio are facing declining enrollments and the challenge for all of them is how to expand the base from which enrollments are drawn, because the number of traditional college age students 18-24 years old is declining.

It appears that the University has been dealing with declining enrollment largely by reducing the size of the faculty. At the same time, it seems to have left intercollegiate athletics untouched and appears to have expanded the hiring of administrators. This suggests that the priorities of the institution are misaligned with the central mission of the institution, teaching students and engaging in research and other scholarly activity.

Given the political and demographic realities, what can institutions do to control costs and recruit and retain students? Most universities seem to rely on gimmicks or hiring more administrators to “manage enrollment.” It certainly seems that this is what is happening at the University of Toledo considering the growing number of managers.

However, it is important to remember that faculty are the reason why students come to study at universities and that faculty working conditions are student’s learning conditions. With fewer faculty it will be harder to offer the courses that students need to graduate. Hiring more administrators and relying on gimmicks will not attract and retain students. What is needed is for the University to focus on its core mission, teaching students and engaging research and other scholarly activity. This means taking a hard look at administrative bloat and making cuts in places that are not central to the University’s primary mission.