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An Examination of Western Michigan University's
Financial Statements

Jordan Farrel

Western Michigan University

Abstract

In the attempt to fulfill the university's mission, the leaders must constantly balance each decision and its effect on the various stakeholders at the university. Students, faculty, and outside enterprises all want what is best for themselves, and sometimes those wants can clash. In order to ensure that the university is allocating its resources in a way that is beneficial to stakeholders collectively and focuses on the long-term, financial analysis can be done on the university's annual financial reports. The financial reports for universities experienced massive changes in the early to late 1990s as the Governmental Accounting Standards Board (GASB) decided how to implement rules for public universities and colleges. The financial reports contain valuable information that can give the reader an idea as to what the university's financial position looks like, what kind of revenues and expenses are incurred, and the inflows and outflows of cash. A Composite Financial Index (CFI) can then be calculated using the information in the financial reports. After calculating the CFI for Western Michigan University, it was found that the university may be under financial stress. In addition to what appears to be a declining financial performance, WMU is experiencing average to below-average performance in terms of enrollment, retention, and graduation. Considering both financial and non-financial factors, it may be in WMU's best interest to work towards re-engineering the institution. With the construction of the new South Neighborhood and student center, along with a new budget model that is planned to be implemented soon, WMU does look like it is taking action that may positively influence their CFI in the coming years.

Introduction

When thinking about the university experience, what comes to mind? Some may think about welcome week, auditoriums filled with hundreds of students, or people stuffing their faces with food at the nearest dining hall. Others may think about events they are planning for their registered student organizations, how to better engage their students, or what capital projects the university should undertake in the upcoming years. Each individual's experience is unique and yet interconnected as they all relate directly or indirectly to the university's mission. In Western Michigan University's case, that mission is:

a learner-centered, research university, building intellectual inquiry and discovery into undergraduate, graduate, and professional programs in a way that fosters knowledge and innovation, and transforms wisdom into action. As a public university, WMU provides leadership in teaching, research, learning, and service, and is committed to enhancing the future of our global citizenry. (Western Michigan University, 2016)

WMU acquires and generates resources to complete objectives with the ultimate goal of fulfilling its mission. These objectives include things like "hiring and retention of a distinguished faculty and staff", maximizing "student retention and degree completion", and creating a "student living-learning environment [that] enhances learning, personal development, and engagement in campus communities" (Western Michigan University, 2016).

In these few objectives alone, various stakeholders can already be identified. The first stakeholder is the student. In order to maximize student retention and degree completion as well as create a student-centered environment, resources have to be put towards appealing to the modern student. From the academic perspective, this may involve offering scholarships, creating new degree programs, and upgrading technology to provide better hardware and software. From

the social perspective, this may involve building new facilities, dorms, and funding even more extracurricular activities. This is in part due to the constantly shifting perception of what college is about. While there may be a significant portion of students going to learn, the large group of students that value the social aspects of the college experience more cannot simply be ignored. Brigsby (as cited in Arum & Roksa, 2011) noted that most of the students in her study claimed, “the important part of college is getting the degree in the end and the fun they have along the way, the friends they make, and the things they learn about themselves in peer relationships.” These social experiences can be enhanced with the new facilities and a bigger emphasis on extracurriculars.

At the same time, building these new facilities means opportunities for construction and logistical companies to earn money. Consider WMU’s Valley Dining Center which opened in Fall 2016. A tremendous amount of planning, design, and construction was required to build the \$33.4 million facility. Once built, recurring expenses like food, wages, and electricity are needed. This single building provides additional revenue streams that go well beyond WMU.

Finally, universities have to compete for faculty members. This can be accomplished either through funding specific programs or research as well as offering competitive salaries, retirement funds, and other post-employment benefits.

Depending on the circumstances, it may be tempting for the university to prioritize one stakeholder over another. How can stakeholders ensure that the university is using their resources in a way to maximize benefits in a healthy and sustainable way over the long term? A great way is to evaluate the university’s financial statements. Financial statements can be used on their own and in addition to non-financial metrics to get a pulse on the institution’s overall health.

Overview of Public University Financial Statements

Before navigating the financial statements of Western Michigan University, it is important to understand what they are, why they exist, who decides what needs to be reported, and the importance of why the rules are always changing.

Components of the Financial Statements

Financial statements are a collection of summary-level reports about an organization's financial results, financial position, and cash flows (Bragg, 2018). They are most commonly published as annual reports and are required for public entities. For a university engaged in business-type activities like WMU, three financial statements are required (Governmental Accounting Standards Board, 1999, p. 54-55). The first financial statement is the Statement of Net Position. This is similar to a balance sheet created by a company. It provides information about the entity's current and long-term resources, debt obligations, and deferred inflows and outflows of resources. According to GASB standards, the Statement of Net Position is separated into three components. The first component is net investment in capital assets. This will include the net capital asset balance minus any other balance or debt related to the capital assets. The second component is the restricted portion of net position, which includes the resources that have some type of constraint as to how they can be used. The third component is the unrestricted portion of net position, which essentially includes the resources not found in the other two components. This financial statement provides a picture of the university at a point in time and is extremely useful for assessing areas like liquidity, ability to pay debt, and needs for external financing.

The second financial statement is the Statement of Revenues, Expenses, and Changes in Net Position. This financial statement provides information about how the entity operates over a period of time. Operating revenues and expenses are the activities that the entity undergo in exchange for some type of good or service and are usually part of its ordinary business operations. For example, WMU regularly provides education services to students in exchange for collecting tuition revenue. Nonoperating revenues and expenses are activities that are classified as nonexchange transactions. For example, if a donor decides to gift WMU money for nothing in return, that would be included in the nonoperating revenues section. It is important to know that recording revenues and expenses is not the same thing as collecting cash. Regardless of when the entity receives or pays cash, they must keep track of the monetary value of doing business for that year. The actual amounts of cash disbursed and received are reported in the next financial statement, which is the Statement of Cash Flows.

These Statements of Cash Flows contain information on how the entity spent and received cash over the year. Under GASB reporting standards, the Statement of Cash Flows is classified into four (4) sections and must be prepared using the direct method. The first section reports cash flows from operating activities. This involves recording cash spent or received for exchanging goods or services from ordinary business operations. The second section reports cash flows from noncapital financing activities. This section records cash received and paid out for purposes other than capital assets, which are significant pieces of property like buildings. The third section reports cash flows from capital and related financing activities. This section *does* record the cash received or spent for activities related to capital assets. For example, cash payments made to the construction companies for working on the Valley Dining Center would be

included in this category. The final section is cash flows from investing activities. This section records the cash disbursed and received from the institution making investments elsewhere.

After creating these three financial statements, management of the university creates a narrative titled “Management’s Discussion and Analysis (MD&A)”. Management conducts their own analysis of the financial report and summarizes their findings. The annual report must also include different disclosure notes and required supplementary information. This can include information such as pension fund progress and more specific details on capital assets.

GASB’s Implementation of Rules for Colleges and Universities

For governmental entities like WMU, the Governmental Accounting Standards Board (GASB) establishes the accounting and reporting standards for the financial statements. “GASB develops and issues accounting standards through a transparent and inclusive process intended to promote financial reporting that provides useful information to taxpayers, public officials, investors, and others who use financial reports”(About the GASB, n.d.). For public universities in particular, this process goes back to the early 1990s. GASB acknowledged that there had not been any sort of specific structure for governmental colleges. At the time, the colleges were recommended to use one of two financial reporting models. However, according to Statement No. 15 made by GASB, some colleges were not following either model. After learning about this, GASB made it mandatory that governmental colleges choose one of the two models and follow them when creating financial reports (Governmental Accounting Standards Board, 1991, p. 1). This mandatory rule is an early instance of some structure forming around governmental colleges while GASB figured out a more comprehensive guide.

A few years later, GASB made an amendment to Statement No. 15, which created some more structure for public colleges. This amendment, made in Statement No. 19, had two main focus points: Pell grants and risk financing activities. Pell grants help subsidize education costs for students with financial need and risk financing deals with how an entity plans to cover losses. The amendment addressed how these activities needed to be classified for a few reasons. Pell grants needed to be addressed because the two reporting models interpreted them differently. Risk financing activities needed to be addressed because one reporting model had specific rules, but the other model did not (Governmental Accounting Standards Board, 1993).

At this point, GASB was still conducting research to find a permanent set of standards for public colleges but made changes to high impact areas in the meantime. GASB was slowly approaching a solid structure of rules, but it was not until 1999 when GASB finished their research. Statement No. 35 issued by GASB describes the complex process that the researchers went through when determining what model and which set of rules should be used by public colleges. Statement No. 35 goes into great detail on reports done to determine user needs and previous reporting practices. Researchers collaborated with the public, held public hearings, surveys, and comments to try and get the most comprehensive view on the subject as possible (Governmental Accounting Standards Board, 1999).

Various methods were considered through the process. One method was to require colleges to report on an entity-wide level and to report by fund group. After consideration, they thought this method would be too confusing for users to understand. In the end, GASB decided to just include public colleges into Statement No. 34 which has the rules for state and local governments. It was a long road to get here, but public colleges are now all generally under a single set of standards. With the creation of Statement No. 35, Statement No. 15 and 19

described earlier are essentially obsolete. While those rules may not be relevant now, it is important to see the evolution of the changing standards.

By including public colleges into the rules for state and local governments, the colleges now have a general framework to work within. This allows GASB to focus on tweaking minor differences between public colleges rather than having to start from scratch and make rules as they go. Therefore, while there is a general framework, public colleges now have certain guidelines based on how they classify. Public colleges are now classified as one of three ways: a special purpose government engaged in business type activities, government activities, or both business and government activities. It is critical that public colleges are categorized differently and have some slight differences in rules because some of them have different powers compared to others. For example, community colleges may have taxing authority while a four-year university does not. This has serious implications when it comes to recording revenue and different rules are needed as a result.

To summarize, GASB's rulemaking history is full of complexities, especially when it comes to public colleges. Two mildly developed reporting models were considered the standard and public colleges were suggested to choose one. GASB eventually made it mandatory for public colleges to choose one of the models and added rules to some specific components of those rules while they conducted research to create a more comprehensive model. After much deliberation, GASB decided to just include public colleges into the reporting standards for state and local governments. This gave public colleges a general guideline to follow while allowing GASB to deal with specifics by categorizing public colleges into one of three categories.

Reasons for Having Financial Statements

Why did this process take so long? Why are there constant changes, different rules and decisions to be made depending on if it is company, university, or other type of entity? The first main point sounds pretty obvious, but it is to ensure accountability. “Accountability requires governments to justify the raising and use of public resources, such as taxes. Government financial reports can provide citizens with the information needed to help with the public debate about the sources and uses of public sources” (Reck, Lowensohn, & Neely, 2019). Sometimes people find a new way to take advantage of the reporting process to benefit them in a way they should not be able to. Sometimes the nature of business simply changes over time. Because of these reasons, the rules must be able to adapt to those changes to ensure accountability.

The rules are also important to ensure comparability and consistency. “Comparability helps users see similarities and differences between events and conditions” and “consistency of accounting practices over time permits valid comparison *among different reporting periods*” (Spiceland, Nelson, & Thomas, 2018). The standards give stakeholders the power to see how one public university stacks up to another. Enforcing the standards year after year also gives stakeholders the ability to see trends over time. If a public university was able to drastically change rules on how they report every year, previous annual reports would almost be worthless. Stakeholders would not be able to see if the public university is making improvements or not.

Certain rules also need to be implemented to account for the differences between private enterprises and governmental entities. One difference involves the potential for longevity. While enterprises risk going out of business if they cannot make a profit, “governments rarely need to consider liquidation because of their ongoing power to tax and the ongoing need for public services” (Why Governmental Accounting, n.d.). The rules must be tailored to take this long-

term life cycle into consideration. Certain situations that would be considered a business expense for the year are now held on and distributed over a designated time period to counteract short-term changes.

The overall relationship with stakeholders is different as well:

Users of governmental financial reports may wish to evaluate the combination of taxes, user fees, grants, and borrowing that financed current services. In contrast, business enterprise financial reports show changes in equity of the enterprise during the current period because business enterprises focus primarily on increasing shareholders' equity. (Why Governmental Accounting, n.d.)

Individuals may be funding government entities like universities or community colleges without directly benefiting from the services. This is in great contrast to equity holders of a business who can start or end their relationship with the business at any moment by trading their equity. As a result, the rules need to be able to best benefit the users based on their different relationship with the entity.

Finally, the rules need to be different because the needs of the end users are different, and the nature of business is different. The organizational purpose is different compared to a business enterprise. "The predominant performance measures of business enterprises—net income and earnings per share—generally have little or no meaning in the governmental environment. Instead, governments focus on providing services and goods to constituents efficiently, effectively, and sustainably" (Why Governmental Accounting, n.d.). This means that rules have to be tailored to the overall objective of the government entity and provide information that is meaningful to the end user.

A great deal of information has been covered up to this point. The Governmental Accounting Standards Board spent many years evaluating and changing the reporting standards

associated with public universities. Various financial statements that a public university like WMU has to provide were introduced, and the components of each financial statement were briefly described. Finally, the argument was made for having standardized financial statements and why having different rules is actually beneficial for the end user. With all of this in mind, we can now start examining WMU's financial statements, conduct ratio analysis, and make some general comments on the information gathered.

Financial Ratio Analysis

Participants

The object of this analysis is Western Michigan University. Secondary data was collected from Western Michigan University's annual financial reports from 2014 to 2018. Other data was collected from various sources, including WMU Strategic Plan 2020 Metrics and publicly available enrollment data.

Design and Data Analysis

After the secondary data was collected, quantitative methods were used to draw conclusions. Quantitative assessment was made by using Composite Financial Index (CFI) calculations and by looking at trends over time.

Composite Financial Index (CFI)

The Composite Financial Index is a financial indicator that was created to provide insight into the overall financial health of colleges and universities. This single indicator is the combination of four financial ratios: the Primary Reserve Ratio, Viability Ratio, Return on Net Assets Ratio, and Net Operating Revenues Ratio. Each ratio serves to answer a different question about the university's financial health. The Primary Reserve Ratio determines if resources are

sufficient and flexible enough to support the mission. The Viability Ratio determines if debt resources are being managed strategically to advance the mission. The Return on Net Assets Ratio determines if asset performance and management support the strategic direction. Finally, the Net Operating Revenues Ratio determines if operating results indicate that the institution is living within available resources (Tahey, Salluzzo, Prager, Mezzina, & Cowen, 2010).

According to Tahey et al. (2010):

These ratios compare the institution's operating commitments (Primary Reserve Ratio) and its outstanding long-term obligations (Viability Ratio) against its expendable wealth. They measure the ability of the institution on a short-term basis to live within its means (Net Operating Revenues Ratio) and the ability of the institution to generate overall return against all net resources (Return on Net Assets Ratio). The core ratios were selected because they represent measurement of key components in relation to institutional risk that must be consistently addressed.

Once each individual ratio is calculated, they are converted into strength factors by dividing the ratio by a ratio scale. This strength factor is multiplied by a weighting factor, and then the new scores for each of the four ratios are added together to result in the total CFI. The CFI will range from -4 to 10. A CFI score of 3 or higher indicates relatively strong financial health. For public institutions with long-term debt, the ratio scale and weighting factors are the following:

Ratio	Ratio Scale	Weighting Factor
Primary Reserve Ratio	.133x	35%
Net Operating Revenues Ratio	1.3%	10%
Return on Net Assets Ratio	2%	20%
Viability Ratio	.417x	35%

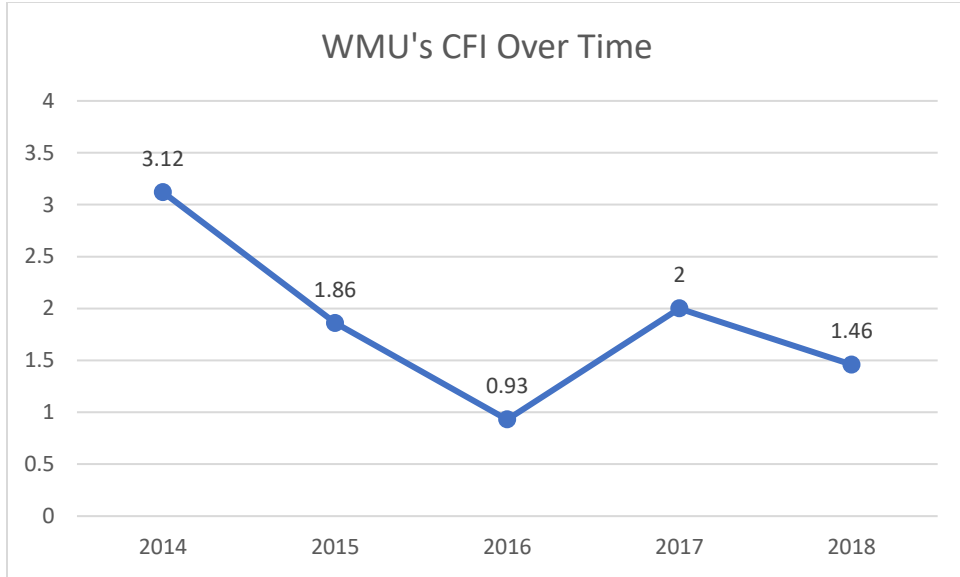
Results

The calculations for individual ratios from 2014 to 2018 are shown in Appendix A. The final numbers are shown below:

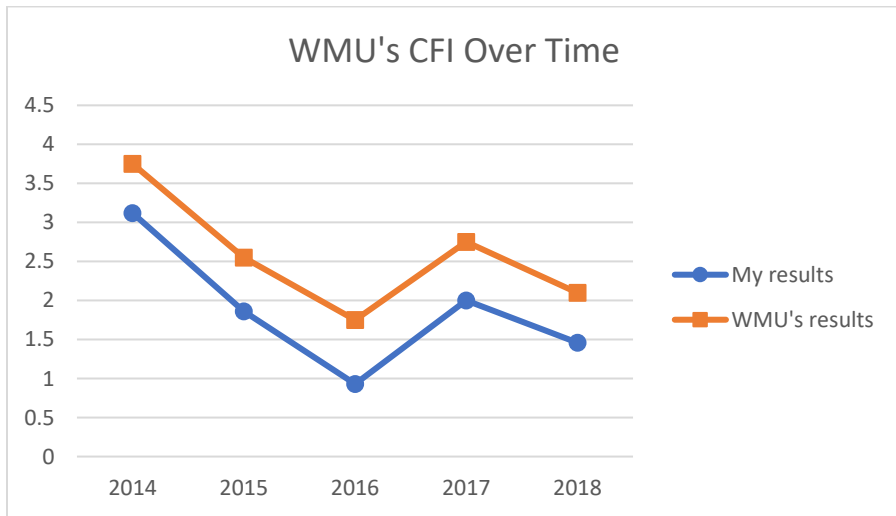
Ratio Calculations for WMU from 2014-2018					
Ratio Name	2014	2015	2016	2017	2018
Primary Reserve	0.44x	0.35x	0.27x	0.31x	0.14x
Net Operating Revenues	6.93%	1.62%	0.97%	4.77%	5.73%
Return on Net Assets	9.81%	4.66%	-1.52%	4.70%	4.97%
Viability	0.54x	0.40x	0.35x	0.42x	0.19x

After applying the appropriate ratio scales and weighting factors, a trendline of WMU's CFI over the time period was created. The CFI calculation for 2018 is also shown below as an example.

CFI Calculation for WMU – 2018					
Ratio Name	Ratio Value	Ratio Scale	Strength Factor	Weighting Factor	Score
Primary Reserve	0.14	0.133	1.04	35%	0.36
Net Operating Revenues	5.73%	1.3%	4.41	10%	0.44
Return on Net Assets	4.97%	2%	2.49	20%	0.50
Viability	0.19	0.417	0.46	35%	0.16
Total CFI					1.46



After this analysis was conducted, it was discovered that WMU displays their CFI (*Dashboard metrics, n.d.*). A comparison of the results is shown by the graph below.



I believe the reason for the discrepancy is due to a different value used for the “net investment in plant” in the Primary Reserve Ratio and Viability Ratio as well as a different value used for the “institution and component unit plant-related debt” in the Viability ratio. Even with the discrepancy, the trend line is similar, and the conclusion will essentially be the same. WMU’s financial dashboard offers some explanation as to what may have caused the dip in 2015 and 2018. During 2015, the university implemented a new governmental standard which “requires that governmental entities providing defined benefits to their employees recognize their unfunded pension benefit obligation as a liability for the first time” (*Dashboard metrics*, n.d.). During 2018, the university implemented another new governmental standard that “requires that governmental entities providing other postemployment benefits (OPEB) plans to recognize their unfunded OPEB obligation as a liability for the first time” (*Dashboard metrics*, n.d.). Both of these changes involve the reporting of liabilities, which will in turn impact the Primary Reserve Ratio and the Viability Ratio. This can be seen by looking at the changes in those individual ratios from 2015 to 2016 and 2017 to 2018. Also considering that these two ratios have the heaviest weight factors, any changes influencing these ratios will have a greater impact on the CFI.

Also, in 2016, WMU experienced abnormally large nonoperating expenses. WMU showed a \$58 million “other expense” in 2016 compared to \$21 million in 2015. The explanation for this is that gift transfers were made to WMed that year. If those gift transfers are removed from the CFI calculations for 2016, the adjusted CFI would be around 1.40, significantly smoothing out the dip, but still showing a downward trend.

Tahey et al. (2010) created a scoring chart and the implications for the institution based on its CFI score. For example, a CFI score of -4 to -2 is an indicator to consider whether

financial exigency is appropriate and a CFI score of 7.5 to 10 is an indicator to deploy resources to achieve a robust mission. Both the calculated CFI and the CFI from WMU's dashboard metrics consistently fall within the 1 to 3 range, therefore indicating that WMU should currently be in a "re-engineer the institution" process, which could be interpreted as fundamentally changing how the institution operates in key areas. However, Tahey et al. (2010) mention that "the CFI *only* measures the financial component of an institution's well-being. It must be analyzed in context with other associated activities and plans to achieve an assessment of the overall health, not just financial health, of the institution...." While WMU's CFI gives some financial insight, it should still be examined along with non-financial indicators before any meaningful conclusion can be made.

Non-Financial Metrics Critical to WMU's Mission

Enrollment. A compilation of WMU's enrollment data is shown in Appendix B. Virtually every group is showing a decrease except for non-resident enrollment. Total Fall enrollment is down from 24,294 in 2013 to 22,562 in 2018, a decrease of 7.13%. The number of residents enrolled has been decreasing year over year from 21,356 in 2013 to 18,552 in 2018, a decrease of 13.13%. However, non-resident enrollment has seen a relatively large increase from 2,938 in 2013 to 4,010 in 2018, an increase of 36.49%. The state of Michigan's overall undergraduate enrollment trend has been steady for the last 5 years (MI School Data, n.d.), but high school graduation rates are expected to decline over the next 10-15 years (State Profiles, n.d.). President Montgomery is approaching this enrollment issue in two ways. His first approach is to upgrade "Western's 'curb appeal' by replacing outdated residence halls" (Miller, 2017). The other approach is to attract more out of state students. Associate Provost Terrance Curran says "WMU's goal is to get that figure to 30 percent" and in 2017, WMU "slashed out-of-state tuition

from over \$27,000 a year to under \$15,000” (Miller, 2017). Despite undergraduate enrollment remaining relatively steady at the state level, WMU has been seeing themselves lose that part of the market. In addition, high school graduation rates are expected to decrease, which will effectively shrink that market. As a response, WMU is starting to focus on capturing more of the non-resident market.

Retention. WMU reported a second-year retention rate of 78.1% (Western Michigan University, 2018b). This is higher than the national average of 71.2% at four-year public institutions (NSC Research Center, 2018) but lower than the average rate of 79.7% at peer institutions. However, it can be difficult to determine what to do about retention rates. Keith Hearit, assistant to the provost, said “other factors make retention rates and comparisons complex, such as the type of student universities accept. The University of Michigan, for example, sees a 90 percent second-year retention rate. When students are coming in with high GPAs and ACT scores over 30, ‘it’s no wonder they persist and do so well’”. Hearit also mentions that “WMU is about ‘high academic expectations but also access’” (Miller, 2018). It is ultimately going to come down to what WMU wants its identity to be. WMU may have to trade off higher retention rate for providing access to a broader range of students, and that is not necessarily a bad thing as long as WMU is providing the students the resources they need to have the best chance of being successful..

Graduation. Graduation rates are based on two factors. One factor is that it only includes students that are considered First-Time in Any College (FTIAC). This means that students that transfer to WMU will not be included in the graduation rate statistic. The other factor is that the graduation rate is based on the percent that graduate in 6 years, not 4. A table showing WMU’s graduation rates by cohort is included in Appendix C.

As President Montgomery puts it, “A six-year graduation rate of 54 percent is not good enough.” (Miller, 2018). That 54% ended up decreasing to 50.8% for the 2011 cohort. Students transferring into WMU, students transferring out of WMU, or student taking longer than 6 years to graduate could all explain the lower graduation rate. Depending on which category represents the biggest or most pressing issue, resources can be allocated to address that issue.

Other Comments on the Financial Statements

Net tuition and fee revenue has continued to grow year after year. Some of it may be that the growth of non-resident students paying a smaller tuition is greater than the previously lower quantity of non-resident students paying the higher tuition. It is also because the board of trustees continues to raise rates on resident undergraduates every year. The board raised rates by 3.75% in 2014, 3.19% in 2015, 3.22% in 2016, 4.19% in 2017, 3.91% in 2018, and is expected to raise rates by 3.88% in 2019. As we have seen, residents currently make up a majority of the student population. It is also interesting to note that the highest inflation rate since 2014 was 2.1% in 2016 and 2017, meaning that it has been getting more expensive for residents to attend WMU.

Operating revenue by source has been consistent over the years. Tuition and fees tend to account for 60% of operating revenues, while auxiliary activities stay around 22%, other sources around 11%, and grants/contracts around 7%. The big 3 operating expenses include instruction, auxiliary activities, and academic support.

In the statement of net position, WMU’s main assets are capital assets, and more specifically, the buildings. In 2018, buildings had an ending balance, net accumulated depreciation of \$661,724,456. This is nearly 85% of the net capital assets reported on the statement of net position. The current portion of capital lease receivable skyrocketed from

\$1,580,000 in 2017 to \$64,280,000 in 2018. The MD&A states “the WMed capital lease receivable payments are tied to the direct purchase note payable which comes due in December 2018. Therefore, the entire capital lease receivable has been classified as current” (Western Michigan University, 2018a).

The statement of net position also shows a large increase in the cash account, which grew from \$74,964,804 in 2017 to \$178,908,539. The report states that “the increase in cash is a result of the university entering into an agency relationship”(Western Michigan University, 2018a). This would also explain the large increase in the liability – Due to depositors. It looks like this cash was placed into money market funds since in the cash and investments section of the notes, the fair value of money market funds increased from \$76 million in 2017 to \$179 million in 2018.

The financial statements also show that WMU has maintained or upgraded its credit rating among two credit agencies. “S&P Global Ratings affirmed the University’s A/Stable outlook... while Moody’s Investor Services upgraded the University’s rating to Aa3/Stable”(Western Michigan University, 2018a).

Limitations

This study comes with various limitations. One limitation is that the CFI should not be used to compare institutions. Tahey et al. (2010) “stress that the CFI should not be calculated for peer group comparison purposes due to the flexibility in calculating the component ratios, as well as the absence of readily available information needed for certain ratios”. This makes it difficult to determine if WMU is individually feeling financial pressure or if WMU’s peer institutions are feeling financial pressures as well. Another limitation is that only the publicly

available information from WMU's financial statements was used. While the public information is comprehensive, internal data from WMU and its component units could provide additional information regarding the financial well-being of the institution. Finally, only a few non-financial factors were examined. Enrollment, retention, and graduation are all important metrics to examine, but there may be other factors that are more important to the university's mission or have a higher impact on the university's financial health. Mohanlingam and Linh (2013) mention this in their study of Australian universities using the CFI, "it will be important... to explore if non metric factors (such as quality of teaching and researching, ambience, reputation, management styles, organization cultures) have an influence on their financial health".

Discussion

After gathering all of this information, the implication of "re-engineering" the institution still seems to hold steady. WMU's CFI is on a downward trend into even deeper financial stress territory. Enrollment levels of resident students, the majority of WMU's student structure, is declining despite a steady enrollment level in the state of Michigan. Graduation rates are at a below-average level, implying that students are either transferring to WMU, transferring to other schools, or taking longer than 6 years. Considering that tuition and fees remains one of the largest sources of revenue for WMU, maintaining and growing a high-quality student body is going to be critical to WMU's future success.

WMU is currently implementing some rather large changes that may start to send the CFI into an upward direction. As mentioned earlier, non-resident tuition has been drastically reduced to make WMU more competitive. This will work if the marketing is effective and the higher quantity of students makes up for the lower cost. WMU is also undergoing major construction of the new South Neighborhood housing and student center. This can end up being a great revenue

source and it shows that WMU is trying to adapt to a growing student population that is putting more emphasis on the social experience. However, this is only going to work if the students' perceived value of the new living space and other amenities WMU plans on providing is greater than the cost they will pay. Considering the level of detail, planning, and community engagement described in the South Neighborhood Sub-Campus Master Plan, it looks like WMU is trying its best to create something the community wants, and not something the leaders *think* the community wants. Finally, WMU's new budget model may be powerful enough to influence the CFI. The new, decentralized model will have each college control their own budget and be accountable for their expenses, including salaries and facilities. This should also hopefully incentivize new revenue generation by returning revenue to the college/center that generates it. This collective accountability on revenues and expenses, which should allow for more efficient uses of resources, will impact every ratio of the CFI and hopefully improve it over time. I expect the CFI to remain steady or slightly decrease for the next 2-3 years as resources are used to complete construction and implement the new budget model. After that, I expect the CFI to slowly increase.

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Appendix A

		Primary Reserve Ratio				
		2014	2015	2016	2017	2018
Numerator - Expendable Net Assets						
+ Institution unrestricted net assets	(18,028,112)	(94,596,058)	(119,841,090)	(114,227,142)	(235,298,561)	
+ Institution expendable restricted net assets	2,327,580	2,930,053	3,212,308	1,947,608	5,476,100	
+ CU unrestricted net assets	212,858,120	219,736,444	255,007,565	282,700,571	295,688,822	
Western Michigan University Foundation	193,995,562	205,060,757	227,354,556	255,603,374	270,220,576	
Western Michigan University Homer Stryker M.D. School of Medicine	6,413,831	4,134,883	18,317,978	19,286,425	23,903,300	
Western Michigan University Research Foundation	10,808,222	8,924,032	7,883,925	6,242,936	-	
Paper Technology Foundation, Inc.	1,640,505	1,616,772	1,451,106	1,567,836	1,564,946	
+ CU temporarily restricted net assets	168,969,528	187,928,694	155,795,774	147,314,150	132,543,324	
Western Michigan University Foundation	147,897,921	163,691,262	133,033,905	125,285,617	110,650,145	
Western Michigan University Homer Stryker M.D. School of Medicine	18,064,960	21,516,131	20,447,509	19,430,196	19,334,199	
Western Michigan University Research Foundation	-	-	-	-	-	
Paper Technology Foundation, Inc.	3,006,647	2,721,301	2,314,360	2,598,337	2,558,980	
- CU net investment in plant	96,035,595	97,527,726	111,130,361	109,633,484	106,979,144	
Western Michigan University Foundation	2,656,569	2,477,953	4,028,363	2,262,967	3,020,897	
Western Michigan University Homer Stryker M.D. School of Medicine	93,379,026	95,049,773	107,101,998	107,370,517	103,958,247	
Western Michigan University Research Foundation	-	-	-	-	-	
Paper Technology Foundation, Inc.	-	-	-	-	-	
Numerator	270,091,521	218,471,407	183,044,196	208,101,703	91,430,541	
Denominator - Total Expenses						
+ Institution Operating Expenses	496,262,909	502,137,681	512,884,836	537,820,870	525,157,603	
+ Institution non-operating expenses	59,313,284	40,199,562	79,211,987	39,163,376	32,868,795	
+ CU total expenses	62,346,537	74,283,966	82,921,302	97,860,327	103,339,078	
Western Michigan University Foundation	3,780,056	5,120,330	5,174,094	5,056,987	5,953,880	
Western Michigan University Homer Stryker M.D. School of Medicine	55,762,330	66,756,243	76,094,408	90,170,095	96,167,533	
Western Michigan University Research Foundation	2,507,082	2,146,994	1,337,684	2,366,523	895,105	
Paper Technology Foundation, Inc.	297,069	260,399	315,116	266,722	322,560	
Denominator	617,922,730	616,621,209	675,018,125	674,844,573	661,365,476	
Value of Ratio	0.44x	0.35x	0.27x	0.31x	0.14x	

Net Operating Revenues Ratio						
	2014	2015	2016	2017	2018	
Numerator - Net operating income						
+ Institution operating income (loss)	(120,566,883)	(119,785,070)	(127,773,923)	(141,759,479)	(120,805,215)	
+ Institution net nonoperating revenues	127,143,642	123,991,206	99,330,870	150,078,237	150,110,000	
+ CU change in unrestricted net assets	44,865,965	6,878,324	35,271,121	27,693,006	12,988,251	
Western Michigan University Foundation	41,967,610	11,065,195	22,293,799	28,248,818	14,617,202	
Western Michigan University Homer Stryker M.D. School of Medicine	1,222,225	(2,278,948)	14,183,095	968,447	4,616,875	
Western Michigan University Research Foundation	1,562,253	(1,884,190)	(1,040,107)	(1,640,989)	(6,242,936)	
Paper Technology Foundation, Inc.	113,877	(23,733)	(165,666)	116,730	(2,890)	
Numerator	51,442,724	11,084,460	6,828,068	36,011,764	42,293,036	
Denominator - Total operating revenues						
+ institution operating revenues	375,696,026	382,352,611	385,110,913	396,061,391	404,352,388	
+ institution nonoperating revenues	186,456,926	164,190,768	178,542,857	189,241,613	182,978,795	
+ CU total unrestricted revenues	180,380,469	139,590,913	139,285,179	170,397,216	150,875,180	
Western Michigan University Foundation	100,712,320	70,590,455	53,680,508	77,208,247	45,127,853	
Western Michigan University Homer Stryker M.D. School of Medicine	74,449,546	68,034,439	85,061,134	91,431,941	104,077,639	
Western Michigan University Research Foundation	4,069,335	262,804	297,577	725,534	993,712	
Paper Technology Foundation, Inc.	1,149,268	703,215	245,960	1,031,494	675,976	
Denominator	742,533,421	686,134,292	702,938,949	755,700,220	738,206,363	
Value of Ratio	6.93%	1.62%	0.97%	4.77%	5.73%	

Return on Net Assets Ratio						
	2014	2015	2016	2017	2018	
Numerator - Change in net assets						
+ Institution change in net assets	14,160,739	6,725,382	(18,820,593)	13,205,492	30,642,762	
+ CU change in net assets	63,134,156	29,876,932	6,340,509	24,831,857	4,134,510	
Western Michigan University Foundation	42,369,575	30,729,562	(5,522,539)	24,779,722	2,406,216	
Western Michigan University Homer Stryker M.D. School of Medicine	18,687,216	1,278,196	13,295,503	1,261,846	7,910,106	
Western Michigan University Research Foundation	1,562,253	(1,884,190)	(1,040,107)	(1,640,989)	(6,242,936)	
Paper Technology Foundation, Inc.	515,112	(246,636)	(392,348)	431,278	61,124	
Numerator	77,294,895	36,602,314	(12,480,084)	38,037,349	34,777,272	
Denominator - Total net assets (Beg. Of year)						
+ Institution total net assets (beg. Of year)	397,331,404	331,898,213	338,623,595	319,803,002	185,103,988	
+ CU total net assets (beg. Of year)	390,373,694	453,507,850	483,384,782	489,725,291	514,557,148	
Western Michigan University Foundation	369,021,782	411,391,357	442,120,919	436,598,380	461,378,102	
Western Michigan University Homer Stryker M.D. School of Medicine	6,125,875	24,813,091	26,091,287	39,386,790	40,648,636	
Western Michigan University Research Foundation	9,245,969	10,808,222	8,924,032	7,883,925	6,242,936	
Paper Technology Foundation, Inc.	5,980,068	6,495,180	6,248,544	5,856,196	6,287,474	
Denominator	787,705,098	785,406,063	822,008,377	809,528,293	699,661,136	
Value of Ratio	9.81%	4.66%	-1.52%	4.70%	4.97%	

		Viability Ratio				
		2014	2015	2016	2017	2018
Numerator - Expendable Net Assets						
+ Institution unrestricted net assets	(18,028,112)	(94,596,058)	(119,841,090)	(114,227,142)	(235,298,561)	
+ Institution expendable restricted net assets	2,327,580	2,930,053	3,212,308	1,947,608	5,476,100	
+ CU unrestricted net assets	212,858,120	219,736,444	255,007,565	282,700,571	295,688,822	
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Western Michigan University Research Foundation	10,808,222	8,924,032	7,883,925	6,242,936	-	
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+ CU temporarily restricted net assets	168,969,528	187,928,694	155,795,774	147,314,150	132,543,324	
Western Michigan University Foundation	147,897,921	163,691,262	133,033,905	125,285,617	110,650,145	
Western Michigan University Homer Stryker M.D. School of Medicine	18,064,960	21,516,131	20,447,509	19,430,196	19,334,199	
Western Michigan University Research Foundation	-	-	-	-	-	
Paper Technology Foundation, Inc.	3,006,647	2,721,301	2,314,360	2,598,337	2,558,980	
- CU net investment in plant	96,035,595	97,527,726	111,130,361	109,633,484	106,979,144	
Western Michigan University Foundation	2,656,569	2,477,953	4,028,363	2,262,967	3,020,897	
Western Michigan University Homer Stryker M.D. School of Medicine	93,379,026	95,049,773	107,101,998	107,370,517	103,958,247	
Western Michigan University Research Foundation	-	-	-	-	-	
Paper Technology Foundation, Inc.	-	-	-	-	-	
Numerator	270,091,521	218,471,407	183,044,196	208,101,703	91,430,541	
Denominator - Total Plant-related debt						
+ Institution Total Plant-related debt	427,165,076	471,381,336	454,020,062	434,642,746	416,951,142	
+ CU Plant-related debt	68,950,000	68,950,000	67,415,000	65,860,000	64,280,000	
Western Michigan University Foundation	-	-	-	-	-	
Western Michigan University Homer Stryker M.D. School of Medicine	68,950,000	68,950,000	67,415,000	65,860,000	64,280,000	
Western Michigan University Research Foundation	-	-	-	-	-	
Paper Technology Foundation, Inc.	-	-	-	-	-	
Denominator	496,115,076	540,331,336	521,435,062	500,502,746	481,231,142	
Value of Ratio	0.54x	0.40x	0.35x	0.42x	0.19x	

Appendix B

All Campus, Unduplicated Enrollment for Fall									
Type	2013	2014	2015	2016	2017	2018	Trendline	% Change	
Undergraduates	19,198	18,889	18,567	18,313	17,936	17,760		-7.49%	
Graduates	5,096	5,025	4,989	4,939	4,958	4,802		-5.77%	
Total	24,294	23,914	23,556	23,252	22,894	22,562		-7.13%	
FPPP									
Full-time Undergraduates	15,879	15,713	15,416	15,048	15,063	14,983		-5.64%	
Part-time Undergraduates	3,319	3,176	3,151	3,265	2,873	2,777		-16.33%	
Full-time Graduates	3,061	3,079	3,063	3,002	3,039	2,840		-7.22%	
Part-time Graduates	2,035	1,946	1,926	1,937	1,919	1,962		-3.59%	
Residency									
Residents	21,356	20,800	20,406	20,111	19,507	18,552		-13.13%	
Non-Residents	2,938	3,114	3,150	3,141	3,387	4,010		36.49%	
Beginners, Transfers, Re-entries									
Beginning Undergraduates	3,361	3,089	3,091	3,026	3,179	3,025		-10.00%	
Beginning Graduates	1,456	1,390	1,413	1,384	1,407	1,233		-15.32%	
New Transfer Undergraduates	1,730	1,832	1,768	1,712	1,713	1,606		-7.17%	
Re-entries Undergraduates	349	374	301	338	265	295		-15.47%	
Re-entries Graduates	127	112	101	80	84	59		-53.54%	

Data was collected from

<https://wmich.edu/institutionalresearch/reporting/reports.php?type=enrollment>

Appendix C

Retention and Graduation Rates for First time, Full Time, Baccalaureate Degree-Seeking Freshman												
Cohort Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Trendline	
Cohort Type	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total		
Head Count	3,475	3,806	3,163	3,354	3,132	2,989	3,158	2,970	2,953	2,891		
Average ACT	21.9	22	22	22.1	21.9	21.9	22.3	22.3	22.4	22.2		
% Cont to 2nd Yr.	73.4%	72.4%	76.0%	74.4%	73.1%	73.7%	77.5%	79.0%	78.6%	78.1%		
% Cont to 3rd Yr.	64.6%	65.1%	67.0%	65.3%	63.3%	64.8%	69.0%	69.8%	68.9%			
% Grad in 3 Yrs.	0.8%	0.7%	0.9%	0.9%	1.1%	0.7%	0.9%	0.8%				
% Cont to 4th Yr.	61.7%	61.9%	62.8%	61.8%	59.8%	60.4%	64.9%	64.5%				
% Grad in 4 Yrs.	24.2%	23.1%	22.7%	21.5%	21.5%	23.2%	26.8%					
% Cont to 5th Yr.	36.3%	35.9%	38.6%	37.2%	35.9%	35.0%	35.6%					
% Grad in 5 Yrs.	47.0%	46.1%	46.3%	45.2%	44.5%	45.8%						
% Cont to 6th Yr.	11.3%	12.1%	12.6%	12.0%	10.7%	10.5%						
% Grad in 6 Yrs.	54.9%	54.0%	54.4%	52.7%	50.8%							
% Cont to 7th Yr.	4.0%	3.9%	4.9%	4.8%	4.1%							
% Grad in 7 Yrs.	57.6%	56.7%	57.8%	55.5%								
% Cont to 8th Yr.	1.6%	1.7%	1.9%	1.9%								
% Grad in 8 Yrs.	58.6%	57.6%	58.8%									
% Cont to 9th Yr.	1.0%	0.8%	1.3%									
% Grad in 9 Yrs.	59.2%	58.3%										
% Cont to 10th Yr.	0.9%	0.4%										
% Grad in 10 Yrs.	59.6%											
% Cont to 11th Yr.	0.7%											
% Grad in 11 Yrs.												

Data was collected from <https://wmich.edu/institutionalresearch/reporting/reports.php?type=retention>