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PREDICTORS OF FINANCIAL RESPONSIBILITY COMPOSITE SCORES AT CATHOLIC  
COLLEGES AND UNIVERSITIES

By

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Dissertation  
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for the degree of

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in Educational Leadership

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# PREDICTORS OF FINANCIAL RESPONSIBILITY COMPOSITE SCORES

## ABSTRACT

Agostinelli, Sara, Ed.D., Spring, 2020

Educational Leadership

Predictors of Financial Responsibility Composite Scores at Catholic Colleges and Universities

Chairperson: Dr. Frances L. O'Reilly

The purpose of this quantitative study was to understand the relationships of the demographic variables of religious order, program length, and geographic region interact with the score a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive statistics. The research study showed a statistically significant negative correlation between the institution's composite score on the financial responsibility test and student loan default rates using the Pearson correlation coefficient, with a small effect size. The research study also showed a statistically significant positive correlation between the institution's composite score on the financial responsibility test and enrollment using the Pearson correlation coefficient, with a small effect size. Data were collected from Federal Student Aid Department within the U.S. Education Department, Integrated Postsecondary Education Data System (IPEDS) from the National Center for Educational Statistics, and the Association of Catholic Colleges and Universities. Implications of this study allow for higher education leaders to further understand the economic factor of an institution's financial responsibility composite score as a potential influencer for students and their families in their college selection process as understood by Student Choice Theory in an increasingly competitive admissions market.

Keywords: Catholic higher education, financial responsibility composite score, Student Choice Theory, student loan default rates, enrollment

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## PREDICTORS OF FINANCIAL RESPONSIBILITY COMPOSITE SCORES

### **Dedication**

I dedicate this dissertation to Joel. Thank you for pushing me to begin my doctoral journey six years ago, and for encouraging and supporting me throughout the entire process. I would not have begun, let alone finished, without you cheering me on.

I would also like to dedicate this dissertation to my dogs-- Trigger, Auri, Salvador, and Piper, for all the time I cut playtime and walks short to do homework, read, and write. Your early morning snuggles on the couch as I furiously typed kept me motivated along the way. I promise a statistically significant increase in outdoor adventures.

## PREDICTORS OF FINANCIAL RESPONSIBILITY COMPOSITE SCORES

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## PREDICTORS OF FINANCIAL RESPONSIBILITY COMPOSITE SCORES

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## **Chapter One: Introduction to the Study**

American Catholic higher education dates back to 1789 with the founding of Georgetown College (now Georgetown University) in Maryland (Power, 1972; Rizzi, 2018). Since then, Catholic higher education has seen significant changes from its foundation to educate the poor and local communities to the transition to become coeducational, either by changes in admissions policies or mergers between single-sex institutions (Morey & Piderit, 2006; Power, 1972). With the passage of the Morrill Land Grant Act of 1862, Catholic higher education refocused institutional purpose of mission-driven work, and sought to distinguish themselves from among the growing number of public institutions (Morey & Piderit, 2006). In 1967, the Land O'Lakes Statement once again created a major transition by creating a focus on academic freedom and institutional autonomy between the academic programs and their respective founding religious orders (Rizzi, 2018). These changes affected both the student experience and also the funding and finances of institutions. Catholic institutions do not receive subsidies from their state governments as their public institution counterparts do (Drinan, 1968). Instead, Catholic education is reliant upon tuition and donations to support itself financially (Drinan, 1968; Morey & Piderit, 2006). Knowing that tuition revenue is tied to enrollment, it is critical for a Catholic institution to meet its enrollment needs to ensure their income covers their expenses (Morey & Piderit, 2006).

The National Student Clearinghouse reported that in Fall 2019, that semester was the eighth consecutive year that fall enrollments had declined across all higher education institutions, falling below 18 million students for the first time in the decade (2019). Given the competitiveness for students, it is critical higher education leaders are able to understand the financial motivators that influence college selection. Student Choice Theory tells us that

economic factors impact the decision of a high school student determining to pursue college after graduation, rather than entering the workforce (Hossler, Schmit, & Vesper, 1999; Manski & Wise, 1983; St. John & Asker, 2001). Further, it predicts which institution a student decides to attend for college (Hossler, Schmit, & Vesper, 1999; Manski & Wise, 1983). Economic Student Choice Theory models suggest that students use a cost-benefit analysis in their decision-making process, selecting the lowest-cost institution with the highest-quality education (Hossler, Schmit, & Vesper, 1999). Hossler, Schmit, and Vesper (1999) found that students and parents are well aware there are federal financial aid programs, and that the financial aid offer affects the college choice decision. This decision is based upon tuition and other college costs, and the financial aid package as students and their families are concerned about the rising cost of college (Hossler, Schmit, & Vesper, 1999; St. John & Asker, 2001). Knowing this, higher education leaders can predict and respond to student needs and concerns, making intentional decisions about financial aid awards and marketing financial factors to these perspective students in order to influence the students' college choice (St. John & Asker, 2001).

As the cost of higher education has risen, the means by which students and their families pay for college has also changed (Paulsen & Smart, 2001). While there appears to be universal concern over the rising cost and overall affordability of colleges and universities, the focus has been on cost of attendance and reliance upon student loans to fund higher education. The reliance on student loans has come about from changes at the federal level of higher education finance (Baum, Davis Bell, & Sturtevant, 2010; Hearn, 2001). The Higher Education Act of 1965 was designed to increase and improve need-based aid for higher education through Pell Grants, Supplemental Educational Opportunity Grants, and loans (Hearn, 2001). The access to need-based aid is critical, especially for low-income students, who are of special concern to

Catholic colleges and universities that were often founded on the principle of educating the poor within their communities (Rizzi, 2018). Merit based programs are designed to help the best and the brightest, but merit based aid is awarded disproportionately to students with the economic ability to attend college anyway, where need-based financial aid specifically targets and supports students without the economic means to afford higher education (Baum, Davis Bell, & Sturtevant, 2010). As the reliance on student loans has increased, so has the default rate of repayment of these loans (Mueller & Yannelis, 2019).

The research to date has focused on the rising cost of attendance and increasing student loan debt, but it has not focused on the financial health of an institution nor determined whether a correlation to the student loan default rate exists. While information is available from the U.S. Education Department on financial responsibility in the form of financial responsibility composite scores for private institutions, there has been little focus on this information (Abron, 2019). Additionally, the research and information available does not examine whether there is a correlation between the institutions financial responsibility composite score and the default rate on student loans from student borrowers from that institution. The conversation on affordability has focused on the cost of attendance at primarily public colleges and universities, not within Catholic higher education specifically.

### **Background of the Study**

The Higher Education Act of 1965 requires all private institutions to annually submit audited financial statements to the U. S. Department of Education to demonstrate they are maintaining the standards of financial responsibility necessary to participate in Title IV programs (Federal Student Aid, 2019). These financial statements are used to determine the institution's financial responsibility composite score, and whether an institution is "financially responsible",

“requires additional oversight,” or could potentially lose access to Title IV funding by being “not financially responsible” (Federal Student Aid, 2019). This is critical, as Title IV programs represent all forms of federal financial aid, including grants, loans, and work study programs (Federal Student Aid, 2019). As the reliance on student loans to pay for higher education grows, the risk of losing this option is concerning for private institutions that do not receive state subsidies and rely, instead upon other funding sources such as tuition and private donations.

The passage of the Middle Income Student Assistance Act as a part of the Higher Education Amendments of 1978 was a contributing factor to the move from grants to student loans to fund higher education (Hearn, 2001). This act began a cultural shift to increase the expectation of individual students and their families to pay for higher education. Prior to 1982, federal, state, and private grants were the main form of financial aid in higher education until there was a shift to student loans becoming the primary form of aid students received (Elliott, 2014). Research shows that about 69% of undergraduate students who graduated in 2013 took out federal or private student loans to finance their educations (Chopra, 2012). Student loans are impacted by the status of the general economy, and rates are influenced by the market (Mueller & Yannelis, 2019). Federal student loans make up 92% of all loans used to fund higher education, and there was a rise in student loan default rates every year between 2000 and 2006 (Mueller & Yannelis, 2019).

### **Purpose of the Study**

The purpose of this quantitative study was to understand the relationship of the demographic variables of religious order, program length, and geographic region interact with the score a Catholic institution receives on the U.S. Education Department test for financial responsibility by using descriptive statistics. The predictor demographic variables that were

studied are institution type, program length, and geographic region. The criterion variable that was studied is the score of the university on the financial responsibility test ranging from -1.0 to 3.0 as determined by the U.S. Education Department. This study also examined whether there was a correlation between the financial responsibility of a college or university and its students by looking at the financial responsibility composite score and student loan default rate. For the second research question, the criterion variable was the institution's enrollment, and the predictor variable was the score of the university on the financial responsibility test ranging from -1.0 to 3.0, both determined by the U.S. Education Department.

A census was conducted of all Catholic colleges and universities as identified by the United States Conference of Catholic Bishops (2019) with data from the FY2016 (July 2015-June 2016) academic year. This census study provided information on the population and avoided sampling bias. Institutions that do not participate in Title IV funding were removed from the census, as they do not have a financial responsibility composite score or student loan default rate. As a result, 213 Catholic institutions were examined. Given the population of Catholic colleges and universities that participate in Title IV funding, a census further allowed for the most thorough understanding of the data. Data were obtained from the Federal Student Aid Department within the U.S. Education Department, Integrated Postsecondary Education Data System (IPEDS) in the National Center for Educational Statistics, and the Association of Catholic Colleges and Universities.

### **Definitions of Key Terms**

The following terms are defined for the purpose of this research:

*Catholic College or University.* Institutions of higher education recognized by the United States Conference of Catholic Bishops as having a connection to a specific Catholic Religious

Order, to the Dioceses, or are Independent (United States Conference of Catholic Bishops, 2019).

*Correlation Research Design.* The measurement of two factors to determine or estimate the extent to which the values for the factors are related or change in an identifiable pattern (Privitera, 2017).

*Cost of Attendance.* The total amount it will cost a student to go to college each year. The COA includes tuition and fees; on-campus room and board (or a housing and food allowance for off-campus students); and allowances for books, supplies, transportation, loan fees, and, if applicable, dependent care. It can also include other expenses like an allowance for the rental or purchase of a personal computer, costs related to a disability, or costs for eligible study-abroad programs (U. S. Department of Education, 2019).

*Default.* Failure to repay a student loan according to the terms of the loan (Federal Student Aid, 2019).

*Default Rate.* The percentage of outstanding student loans that are in repayment that have missed or are behind in repayment and been classified in default (Federal Student Aid, 2019).

*Demographic Variable.* Refers to a characteristic or attribute of an individual institution that can be measured or observed and that varies among the different institutions being studied. A variable will vary in two or more categories (Creswell, 2014).

*Enrollment.* The number of unique students enrolled at an institution during a specific academic year (Integrated Postsecondary Education Data System, 2019).

*FAFSA.* Free Application for Federal Student Aid form to apply for financial aid for college or graduate school (U. S. Department of Education, 2019).

*Federal Student Loans.* Federal student loans are made by the government, with terms and conditions that are set by law, and include benefits, such as fixed interest rates and income-driven repayment plans, not typically offered with private loans (Federal Student Aid, 2019).

*Financial Responsibility Composite Score.* A composite of three ratios derived from an institution's audited financial statements. The three ratios are a primary reserve ratio, an equity ratio, and a net income ratio. These ratios gauge the fundamental elements of the financial health of an institution, not the educational quality of an institution (Federal Student Aid, 2019).

*Geographic Region.* The region of the United States that the institution is located within based on the six regional accreditation agencies as recognized by the Department of Education: Central based on the Higher Learning Commission (AZ, AR, CO, IL, IN, IA, KS, MI, MN, MO, NE, NM, ND, OH, OK, SD, WV, WI, WY); Mid Atlantic based on Middle States Commission on Higher Education (DE, District of Columbia, MD, NJ, NY, PA); New England based on the New England Commission on Higher Education (CT, ME, MA, NH, RI, VT); Northwest based on the Northwest Commission on Higher Education (AK, ID, MT, NV, OR, UT, WA); South based on the Southern Commission on Higher Education (AL, FL, GA, KY, LA, MI, NC, SC, TN, TX, VA); and West based on the Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges (CA, HI).

*Private Student Loans.* Student loans made by private organizations, such as banks, credit unions, and state-based or state-affiliated organizations, which have terms and conditions that are

set by the lender. Private student loans are generally more expensive than federal student loans (Federal Student Aid, 2019).

*Program Length.* The length of the longest program offered by the institution:

Short-Term (300–599 hours); Graduate/Professional ( $\geq 300$  hours); Non-Degree (600–899 hours); Non-Degree 1 Year (900–1799 hours); Non-Degree 2 Years (1800–2699 hours); Associate's Degree; Bachelor's Degree; First Professional Degree; Master's Degree or Doctoral Degree; Professional Certification; Undergraduate (Previous Degree Required); Non-Degree 3 Plus Years ( $\geq 2700$  hours); Two-Year Transfer (Federal Student Aid, 2019).

*Religious Order.* The religious community, characterized by its members professing solemn vows, who founded the college or university (Association of Catholic Colleges and Universities, 2019).

### **Research Descriptive Statistics, Questions, and Hypothesis**

The demographic variables of an institution's religious order, program length, geographic region, and financial responsibility composite score, as determined by the U.S. Education Department, are shown in a descriptive manner and analyzed. Additionally, the following two research questions were asked in this research study:

1. What is the relationship between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's student loan default rate?

Hypotheses 1:

$H_0$ : There is no correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's student loan default rate.

$H_1$ : There is a correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's student loan default rate.

2. What is the relationship between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's enrollment?

Hypotheses 2:

$H_0$ : There is no correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's enrollment.

$H_1$ : There is a correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's enrollment.

### **Delimitations of the Study**

The scope of the study included a census of the private Catholic institutions as identified by the United States Conference of Catholic Bishops (2019). The census was limited to those 213 Catholic institutions that reported both a score for the U. S. Education Department's financial responsibility test to participate in Title IV funding and their student loan default rate as a part of compliance through the U. S. Education Department. The study was delimited to Catholic universities, as only private, nonprofit and for-profit institutions receive a score for the financial responsibility test from the U.S. Education Department. By delimiting the study to a

specific private institution type, the research could increase information available concerning Catholic Higher Education and examine institutions with similar mission and values.

### **Limitations of the Study**

Limitations of the study included the availability and clarity of the data. The data were collected from existing national data sets. Financial responsibility composite scores were used, but financial information as to why each institution received the score it did was not included. This could lead to information that could influence other demographic variables that were not being investigated in this particular study.

A second limitation of the study was that there could be other demographic variables that could be better predictors of influences of an institution's score on the financial responsibility test that was examined herein. Research has shown that there is a statistically significant and positive correlation between financial responsibility composite scores and enrollment, but that research was limited to private HBCU institutions that receive accreditation from the Southern Association of Colleges and Schools Commission on Colleges (Abron, 2019). This study added to the body of knowledge by examining enrollment and financial responsibility composite scores for a different institution type. However, enrollment and student loan default rate may not be the strongest predictors of financial responsibility composite scores.

A third limitation to this study was that the research is limited to private Catholic colleges and universities. Because public universities receive financial support from their states and are not fully tuition dependent, they do not have to participate and pass the U. S. Education Department's financial responsibility test in order to receive Title IV funding (Federal Student Aid, 2019). By limiting the study to Catholic institutions, the information garnered here was not

generalizable to all institutions, specifically not to public, state institutions; other private, non-Catholic institutions; or any for-profit institutions.

### **Significance of the Study**

This quantitative study provides additional information and context for educational leaders within Catholic higher education about the relationship between financial responsibility composite scores based on the U. S. Department of Education and other demographic factors. This allows educational leaders insight about their institution's financial health, and whether this correlates with their students' financial health through examining student loan default rates. By understanding this information, educational leaders can intentionally consider how to use these findings to both recruit students to their university with economic factors of Student Choice Theory, and learn how to best prepare their students for student loan repayment. Knowing the relationship between religious order and financial responsibility composite score allows for educational leaders at Catholic colleges and universities to have insight on potential best practices within Catholic higher education as they can look at other factors, beyond what was studied in this research study, that may be helpful in understanding financial responsibility composite scores.

### **Chapter Summary**

In summary, this dissertation was designed to understand the relationship of the demographic variables of religious order, program length, and geographic region with the score a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive statistics. This study also examined whether there was a correlation between the financial responsibility composite score and student loan default rate, and it examined whether there was a correlation between the financial responsibility composite score and

enrollment for private, Catholic institutions that receive Title IV funding. Although existing literature does show that there is a statistically significant and positive correlation between financial responsibility composite scores and enrollment (Abron, 2019) this study helps to fill the gap in the literature by providing additional information about Catholic higher education, and introduced additional demographic variables to the existing body of research currently available. This chapter introduced the study and purpose of the study. This chapter also described the two research questions that helped guide this study. The delimitations and limitations were acknowledged and terms were defined. The chapter stated the significance of the study. Chapter Two provides a comprehensive review of the current literature concerning Student Choice Theory, Title IV funding, the rising cost of college, growing reliance on student loans and student loan default rates, financial responsibility composite scores, and the history of Catholic higher education.

## **Chapter Two: Literature Review**

To understand how this research study adds to the current body of knowledge, a thorough review of related literature has been conducted. The literature review for this study was guided by the five criteria that Boote and Beile (2005) outlined as critical to an effective literature review:

- The justification of the inclusion and exclusion of literature from the review (coverage),
- The synthesis of the existing literature to know the current state of the field, how this research relates to the historical context of the topic, explain the variables and phenomena relevant to this topic, and adding to the body of knowledge in the field by offering a new perspective on the topic.
- Identify the main research techniques have been used in this field and the advantages and disadvantages of those techniques (methodology).
- Explain the practical and scholarly significance of the research problem.
- Complete the literature review with coherent and clear structure (rhetoric).

In quantitative research, theory drives the research (Creswell, 2014). For this research, Student Choice Theory was the driving force. Through this literature review, prior research provides context to understand what descriptive statistics of demographic variables of religious order, program length, and geographic region show when looking at the institution's score on the financial responsibility test determined by the U.S. Education Department. Additionally, the literature review will provide foundational information critical to understand the research questions: Is there a correlation between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's student loan default rate?

Is there a correlation between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's enrollment?

Using the five criteria from Boote and Beile (2005) will ensure the literature review is in-depth, while being concise. This allows the researcher to gain knowledge and be influenced by what is already known regarding financial responsibility composite scores and Catholic higher education from numerous authors and researchers. The goal of this chapter is to inform the reader of previous research that has contributed to the background of Title IV funding, the rising cost of college, growing reliance on student loans and student loan default rates, financial responsibility composite scores, and the history of Catholic higher education. This chapter will also provide additional information on the demographic variables of religious order, program length, and geographic location. The background research influenced this research study to take a specific direction and contribute new information to the university and research field at large.

### **Student Choice Theory**

Student Choice Theory outlines five decisions or choices that are made to determine whether a student will pursue and persist at college (Manski & Wise, 1983). The first decision is made by the student to apply to college; the second decision is made by the institution, determining whether they will offer admission to the student; the third decision is made by the institution as to if and how much financial aid is offered to the student; the fourth decision is made by the student if they will ultimately pursue college, and if so, which college; the fifth decision, is made by the student to persist in college (Manski & Wise, 1983). At each of these decision points, Student Choice Theory recognizes that there are social, economic, and educational factors that affect and influence each decision the student will make (Hossler, Schmit, & Vesper, 1999; Manski & Wise, 1983). While Student Choice Theory examines social,

economic, and educational factors that include college choice, this research is primarily interested in the economic factors that influence students' ultimate decision on college selection and persistence. Subsequently, the findings suggest how higher education leaders might best utilize this information.

A major economic factor that influences the college selection process is the federal financial aid offered to a student (St. John & Asker, 2001). Federal financial aid is based on family income and estimated family contribution, and it is inversely related to income (Manski & Wise, 1983). The focus is often on the final cost, and not necessarily just the cost of tuition and fees or financial aid (Manski & Wise, 1983; St. John & Asker, 2001). A decrease in tuition has the same impact on college decision as an increase in financial aid of the same amount (Manski & Wise, 1983). For student decisions, the amount of financial aid offered, has less impact than the fact of just being offered financial aid (Hossler, Schmit, & Vesper, 1999). Financial aid awards have both an economic influence, and a psychological influence on students who perceive the aid as evidence that an institution wants them to join their community (Hossler, Schmit, & Vesper, 1999).

While this economic factor does influence students, it is not completely separate from the social or educational factors. Manski and Wise (1983) claimed. "Even if the effect of family income were completely offset by financial aid, family background would continue to exert substantial influence on college application" in their longitudinal study of 23,000 higher school seniors (p. 6). For parents, having their child attend college in-state and close to home is a stronger factor on their influence of their child than the financial aid package offered (Hossler, Schmit, & Vesper, 1999).

Financial factors are made in balance with other factors. Students often select institutions that they perceive to be the highest quality education for the lowest financial cost (Hossler, Schmit, & Vesper, 1999). The financial cost is more than just tuition and includes factors such as traveling home due to distance. Students prefer low-cost colleges (Manski & Wise, 1983), but students will select more expensive colleges if they are perceived to offer higher quality education with more potential economic advantages after graduation (Hossler, Schmit, & Vesper, 1999).

### **History of Financial Aid and Title IV Funding**

Prior to the formalization of financial aid by the federal government, individual institutions developed their own financial aid programs based on funding they had available, leading to inconsistencies between different universities (Fuller, 2014). Often any form of financial aid awarded to students was historically in the form of scholarships based on donations made to the institution from individuals seeking to support education (Fuller, 2014). While these were often need-based to support the education of those who could not afford higher education, in 1934, Harvard University developed the Scholastic Aptitude Test, based upon the Army Alpha Test specifically as a means to award merit-based scholarships to those students identified as the brightest students (Fuller, 2014).

The first major federal financial aid program came in the form of the Servicemen's Readjustment Act of 1944, better known as the G.I. Bill. Enrollment in higher education doubled in the decade following the Servicemen's Readjustment Act, as veterans received direct payments for pursuing higher education (Fuller, 2014). By the end of the G.I. Bill in 1956, 2.2 million veterans had taken advantage of the funding for educational benefits (Fuller, 2014). The G.I. Bill set the stage for all future federal financial aid programs. It created the precedent of

funding for veterans, a connection of aid to only those institutions considered high-quality education and were accredited, and changed the face of higher education institutions themselves by opening the doors to people from all social classes (Fuller, 2014).

The federal government continued and expanded funding for those who had served in the military. The Veterans' Readjustment Assistance Act of 1952 was a reauthorization of the Servicemen's Readjustment Act of 1944, but with the requirement of accreditation from the individual institutions for the federal government to award the funding. In 1952, in an attempt to provide funding for low income and underrepresented students, the College Board's College Scholarship Service was created, which is considered the precursor to the modern Free Application for Federal Student Aid (FAFSA). The National Defense Education Act of 1958 continued to invest into accredited higher education institutions and developed the National Direct Loan System, which would later become the Perkins Loan program (Fuller, 2014).

Federal financial aid is important for Catholic colleges and universities as a means for students to pay tuition and other educational costs (Drinan, 1968). Private religiously-affiliated institutions have access to federal financial aid. However, there has not always been support for religiously-affiliated colleges and universities to have access to federal financial aid programs. In 1963, a quarter of the Senate voted to exclude all religiously-affiliated colleges and universities from having access to federal financial aid programs (Drinan, 1968). This bill did not pass, allowing Catholic colleges and universities to continue to access federal financial aid (Drinan, 1968).

While the G.I. Bill and the College Board's College Scholarship Service would set the stage for federal financial aid, it was the Higher Education Act of 1965 that would permanently solidify the federal government's involvement in higher education financial aid and establish

higher education as a national issue (Paulsen & Smart, 2001). The passage of the Higher Education Act in 1965 was “a landmark event destined to make earlier need-based student-aid award levels seem trivial by comparison,” stated University of Georgia sociologist James Hearn (2001, p. 274). Need-based aid was awarded through Pell Grants, Supplemental Educational Opportunity Grants, and loans, such as the Stafford Loan (Hearn, 2001; Fuller, 2014). This growth continued until the 1980s, when Hearn (2001) concluded, “approximately one-third of all U.S. undergraduates received some form of federal financial aid” (pp. 274-275), and nearly 2.7 million students took advantage of the need-based Pell Grant (Gladieux & Hauptman, 1995). Their access to need-based aid is critical for low-income students, because:

research studies indicate that merit programs have helped keep the best and brightest high school students in-state. But merit programs disproportionately reward students who most likely can afford and will go to college anyway. Merit aid may erode critical funding for need-based programs. (Baum et al., 2010, p. 6)

Up until 1982, federal, state, and private grants were the main form of financial aid in higher education. Subsequently, there emerged a shift to student loans as the new primary form of federal financial aid students received (Elliott, 2014). There has been a cultural shift resulting in an increased expectation on individuals and their families to pay for higher education. “Given the increasing expectation that students should bear most of the college-cost burden, loans have been the largest form of financial aid since 1982-- a shift that has been particularly hard on needy students,” stated University of Kansas associate professor William Elliott (2014, p. 26). The passage of the Middle Income Student Assistance Act as a part of the Higher Education Amendments of 1978 was a contributing factor to the move from grants to student loans to fund higher education (Paulsen & Smart, 2001). “MISSA [Middle Income Student Assistance Act]

marked the beginning of the dramatic return in federal student-aid policy to an emphasis on loans over grants” stated University of Georgia professor of higher education James Hearn (2001, p. 285). While the reliance on loans as a primary form of financial aid has continued, the Student Loan Forgiveness Act of 2012 developed a plan for those who qualified based on their financial need and profession, to have the remainder of their loans forgiven after 120 payments over 10 years towards student loans.

Today, there are a number of requirements for institutions to participate in federal financial aid, or Title IV Student Financial Aid Programs. Institution must offer educational programs that lead to a degree, be accredited by a recognized accrediting agency, meet expectations on financial responsibility, and be deemed administratively capable of monitoring federal financial aid (Hegju, 2019). Additionally, there are several program participation agreements, such as the 90/10 rule, stating that no more than 90% of an institution’s revenue may come from Title IV programs, as well as mandated reporting of campus crimes through the Clery Act requirements (Hegju, 2019).

Financial aid has shifted from local, individual philanthropy directed at a specific institution of their choice, to a complex system overseen and funded by the federal government. Nonetheless, institutions still have privately funded scholarships that they can award for either need-based or merit-based reasons. Institutional and private scholarships affect the federal financial aid awarded to an individual student and are a part of the larger financial aid system.

### **Growing Reliance on Student Loans and Rising Student Loan Default Rates**

There is much debate on how much the government should fund higher education. Regardless of whether the government should or should not fund higher education, the reality is

that there is growing reliance on student loans to fund higher education. In 2013, about 70% of all graduating seniors from college had student loans (Fox, Bartholomae, Letkiewicz, & Montalto, 2017), and 92% of student loans were federal loans (Mueller & Yannelis, 2019). All this combined leads to an outstanding balance of \$1.4 trillion in student loan debt in the United States as of 2019 (Eide, 2018; Mueller & Yannelis, 2019).

It has become common knowledge that an individual earns more income in a lifetime because of higher education (Martinez, 2004). But what this increased income pays for has changed over the years as there has been a shift towards increased student loans which individuals must repay upon graduation or leaving a university prior to graduation (Mueller & Yannelis, 2019). This emphasis on student loans means that by 2014 there were more than 42 million individuals with federal student loans (Looney & Yannelis, 2015).

There are five primary forms of student loans, four federal loans, subsidized Stafford loans, unsubsidized Stafford loans, Perkins loans, and parent PLUS loans, and private student loans (Avery & Turner, 2012). The four forms of federal student loans are need-based and are awarded to students based on their families' financial needs. Students can also take out private student loans to fund any aspect of their educational expenses. Typically, federal loans have lower interest rates due to federal subsidies, however, not all students who take out educational loans qualify at all or for as much as they need to cover expenses, requiring them to take out private student loans (Lee, Ciarimboli, Rubin, & Gonzalez Canche, 2019).

Student loans, unlike other forms of loans, cannot be discharged in bankruptcy, and an individual's wages can be garnished by the federal government in order to repay federal, defaulted student loans (Fox et al., 2017; Mueller & Yannelis, 2019). Approximately 20% of all student loan debt, excluding debt owed by currently enrolled students, is a minimum of 90 days

delinquent (Mitchell, 2019), and just under 10% of those with student loans are at least 60 days delinquent in their payments on any of their outstanding debt (Fox et al., 2017). Graduates of Catholic colleges and universities experience lower rates of student loan defaults at seven percent, as compared to 14.7% for national averages (Association of Catholic Colleges and Universities, 2016).

Those recently out of school and within the first few years of repayment are the most likely to be in default on their student loans, and student loan default rates increased by 18.9% between 2007 and 2010 (Mueller & Yannelis, 2019). This has long-term financial impacts for students beyond the loan repayment, including the negative impact to an individual's credit score and limited access to the credit market for other loans, such as those for vehicles or mortgages (Mueller & Yannelis, 2019). Carrying student debt and being in default on student loans affects college graduates' reliance on quickly finding employment post-graduation. Students who graduate with student loans spend 8.3% less time on their job search than those without student loan debt, and earn 4.2% less annually in their first ten years post-graduation (Mueller & Yannelis, 2019). Student loan borrowers who experience unemployment have an 83% increase in probability to default on their student loans (Woo, 2002). About one quarter of student borrowers anticipate they will have challenges paying off their student loans (Fox et al., 2017).

Even when college graduates can successfully repay their student loans, they still experience economic disadvantages because of having student loans in general. "The student-loan program prevents loan-burdened four-year-college graduates from reaping equal returns on their education as classmates who graduate debt free--not simply because of loan payments but because of a differential capacity for capital accumulation," said William Elliott (2014, p. 26). This means that students, who complete their college education without loans, see both

immediate and long-term financial benefits. Students have more immediate financial gains as they are not paying a monthly loan. This monthly payment can be a significant one, as the average student who has student loans earns \$44,930 a year, but has \$23,757 in student loan debt (Mueller & Yannelis, 2019). Over the course of their lifetimes, this means students who did not have to borrow student loans can invest their money and build savings, as opposed to needing to pay off debt.

It is important to understand the impacts of student loans as the debate continues around college affordability and the best way to fund higher education. “Research consistently shows that to produce college success, it is better to combine loans with other tools, such as grants, scholarships, and savings” stated William Elliott (2014, p. 30). Indeed, 28% of students at Catholic colleges and universities receive Pell Grants, with an average Pell Grant award of \$4,200 (Association of Catholic Colleges and Universities, 2018). Ninety-six percent of full-time, first-year students at Catholic colleges and universities receive some form of financial aid (Association of Catholic Colleges and Universities, 2016).

While student debt allows people to finance their educations when they do not have funds readily available to do so, the student loan process as it currently stands creates a barrier for low-income students to benefit from the educational system. The arms race for enrollment means that colleges are concerned about impressing students and wooing them into attending their university over other institutions. It is critical for higher education leaders to understand as many factors as possible that could influence students and their families concerning their admissions decisions.

### **Financial Responsibility Composite Scores**

As a part of the Higher Education Act of 1965, for-profit and nonprofit colleges and universities must provide the Department of Education with audited financial statements to showcase their financial responsibility in order to participate in Title IV funding (Federal Student Aid, 2019). The Department of Education uses these financial records to determine three different ratios that are then combined to create the financial responsibility composite score. The first ratio is the primary reserve ratio, which is calculated by dividing the adjusted equity by the institution's total expenses to measure the institution's viability and liquidity (Federal Student Aid, 2019). The second ratio is the equity ratio, which is calculated by dividing the modified equity by the modified expenses to measure the institution's capital resources and ability to borrow money (Financial Student Aid, 2019). The third ratio is the net income ratio, which is calculated by dividing the income before taxes by the total revenue to measure the institution's profitability (Federal Student Aid, 2019). These three ratios are weighted with the primary reserve ratio and equity ratio each worth 40% of the score and the net income ratio worth 20% of the score. The financial responsibility composite score is specifically about the financial health and responsibility of an institution, and is not an indicator of quality of education from the institution.

Financial responsibility composite scores range from -1.0 to 3.0. Institutions with scores between 1.5 to 3.0 are considered financially responsible and do not require any additional financial oversight from the Department of Education (Federal Student Aid, 2016). Institutions with scores between 1.0 to 1.4 are still considered financially responsible, but are required to have additional oversight from the Department of Education, such as cash monitoring (Federal Student Aid, 2016). Institutions with scores between -1.0 to 0.9 are considered not to be

financially responsible, and in order to continue to participate in Title IV funding must provide the Department of Education with a letter of credit of at least 50% of the value of their federal student aid funding or a letter of credit of at least 10% of the value of their federal student aid funding and additional oversight (Federal Student Aid, 2019).

**Composite scores and relationship to other university factors.** With growing concern over the financial aspects of higher education, financial responsibility composite scores have been used in a variety of ways to understand their relationship with other university factors. Research has shown a statistically significant correlation between financial responsibility composite scores and some aspects of strategic planning at Lutheran Colleges and Universities (Ries, 2014). A second study examined three private, Christian colleges financial responsibility composite scores and their missions through a case study design. This study found that financially successful institutions remain true to their distinctive mission, have a flexible strategic planning mentality, operate their college like a business by ensuring tuition fully supports campus operations, make institutional advancements a priority, and diversify the institutional portfolio in a way that is consistent with their mission (Fletcher, 2013). A third study showed statistically significant and positive correlations between financial responsibility composite scores and enrollment, composite scores and level of degree offered, and statistically significant association between financial responsibility composite scores and endowment at private historically black colleges and universities that receive their accreditation from the Southern Association of Colleges and Schools Commission on Colleges (Abron, 2019).

Researchers seek to understand all aspects of the rising cost of higher education due to growing concerns. One area that has not been fully researched is the financial stability of institutions by using financial responsibility composite scores. Expanding on research in this

area of higher education finance may provide insight to understanding the complex financial aspects of higher education.

### **History of Catholic Higher Education in the United States**

Prior to the American Revolution, Catholic higher education was illegal in the thirteen colonies due to English laws. The first three Catholic institutions, Georgetown College (1789), St. Mary's Seminary (1791), and Mount St. Mary's College (1808) were all founded in Maryland, due to its foundation as a "Catholic colony" and the influence of John Carroll, the first Archbishop of Baltimore (Rizzi, 2018). Carroll intentionally separated the undergraduate students at Georgetown from seminary education at St. Mary's. John Carroll saw theology "as a form of professional training for priests and not a normal part of the curriculum for lay students" stated Michael Rizzi, Director of Student Services at the University of Pittsburgh Graduate School of Public & International Affairs (2018, p. 156). Undergraduates were instead introduced to the Catholic faith through mandatory daily Mass.

Catholic institutions were not limited to only Catholic students, and while preparing the next generation of Church leaders was important, the Catholic value of serving the underserved was central to early Catholic higher education (Rizzi, 2018). Catholic institutions sought to give "all students knowledge and appreciation of the Catholic tradition, regardless of whether they are Catholic themselves" (Morey & Piderit, 2006, p. 55). Admitting non-Catholics is a way to increase enrollment and ensure fiscal security for institutions. Early Catholic institutions were reliant on charitable donations and tuition, so having open doors to non-Catholics allowed for institutions to rely more heavily on tuition and less on donations. Institutions that did not have this same financial model struggled. St. Gregory's in Oklahoma and St. Joseph's College in Indiana were both founded to serve the local Native Americans, and St. Catherine's College in

Kentucky was founded to serve Appalachian women (Rizzi, 2018). All of these institutions have been closed since 2017 (Rizzi, 2018). Over 70% of the Catholic institutions that opened in the 1800s are now closed (Power, 1972). In 1965 there were 305 Catholic institutions and as of 2017 there are just over 200 Catholic institutions (Rizzi, 2018).

Prior to the Morrill Land Grant Act of 1862, most Catholic colleges were the only higher education institutions within their community. The Morrill Act, sponsored by Vermont congressman Justin Smith Morrill, called for the donation of 30,000 acres of public land for each state senator and representative (Lucas, 2006). The proceeds would be used to support at least one college per state with a focus on agricultural and mechanical arts (Lucas, 2006). Some states used the financial resources to support struggling, existing state institutions, and other states open new colleges and universities (Lucas, 2006). The impact of the Morrill Act varied greatly state by state and created fierce competition between institutions (Lucas, 2006). With growing public institutions, and the creation of new institutions, Catholic higher education experienced greater competition for students than they had previously experienced. “Now, even the very poor have reasonable access to college both through community colleges and through well-financed four-year state institutions. Catholic universities are no longer the last resort for higher education for most poor students,” stated Director of the Office of Catholic Identity, Assessment, and Formation for the Archdiocese of San Francisco Melanie Morey and Jesuit priest John Piderit (2006, p. 58).

Historically, Catholic colleges were developed either for men or women, and they were built often in schools near one another. Men’s colleges typically were accredited and offered a bachelor’s degree, while women’s colleges were similar to high school education, and they gradually developed into actual accredited colleges (Power, 1972). Over time, a large number of

these colleges either went co-educational, with Marquette University in Madison, Wisconsin being the first to admit women 1909, or these brother-sister schools merged into one, exemplified by the merger of Loyola University and Marymount College in southern California into Loyola Marymount University, Los Angeles. Today there only remains one all-male Catholic university that is not a seminary, and it is St. John University in Minnesota, with a nearby sister institution of the College of St. Benedict. Nonetheless, even these two institutions have highly-intertwined communities, with shared classrooms and majors. Women's Catholic universities maintained their single-sex education longer, before either becoming co-educational or merging with a men's college. In 2018, 10 remain as women's institutions (Rizzi, 2018).

Much like the Morrill Act, the GI Bill forced Catholic institutions to reimagine their missions and purposes within higher education. The GI Bill drove enrollment up across the country at all institutions of higher education by funding veterans' tuition and living expenses while they pursued higher education after World War II (Gleason, 1995). During this time, the number of Catholic colleges and universities grew from 193 to 231, and enrollment grew by 164% from just under 162,000 to over 426,000 students (Gleason, 1995). This massive enrollment increase in a short time period forced higher education institutions to reimagine their roles (Lucas, 2006). Educational leaders within Catholic higher education had to rethink their core audiences as first-generation, working-class students that now had an alternative affordable, often cheaper, access to higher education (Rizzi, 2018). The GI Bill was just the beginning of a change in federal funding to increase access to higher education, forcing Catholic institutions to reimagine their roles and missions within higher education.

A final major shift in Catholic Higher Education occurred in July 1967 when then University of Notre Dame president Fr. Theodor Hesburgh, invited leading Catholic university

presidents, superiors from their sponsoring religious orders, Catholic scholars, and two Bishops to a retreat facility in northern Wisconsin to discuss the future of Catholic higher education (Gleason, 1995). These presidents wrote the Land O'Lakes Statement intended to prioritize "academic freedom and institutional autonomy as essential to a true university, they envisioned a Catholic university that met the highest standards of scholarship, while fostering interdisciplinary integration catalyzed by a theological focus" stated University of Notre Dame president Fr. John Jenkins (2011, para. 31). Critics of the Land O'Lake Statement felt that it removed Catholic higher education too far from the Church and made Catholic education too similar to secular education (Jenkins, 2011). Supporters believe this was the turn that kept Catholic higher education relevant and competitive with higher education as a whole, by ensuring that even as private institutions, Catholic higher education still maintained a focus on academic freedom. It could be argued that this focus on academics ensured the future success of Catholic higher education, given the reliance upon tuition, which in turn relies upon enrollment from non-Catholic students, alongside their Catholic students.

**Impact of religious order within Catholic higher education.** There are 53 different Catholic religious orders that operate at least one college or university, as well as 18 independent Catholic colleges and universities that are not connected to a religious order (Association of Catholic Colleges and Universities, 2019). Since the foundation of Catholic higher education, "religious congregations have drawn upon their respective charisms to ground and to guide their higher education ministries" stated Vice President for the Office of Mission and Heritage at Saint Xavier University Susan Saunders (2010, p. 4). For religious orders, these charisms both ground and focus their ministry, and also shape the culture, style, and ethos of their communities (Saunders, 2010).

Catholic higher education must compete against secular institutions to stay relevant, and find ways to distinguish themselves as offering something unique. Often this unique feature at Catholic institutions is a focus upon social justice (Morey & Piderit, 2006). This includes a focus of Catholic social teaching, promoting service activities and immersion experiences, service-learning projects in academic courses, and an opportunity to partake in faculty research with a service component (Morey & Piderit, 2006). While the academic control had been passed to lay faculty, the religious order often still operated a university and maintained fiscal control (Drinan, 1968), influencing the student culture and focus on social justice as a part of the student experience.

While lay people have taken over the vast majority of leadership roles within Catholic Higher Education due to the declining number of vowed religious priests, sisters, and brothers available for these positions (Morey & Piderit, 2006), Catholic institutions strive to share both their Catholic traditions, and also the values of their religious order, with their lay staff and their students:

In recent decades, parents sent their sons and daughters to Catholic institutions in hopes that they would receive an education that was truly “Franciscan” or “Jesuit” or “Dominican,” regardless of whether they ever took a class with a member of the congregation on campus, their influence was informally judged to be sufficiently significant to produce a congregationally distinctive education. (Morey & Piderit, 2006, p. 235)

This mission-driven and distinctive education comes from the idea that “Catholic colleges have in general remained the most value oriented of all the church-related and private colleges in

America” stated Jesuit priest Robert Drinan (1968, pp. 9-10). As a result, even Pope John Paul II’s charge to Catholic Higher Education was:

I turn to the whole Church, convinced that Catholic universities are essential to her growth and to the development of Christian culture and human progress. For this reason, the entire ecclesial community is invited to give its support to Catholic institutions of higher education and to assist them in their process of development and renewal. (p. 21)

Lay people have taken over the vast majority of faculty positions, especially since the Land O’Lakes Statement was written (Rizzi, 2018). Lay people have also seen an increase in holding positions within upper administration, including university presidents. In the 2017-2018 academic year, about 29% of Catholic colleges and universities presidents are priests or religious (Association of Catholic Colleges and Universities, 2017). It was reported in 2017 by the Association of Catholic Colleges and Universities, that “the total number of vowed religious presidents represents a decrease from 2011, when almost 35% of presidents were priests or other members of a religious community,” (para. 3). In foundation protection of the religious order’s mission was to ensure key positions, such as the president, was of the founding order. With the decline in the number of religiously affiliated persons available for these roles, there has still been a focus on key positions still being held by people who are Catholic (Saunders, 2010). This transition has meant both Catholic tradition and individual values of religious orders have been shifted to lay people to uphold and embrace in their own work.

Catholic colleges and universities, in order to stay relevant and competitive, worked to distinguish both Catholic higher education and their specific religious orders from public institutions and other private institutions. Catholic institutions accomplished this in a variety of ways. One hundred and fifty nine of the more than 200 Catholic institutions in the Association

of Catholic Colleges and Universities have mission officers, with a position specifically dedicated to ensuring the Catholic mission is ingrained in the culture on their campuses (Association of Catholic Colleges and Universities, 2019). Often, the religious foundations are even embedded into the academic curriculum. For example, “at the Jesuit-founded Creighton University, each of the nine colleges has selected one or more Ignatian educational values on which to focus” (Association of Catholic Colleges and Universities, 2019, para. 5). Charisms can also be seen in programs offered at a university, as evidenced with the Sister’s of Mercy:

The charism of the Sisters of Mercy impels its members towards the compassionate service of the poor, sick, and uneducated. When institutionalized, the Mercy charism is expressed in ministries such as health care, education, social service, and pastoral care. (Saunders, 2010, p. 6)

These charisms are central to institutions’ missions and values. Even as there has been a shift in how involved lay people have become in holding faculty, staff, and administrative roles, religious orders have maintained control of their missions by “approving actions that affect the assets of the school such as the alienation of property, the encumbrance of debt, or the dissolution of the corporation” (Saunders, 2010, p.10).

**Development of program length within Catholic higher education.** Early Catholic institutions were created on the six-year German model where boys would enter as teens and complete what now be considered as their final two years of high school and a four-year bachelor’s degree (Rizzi, 2018). At this time the college and universities faculty, in the case of Catholic institutions, was comprised of priests, brothers, and sisters, all expected to be both the teachers and the enforcer of rules outside the classroom (Lucas, 2006). This meant that the students had high contact with the religious order who founded and ran the institutions.

Accreditation agencies standardized the four-year undergraduate plan of study in the 1900s (Rizzi, 2018). At this time, Catholic institutions shifted away from their six-year German model (Rizzi, 2018). Catholic institutions shifted their focus to emphasize interdisciplinary as what defined Catholic higher education (Gleason, 1995). Another change from the accreditation agencies was that faculty were trained in traditional academic disciplines (Rizzi, 2018). This requirement demanded that Catholic institutions either invest in the education of their religiously vowed, or that Catholic colleges and universities turn to lay faculty members. Sister Antonia McHugh, founder of St. Catherine's University (1905) in Minnesota, earned both her bachelor's and master's degrees from the University of Chicago (Gleason, 1995). Sister Antonia sent her most promising candidates to graduate school and created a lay advisory board in 1920 (Gleason, 1995). "The excellence of her leadership was recognized in 1937 when St. Catherine's became the first Catholic college in the country to be admitted to Phi Beta Kappa," stated University of Notre Dame professor of history Philip Gleason (1995, p. 92).

The new requirements of accreditation agencies affected more than program length. As institutions turned to lay faculty who held the required educational requirements, Catholic institutions lost the "faculty who worked for room and board" (Rizzi, 2018). This shift impacted the financial stability of Catholic institutions as lay people demanded a living wage (Rizzi, 2018). In order to meet the financial needs, Catholic colleges and universities turned to government money, which brought additional government oversight (Rizzi, 2018). As Catholic higher education has shifted and responded to outside influence, there is not a universal program length in Catholic higher education. A large number of Catholic institutions are liberal arts colleges and universities, while "some Catholic colleges still exist primarily to provide under-privilege students with access to education," stated Michael Rizzi (2018, p. 170).

Others, such as Notre Dame, Georgetown, and Boston College, are premier institutions specifically enrolling high-achieving, wealthy students (Morey & Piderit, 2006). A deeper understanding of program length may provide helpful information in further understanding of financial responsibility composite scores for Catholic colleges and universities.

**Growth of Catholic higher education across the geographic locations.** As Catholic higher education grew and expanded outside of Maryland, the next wave of institutions were founded along the Mississippi and Ohio River valleys. Institutions including Spalding University (1814) in Kentucky, Xavier University (1831) in Ohio, and Loras College (1839) in Iowa, served a similar mission as modern community colleges (Rizzi, 2018). Their focus was on serving students that were the least advantaged, first-generation, and from their local communities (Morey & Piderit, 2006).

The next wave of Catholic institutions developed from the increased competition in higher education after the Morrill Act. In the Central geographic region, Catholic colleges and universities were developed in areas where there was already a foundation of Catholic education in place to ensure support for the institution (Rizzi, 2018). Institutions including Loyola University Chicago (1870) in Illinois, Marquette University (1881) in Wisconsin, and St. Catherine's University (1905) in Minnesota opened in the Central geographic region.

Immigration patterns played an important role of where Catholic colleges developed. Institutions in the New England and Mid Atlantic geographic regions saw the greatest growth as European immigrants settled into these communities. "Even today there are more Catholic colleges in the Buffalo, New York area (seven) than in the entire state of Florida (four)" stated Director of Student Services at the University of Pittsburg Michael Rizzi (2018, p. 161). The South saw very little growth in Catholic higher education. This has been attributed to Catholics

not being a major religious demographic in the region (Rizzi, 2018). A small number of institutions, such as Spring Hill College (1830) in Alabama and Loyola University New Orleans (1904) in Louisiana, proved to have success in the region (Power, 1972). As industrialization brought immigrants to the West and Northwest, Catholic colleges and universities also formed in these communities. Catholic institutions in the West and Northwest geographic regions were often located within urban city centers, including Regis University (1887) in Colorado, Seattle University (1898) in Washington, and the University of Portland (1901) in Oregon (Rizzi, 2018).

Geographic region plays an important role in overall history of American Catholic higher education. Expansion into each region was influenced by immigration patterns (Rizzi, 2018) and general growth of Catholic communities (Drinan, 1968). “Traditionally, Catholic institutions have educated children of immigrants by providing them with an affordable education, but one within the Catholic tradition” (Morey & Piderit, 2006, p. 58). A deeper understanding of geographic location may provide helpful information when examining financial responsibility composite scores for Catholic colleges and universities.

### **Chapter Summary**

The goals of this chapter were constructed based on the advice of Boote and Beile (2005). First, this chapter provided a concise summary of the relevant information regarding the background of Title IV funding, the rising cost of college, growing reliance on student loans and student loan default rates, financial responsibility composite scores, and the history of Catholic higher education. Second, this chapter provided additional information on the variables religious order, program length, and geographic location within American Catholic higher education explored in this research study. As noted in the literature, further research needs to be completed in the area of financial responsibility composite scores. Finally, this chapter strengthened the

study's significance by providing existing knowledge in the field of Catholic higher education.

Chapter three will outline the methodology and the anticipated statistical analysis.

### **Chapter Three: Methodology and Anticipated Statistical Analysis**

The purpose of this quantitative study was to understand how the relationship of the demographic variables of religious order, program length, and geographic region relate to the score a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive statistics. In addition, the relationship between the financial responsibility test as determined by the U.S. Education Department and student loan default rate, and the relationship between the financial responsibility test as determined by the U.S. Education Department and enrollment were garnered to illustrate a relationship, if any exists. This chapter presents the study's research questions and hypotheses, population, research design, data collection, variables in the study, anticipated statistical analysis, research assumptions, and statistic assumptions.

#### **Research Descriptive Statistics, Questions, and Hypothesis**

The demographic variables of an institution's religious order, program length, geographic region, and financial responsibility composite score (as determined by the U.S. Education Department) were shown in a descriptive manner and analyzed. Additionally, the following two research questions were investigated in this research study:

1. What is the relationship between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's student loan default rate?

Hypotheses 1:

$H_0$ : There is no correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's student loan default rate.

$H_1$ : There is a correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's student loan default rate.

2. What is the relationship between an institution's score on the financial responsibility test as determined by the U.S. Education Department and the institution's enrollment?

Hypotheses 2:

$H_0$ : There is no correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's enrollment.

$H_1$ : There is a correlation between an institution's score on the financial responsibility test from the U.S. Education Department and the institution's enrollment.

### **Census**

A census was conducted of all 213 Catholic colleges and universities, as identified by the United States Conference of Catholic Bishops (2019) and their scores and metrics for financial responsibility, student loan default rates, and enrollment data from the FY2016 (July 2015-June 2016) academic year. Using a census allowed for the use of descriptive statistics. Additionally, a census study is not generalizable to the population of the study; rather it is the population. Using a census also ensured there was no sampling bias given the variance in the number of institutions overseen by the different religious orders.

### **Research Design**

A non-experimental, descriptive research design was used in this study. For this research study, a descriptive research design was chosen to understand the relationship between these

variables: (a). Student loan default rate and financial responsibility composite scores as determined by the U.S. Education Department, and (b). the institution's enrollment and the financial responsibility composite score as determined by the U.S. Education Department. In addition, an attempt to understand the relationship between financial responsibility composite scores and student loan default rates was made. Using a correlation research design was appropriate as the "correlation established the extent to which two factors are related, such that the values for one variable may predict changes in the values of the second variable" stated St. Bonaventure University associate professor of psychology Gregory Privitera (2017, p. 253). Descriptive statistics were applied in analyses of the following variables: religious order, program length, and geographic region and their specific financial responsibility composite scores as determined by the U.S. Education Department.

### **Data Collection**

Data were obtained from the Federal Student Aid Department within the U.S. Education Department, Integrated Postsecondary Education Data System from the National Center for Educational Statistics, and the Association of Catholic Colleges and Universities. Data was publicly available for all institutions' financial responsibility composite scores that participate in Title IV funding. Publically available data was also available for all institutions' student loan default rates as a part of compliance through the U.S. Education Department. College student enrollment data was publicly available for each academic year from the Integrated Postsecondary Education Data System from the National Center for Educational Statistics. Catholic colleges' and universities' religious orders data were available through the Association of Catholic Colleges and Universities.

The list of Catholic institutions included in this study were identified by the United States Conference of Catholic Bishops (2019). This ensured there was a consistent understanding of what qualified as a Catholic institution. This list was limited to those 213 Catholic institutions who participated in Title IV funding and reported their financial responsibility composite scores and student loan default rates. Religious orders or independent status information was available for over 200 of Catholic colleges and universities from the Association of Catholic Colleges and Universities. For the universities that did not belong to the Association of Catholic Colleges and Universities, the individual institution website were used to determine the institution's founding religious orders.

### **Variables in the Study**

This research study used nominal, interval, and ratio level data. Nominal data were used for the variables of religious order, program length, and geographic region, as those variables are descriptive only, and did not have an order, rank, and were not zero based. This nominal data were used to create descriptive statistics to understand these variables and the institution's financial responsibility composite score as determined by the U.S. Education Department. The first research question asked if there were a relationship between the predictor variable of financial responsibility composite scores using interval data and the criterion variable of student loan default rate, using ratio data. Student loan default rates were determined by the ratio of the number of students in default on their student loans to the total number of students in repayment on their student loans and was zero based. In addition to reporting a correlation coefficient using a Pearson correlation, an effect size is also reported using Cohen's (1988) effect size (small effect  $r = .10$  to  $.29$ , medium effect  $r = .30$  to  $.49$ , and large effect  $r = .50$  to  $1.0$ ). The second research question asked if there were relationship between the predictor variable of financial

responsibility composite scores using interval level data and the criterion variable of enrollment, also using ratio data as enrollment was zero based. A Pearson correlation was used to report the correlation coefficient and effect size was reported by using Cohen's (1988) effect size. Table one shows each variable used in this research study, the type of data for each variable, and the source of the data for each variable.

Table 1

*Variables and Sources*

<b>Variable</b>	<b>Type of Variable</b>	<b>Source</b>
Religious Order	Nominal	Association of Catholic Colleges and Universities
Program Length	Nominal	Federal Student Aid, Department of Education
Enrollment	Ratio	Integrated Postsecondary Education Data System, National Center for Educational Statistics
Geographic Region	Nominal	Federal Student Aid, Department of Education
Financial Responsibility Composite Score	Interval	Federal Student Aid, Department of Education
Student Loan Default Rate	Ratio	Federal Student Aid, Department of Education

**Statistical Analysis**

Descriptive statistics were used to illustrate relationships among the institution's financial responsibility composite score as determined by the U.S. Education Department and the variables of religious order, program length, and geographic region. For the first research question, a Pearson correlation coefficient was used to show the relationship between the predictor variable of financial responsibility composite scores using interval data and the criterion variable of student loan default rate using ratio data. The second research question was

analyzed using a Pearson correlation coefficient to show the relationship between the predictor variable of financial responsibility composite scores using interval level data, and the criterion variable of enrollment, using ratio level data. This information will build upon existing knowledge on financial responsibility composite scores at Historically Black Colleges and Universities (HBCU) by providing additional insight for Catholic colleges and universities.

### **Variables**

In order to address the research questions, the following variables were utilized in this research study:

*Religious Order.* The religious community, characterized by its members professing solemn vows, who founded the college or university (Association of Catholic Colleges and Universities, 2019). For institutions that are not connected to a founding religious order, they will be categorized as independent. See Appendix A for a list of all religious orders and their numeric codes for nominal data.

*Program Length.* The length of the longest program offered by the institution (Federal Student Aid, 2019). See Appendix B for a list of all program length options and their numeric codes for nominal data.

*Enrollment.* The number of unique students enrolled at an institution during a specific academic year (Integrated Postsecondary Education Data System, 2019).

*Geographic Region.* The region of the United States that the institution is located within, based on the six regional accreditation agencies as recognized by the U. S. Department of Education (U. S. Department of Education, 2019). While there are not Catholic institutions in each state, each region has multiple Catholic colleges and universities within it. This

information is intended to help educational leaders examine regional differences based on how Catholic higher education spread throughout the United States.

*Financial Responsibility Composite Score.* A composite of three ratios derived from an institution's audited financial statements that range from -1.0 to 3.0. The three ratios are a primary reserve ratio, an equity ratio, and a net income ratio. These ratios gauge the fundamental elements of the financial health of an institution, not the educational quality of an institution (Federal Student Aid, 2019).

*Student Loan Default Rate.* The percentage of outstanding student loans that are in repayment that have missed or are behind in repayment and been classified in default (Federal Student Aid, 2019).

### **Research Assumptions**

In order for this research to be valid and reliable, two assumptions must hold true: the first assumption is that the institutions selected for this study based on the United States Conference of Catholic Bishops' list of Catholic colleges and universities are in fact all the Catholic institutions within the United States. The second assumption is that all the information provided by the U.S. Department of Education, Integrated Postsecondary Education Data System, and the Association of Catholic Colleges and Universities for the study participants on their information of religious order, program length, geographic region, enrollment, financial responsibility composite score, and student loan default rate is true and accurate.

### **Statistical Assumptions**

The first research question asks if there were a relationship between the financial responsibility composite score and student loan default rate. The statistical assumption is that the Pearson correlation coefficient will show a statistically significant correlation with a medium

effect size using Cohen's (1988) effect size (small effect  $r = .10$  to  $.29$ , medium effect  $r = .30$  to  $.49$ , and a large effect  $r = .50$  to  $1.0$ ). Given this is a census study, the statistical significance is not as relevant as the effect size, however, both will be included in the results. The second research question asks if there were a relationship between the financial responsibility composite score and enrollment. The statistical assumption is that the Pearson correlation coefficient will show a statically significant correlation with a small effect size using Cohen's (1988) effect size. Abron (2019) showed a statistically significant correlation with a small effect size between financial responsibility composite score and enrollment at private HBCUs bases these statistical assumptions on prior research. Abron's (2019) research study was based on 37 private HBCU institutions. With this larger population of 213 Catholic colleges and universities, the statistical assumption is that the correlations will also show statistical significance, but the assumption is that there will remain a small effect size between financial responsibility composite score and enrollment.

### **Institution Review Board**

This research study did not collect data from individual participants. Instead, all data were collected from publicly available sources, including the U.S. Department of Education, IPEDS, and the Association of Catholic Colleges and Universities. The only data accessed outside these three sources were gathered from individual institutions' websites to confirm the names of the founding religious orders for all Catholic Colleges and Universities that are not member institutions of the Association of Catholic Colleges and Universities. None of the data collected had privacy restrictions or limitations set by Family Education Privacy Rights Act (FERPA). Because there were no human participants, this research study was deemed

administratively exempt from requiring approval from the University of Montana Institutional Review Board (IRB).

### **Chapter Summary**

The purpose of this chapter was to help explain the chosen methodology for the problem being studied. This chapter explained the methodology through the description of the study's research questions and hypotheses, population, research design, data collection, variables in the study, statistical analyses, research assumptions, and statistical assumptions. The purpose of this non-experimental, descriptive research design study was to understand the relationship of the demographic variables of religious order, program length, and geographic region. Collectively and individually these were compared to the score a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive statistics. Then the relationship between the financial responsibility test and student loan default rates and the relationship between financial responsibility and enrollment was established by the Pearson correlation coefficient in the next chapter.

## **Chapter Four: Results**

The purpose of this descriptive, non-experimental study was to use descriptive statistics to illustrate the relationship of the criterion variables of religious order, program length, and geographic region, to the predictor variable of the institution's financial responsibility composite score as determined by the U.S. Education Department. The research also sought to show the relationship between the institution's composite score on the financial responsibility test and student loan default rate as well as the relationships between the institution's composite score on the financial responsibility test and enrollment. Data were collected from Federal Student Aid Department within the U.S. Education Department, Integrated Postsecondary Education Data System (IPEDS) from the National Center for Educational Statistics (NCES), and the Association of Catholic Colleges and Universities (ACCU). Data were collected in the Spring 2020 semester, for the 2015-2016 academic year, as this was the most recent academic year in which all data were available for all variables within this research study. Analysis of data includes descriptive statistics for both the predictor and criterion variables, along with inferential statistics using a Pearson's correlation coefficient and effect size set forth by Cohen's (1988) effect size.

### **Descriptive Statistics**

According to Privitera (2017), descriptive statistics are used to describe the data in order to "summarize, organize, and make sense of a set of scores, typically presented graphically, in tabular form (in tables), or as a summary statistics (single values)" (p. 426). Descriptive statistics allow for a clear picture of the data and a description of the predictor and criterion variables. Given the population size of Catholic colleges and universities that participate in Title

IV funding, a census was conducted as it allowed for the most thorough understanding of the data.

### **Demographic Information**

All 213 Catholic institutions were identified either by their founding religious order or as independent. Fifty-five percent (n=29) of religious orders oversaw a single institution, and 44% (n=24) of the religious orders oversaw multiple institutions ranging from 2-28 institutions.

Eighteen institutions are independent and are not connected to a religious order. Independent institutions were founded by the lay Catholic community. The following table lists all Catholic religious orders that oversee at least five colleges or universities within the United States and the total number of institutions that particular religious order oversees in the 2015-2016 fiscal year.

A full table of all religious orders and the number of institutions they oversaw is available in Appendix D.

Table 2

#### *Religious Orders with Five or More Institutions*

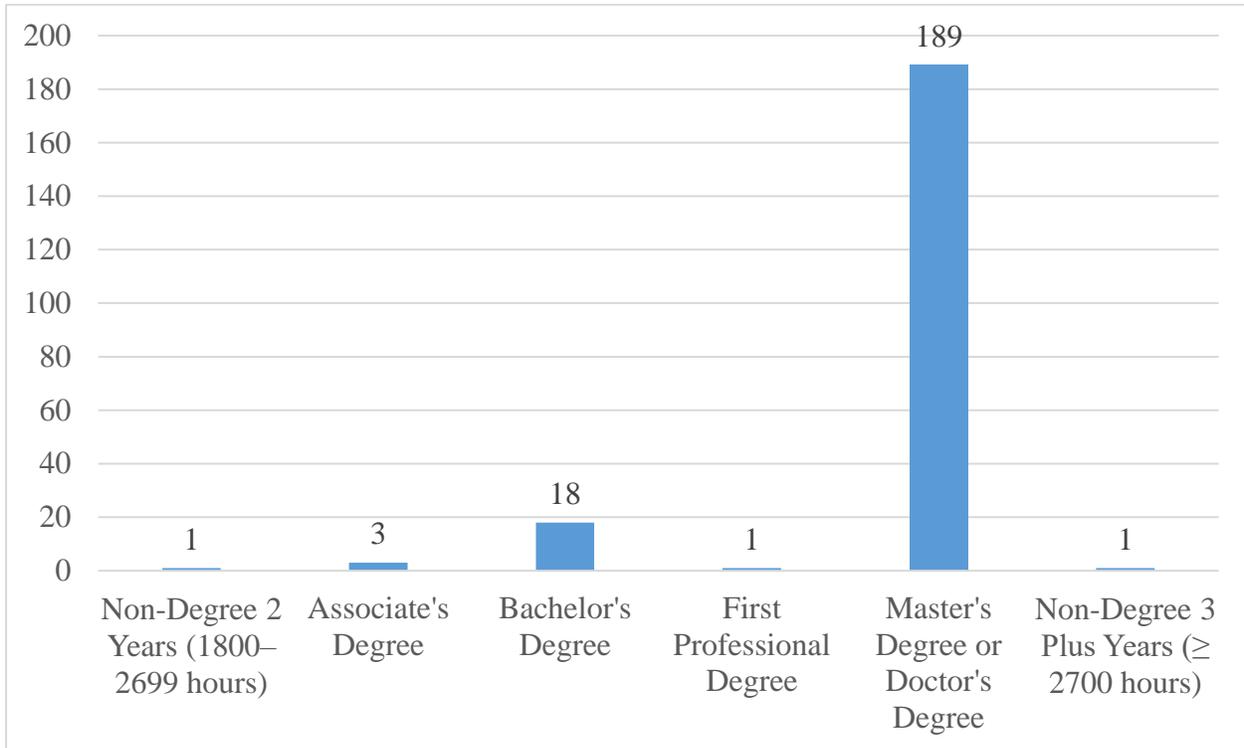
<b>Religious Order</b>	<b>Institutions</b>
Lasallian	5
Holy Cross	9
Sisters of Saint Joseph	9
Diocesan	10
Sisters of Charity	10
Benedictine	12
Dominican	13
Mercy	15

Independent	18
Franciscan	20
Jesuit	28

Eighty-nine percent (n=189) of the institutions offered a Master's Degree or Doctoral Degree as their highest degree, and 8% (n=18) offered a Bachelor's Degree as their highest degree. The remaining program lengths included: Non-Degree 2 years (1), Associate's Degree (3), First Professional Degree (1), and Non-Degree 3 Plus Years (1). There were no institutions with a program length of Short-Term (300–599 hours), Graduate/Professional ( $\geq 300$  hours), Non-Degree (600–899 hours), Non-Degree 1 Year (900–1799 hours), Professional Certification, or Undergraduate (Previous Degree Required). Figure 1 displays the number of institutions per program length.

Figure 1

*Program Length*

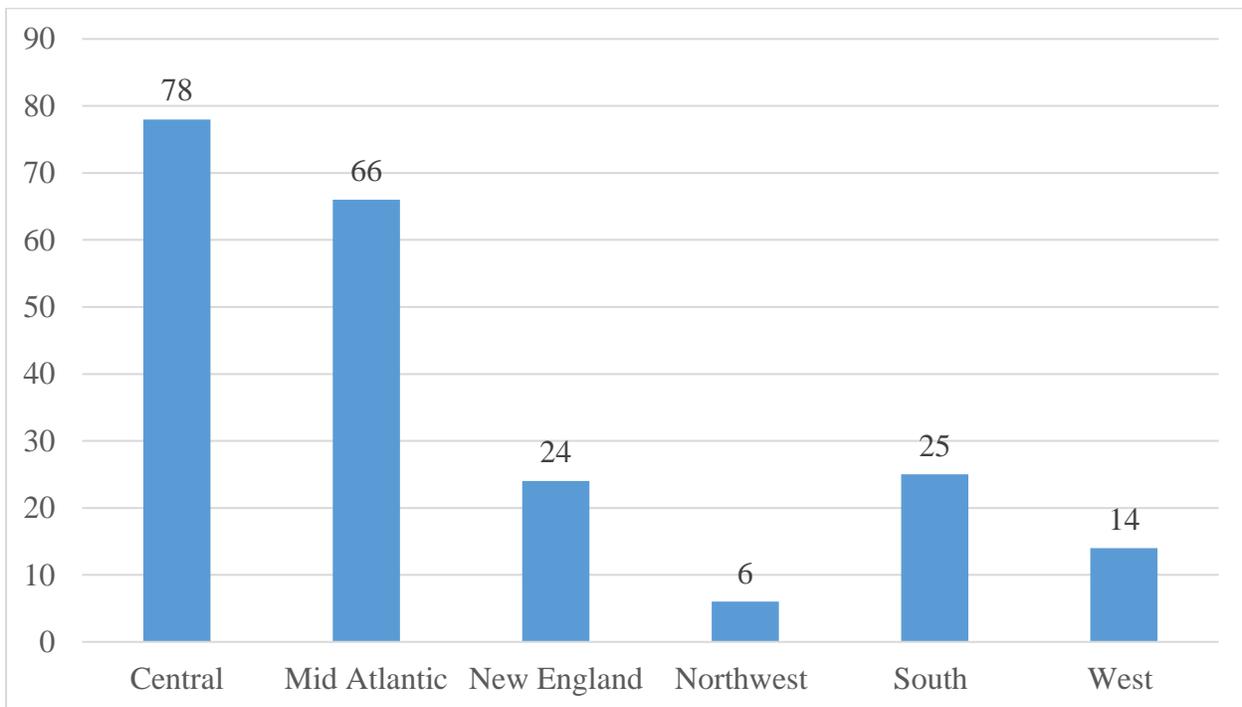


Thirty-seven percent (n=78) of the institutions were located in the Central region, based on the states located within it by the Higher Learning Commission. Thirty-one percent (n=66) of the institutions were located within the Mid-Atlantic region, based on the states in the Middle States Commission on Higher Education. Eleven percent (n=24) of the institutions were located in the New England region, based on the states identified in that category by the New England Commission on Higher Education. Three percent (n=6) of the institutions were located within the Northwest region, according to the Northwest Commission on Higher Education. Twelve percent (n=25) of the institutions were located in the South region, based categorizing of the Southern Commission on Higher Education. Seven percent (n=14) of the institutions were

located within the West region, based on the states located within the Western Association of Schools and Colleges, and the Accrediting Commission for Community and Junior Colleges. Finally, thirty-seven states and the District of Columbia had at least one Catholic college or university. Pennsylvania had the largest number of institutions in a single state (n=27). Figure 2 shows the frequency of Catholic colleges and universities located within each geographic region based on the six regional accreditation agencies as recognized by the U. S. Department of Education.

Figure 2

*Geographic Region*



Two-hundred and thirteen Catholic colleges and universities that participated in Title IV funding reported their financial responsibility composite score. The mean response for financial responsibility composite scores was 2.377 (n=213). Responses ranged from -0.7 to 3.0. Ninety-

four percent (n=200) of institutions had a score of 1.5 or more for their financial responsibility composite score, indicating that they were financially responsible by the U.S. Education Department standards. Four percent (n=9) of institutions had financial responsibility composite scores below a 1.0, meaning they were not considered financially responsible by U.S. Education Department standards, and were at risk of losing access to Title IV funding. This was due to the requirement that institutions be financially responsible, or provide additional information and meet additional requirements, or lose access to Title IV funding. Figure 3 shows a histogram of the frequency of financial responsibility composite scores from the 213 Catholic colleges and universities.

Figure 3

*Financial Responsibility Composite Scores*



### **Inferential Statistics**

According to Privitera (2017), “we often use inferential statistics to analyze and evaluate the data because we are interested in describing the population of interest based on data measured in a sample” (p. 460). In this research, a census was conducted due to the small population and feasibility to study the entire population. Inferential statistics will analyze and evaluate the data by describing the population. Since this is a census study of all Catholic colleges and universities that participate in Title IV funding, this study is a descriptive, non-experimental design. As a census study the results cannot be generalized to a broader population of colleges and universities that are dissimilar.

**Census size.** In this study, the population consisted of 213 Catholic colleges and universities. According to the United States Conference of Catholic Bishops (2019) there are 247 Catholic colleges and universities. Thirty-four Catholic institutions were removed from the study as they did not participate in Title IV funding because they did not report a financial responsibility composite score and did not report a student loan default rate. Both of these variables were part of the federal requirements for participation in Title IV funding.

**Financial responsibility composite score and student loan default rate.** In order to explore the relationship, if any, between an institution’s score on the financial responsibility test, as determined by the U.S. Education Department and the institution’s student loan default rate, a Pearson correlation coefficient was used. A Pearson correlation coefficient was used to examine the relationship between two factors measured on an interval or ratio scale (Privitera, 2017). For this research question, data from the financial responsibility composite scores were on an interval scale, and student loan default rates were on a ratio level scale. Through this test, the researcher was able to ascertain whether there were a statistically significant relationship between financial

responsibility composite scores and student loan default rates. The following tables shows the Pearson correlation coefficient of financial responsibility composite score and student loan default rate using a two-tailed correlation.

Table 3

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate*

		Composite Score	Default Rate
Composite Score	Pearson Correlation	1	-.177**
	Sig. (2-tailed)		.010
	N	213	213
Default Rate	Pearson Correlation	-.177**	1
	Sig. (2-tailed)	.010	
	N	213	213

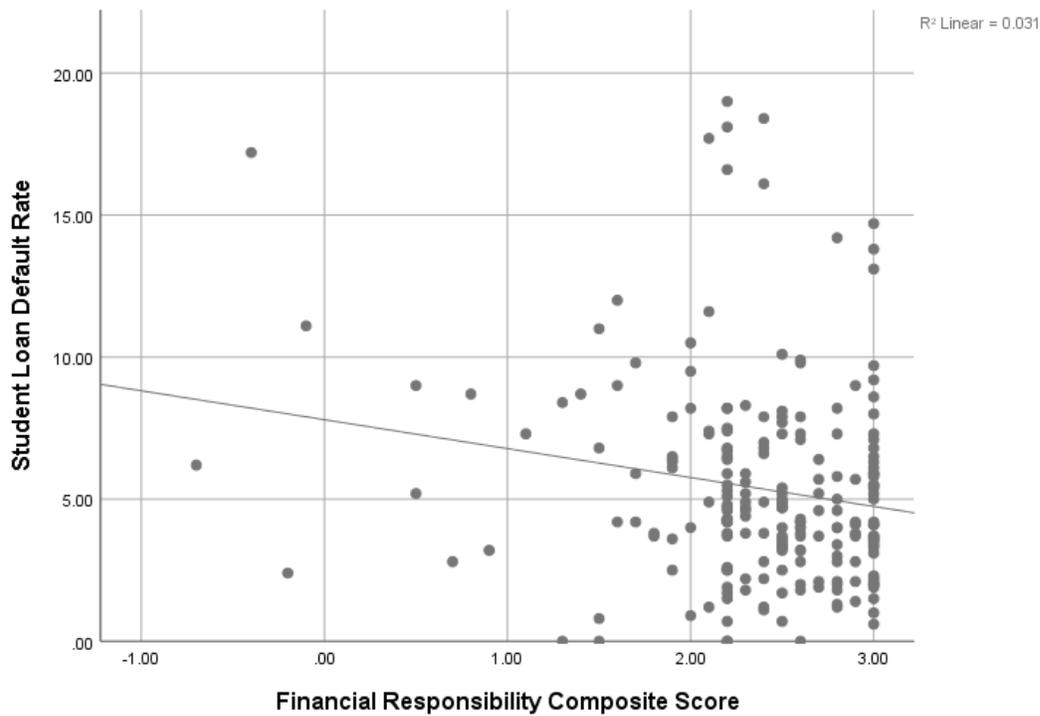
\*\* . Correlation is significant at the 0.01 level (2-tailed).

The direction of the relationship between the predictor variable (financial responsibility composite score) and the criterion variable (student loan default rate) was a negative correlation,  $r = -.18$ ,  $n = 213$ ,  $p = .01$ . In this correlation, the higher the institution’s financial responsibility composite score, the lower the institution’s student loan default rate. While the correlation coefficient showed statistical significance for this test, the correlation coefficient of  $-.18$  suggested a small effect size (Cohen, 1988). The coefficient of determination “is a measure of proportion of variance used to describe effect size for data analyzed using correlation coefficient” (Privitera, 2017, p. 480). For this correlation, the coefficient of determination is  $r^2 = 0.03$ . The coefficient of determination indicated 3% of shared variance between the two variables, meaning that the financial responsibility composite score helped explain three percent

of the variance in student loan default rate. Figure 4 provides a visual of the relationship between financial responsibility composite score and student loan default rates.

Figure 4

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate*



In order to understand the influence of the demographic variable of religious order on the relationship between financial responsibility composite score and student loan default rate, a Pearson correlation was conducted for all religious orders with four or more institutions. In order to use a .05 level of significance with a two-tailed test, there must be a minimum of four institutions ( $n$ ) when using a Pearson correlation coefficient (Privitera, 2015). The other institutions were removed due to the small number of institutions.

Table 4

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate by Religious Order*

<b>Religious Order</b>	<b>r</b>	<b>n</b>	<b>p</b>	<b>r<sup>2</sup></b>
Benedictine	-.302	12	.339	.091
Diocesan	-.617	10	.057	.380
Dominican	-.371	13	.212	.138
Franciscan	-.316	20	.174	.100
Holy Cross	-.204	9	.598	.042
Independent	-.470	18	.049	.221
Jesuit	-.428	28	.023	.183
Lasallian	-.631	5	.254	.398
Mercy	-.233	15	.403	.054
Sisters of Charity	.573	10	.083	.328
Sisters of Saint Joseph	-.252	9	.514	.064

Both Independent and Jesuit institutions met statistical significance. Independent institutions had a Pearson correlation of  $r = -.47$ ,  $n = 18$ ,  $p = .05$ . Jesuit institutions had a Pearson correlation of  $r = -.43$ ,  $n = 28$ ,  $p = .02$ . Diocesan, Lasallian, and Sisters of Charity did not have statistical significance in their Pearson correlation, with a medium effect size (Cohen, 1988). Diocesan institutions had  $r^2 = 0.38$ , which indicated 38% of shared variance. Lasallian institutions had  $r^2 = 0.40$ , which indicated 40% of shared variance. Sisters of Charity institutions had  $r^2 = 0.33$ , which indicated 33% of shared variance. The other religious orders each had a

small effect size according to Cohen’s (1988) effect size when looking at the relationship of financial responsibility composite score and student loan default rate.

In order to understand the influence of the demographic variable of program length on the relationship between financial responsibility composite score and student loan default rate, a Pearson correlation was conducted for the program length of Bachelor’s Degree and Master’s Degree or Doctoral Degree. A Pearson correlation was not conducted for the two-year non-degree, Associate’s Degree, First Professional Degree, or Non-Degree Three Plus Years due to the small number of institutions within these variables. The results of the Pearson correlation can be found in Table 5.

Table 5

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate by Program Length*

<b>Program Length</b>	<b><i>r</i></b>	<b><i>n</i></b>	<b><i>p</i></b>	<b><i>r</i><sup>2</sup></b>
Bachelor’s Degree	-.351	18	.153	.123
Master’s Degree or Doctoral Degree	-.173	189	.017	.030

Master’s degree or Doctoral Degree meet statistical significance. Master’s Degree or Doctoral Degree institutions had a Pearson correlation of  $r = -.17$ ,  $n = 189$ ,  $p = .02$ . Bachelor’s Degree institutions did not have statistical significance in their Pearson correlation. Both Bachelor’s Degree institutions and Master’s Degree or Doctoral Degree institutions had a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and student loan default rate.

In order to understand the influence of the demographic variable of geographic region on the relationship between financial responsibility composite score and student loan default rate, a Pearson correlation was conducted for each region. All geographic regions had more than four institutions, with the Northwest geographic region being the geographic region with the smallest number of institutions at six. Since all geographic regions had more than four institutions, a Pearson correlation was conducted for all geographic regions.

Table 6

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate by Geographic Region*

<b>Geographic Region</b>	<b><i>r</i></b>	<b><i>n</i></b>	<b><i>p</i></b>	<b><i>r</i><sup>2</sup></b>
Central	-.252	78	.026	.064
Mid-Atlantic	.015	66	.903	.000
New England	-.425	24	.038	.181
Northwest	-.330	6	.523	.109
South	-.005	25	.980	.000
West	-.338	14	.237	.114

Both the Central and New England geographic regions met statistical significance.

Central geographic region institutions had a Pearson correlation of  $r = -.25$ ,  $n = 78$ ,  $p = .03$ . New England geographic region institutions had a Pearson correlation of  $r = -.43$ ,  $n = 24$ ,  $p = .04$ . All six geographic regions had a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and student loan default rate.

**Financial responsibility composite score and enrollment.** In order to explore the relationship, if any, between an institution’s score on the financial responsibility test as determined by the U.S. Education Department and the institution’s student enrollment a Pearson correlation coefficient was used. For this research question, data from the financial responsibility composite scores was on an interval scale and enrollment was on a ratio scale. This test was used to determine whether there was a statistically significant relationship between financial responsibility composite scores and student loan default rates.

Table 7

*Pearson correlation of Financial Responsibility Composite Score and Enrollment*

		<b>Pearson Correlation</b>	
		Composite Score	Enrollment
Composite Score	Pearson Correlation	1	.190**
	Sig. (2-tailed)		.005
	N	213	213
Enrollment	Pearson Correlation	.190**	1
	Sig. (2-tailed)	.005	
	N	213	213

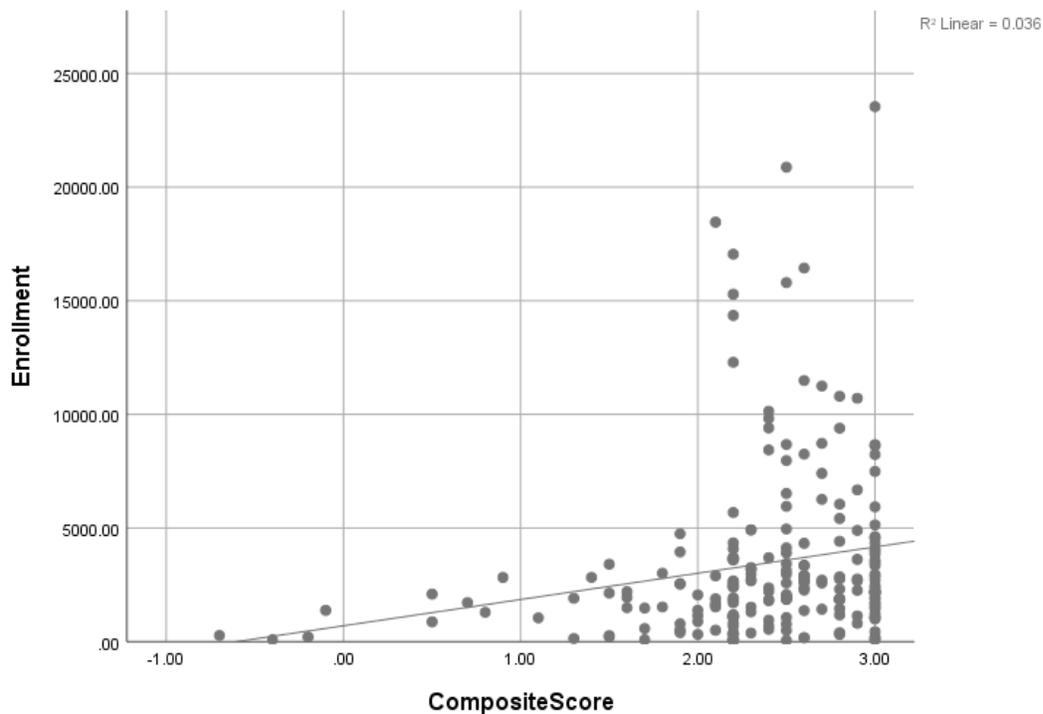
\*\* . Correlation is significant at the 0.01 level (2-tailed).

The direction of the relationship between the predictor variable (financial responsibility composite score) and the criterion variable (enrollment) was a positive correlation,  $r = .19$ ,  $n = 213$ ,  $p = .005$ . In this correlation, the higher the institutions’ financial responsibility composite score, the higher the institution’s enrollment, and vice-versa. While the correlation coefficient

showed statistical significance for this test, the correlation coefficient of .19 suggested a small effect size (Cohen, 1988). For this correlation, the coefficient of determination is 0.04, which indicated four percent of shared variance between the two variables, meaning that financial responsibility composite score helped explain four percent of the variance in enrollment. Figure 5 provides a visual of the relationship between financial responsibility composite score and enrollment.

Figure 5

*Pearson correlation of Financial Responsibility Composite Score and Enrollment*



In order to understand the influence of demographic variables on the relationship between financial responsibility composite score and enrollment, a Pearson correlation was conducted for all religious orders with four or more institutions. The other religious orders were removed due to the size of the population being less than four. Table 8 shows the Pearson correlation,  $n$ ,  $p$ -

value, and effect size for each religious order individually examined based on having more than four institutions.

Table 8

*Pearson correlation of Financial Responsibility Composite Score Enrollment by Religious Order*

<b>Religious Order</b>	<b>r</b>	<b>n</b>	<b>p</b>	<b>r<sup>2</sup></b>
Benedictine	.139	12	.668	.019
Diocesan	.369	10	.294	.086
Dominican	.213	13	.485	.045
Franciscan	.391	20	.089	.153
Holy Cross	-.082	9	.833	.007
Independent	.385	18	.115	.148
Jesuit	.172	28	.381	.030
Lasallian	.327	5	.592	.107
Mercy	-.156	15	.580	.024
Sisters of Charity	.349	10	.323	.122
Sisters of Saint Joseph	.142	9	.715	.020

For this Pearson correlation none of the religious orders has statistical significance. The religious order that comes the closest to having statistical significance is Franciscan with  $r = .39$ ,  $n = 20$ ,  $p = .09$ . All of the religious orders have a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and enrollment.

In order to understand the influence of the demographic variable of program length on the relationship between financial responsibility composite score and enrollment, a Pearson correlation was conducted for the program lengths of Bachelor's Degree and Master's Degree or Doctoral Degree. A Pearson correlation was not run for the two-year non-degree, Associate's Degree, First Professional Degree, or Non-Degree Three Plus Years due to the small population for these variables. The results of the Pearson correlations can be found in Table 9.

Table 9

*Pearson correlation of Financial Responsibility Composite Score and Enrollment by Program Length*

<b>Program Length</b>	<b><i>r</i></b>	<b><i>n</i></b>	<b><i>p</i></b>	<b><i>r</i><sup>2</sup></b>
Bachelor's Degree	.338	18	.170	.114
Master's Degree or Doctoral Degree	.154	189	.034	.024

Master's Degree or Doctoral Degree met statistical significance. Master's Degree or Doctoral Degree institutions had a Pearson correlation of  $r = .15$ ,  $n = 189$ ,  $p = .03$ . Bachelor's Degree institutions did not have statistical significance in their Pearson correlation. Both Bachelor's Degree institutions and Master's Degree or Doctoral Degree institutions had a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and enrollment.

In order to understand the influence of the demographic variable of geographic region on the relationship between financial responsibility composite score and enrollment, a Pearson correlation was conducted for each geographic region. All six geographic regions had more than

four institutions, so a Pearson correlation was conducted for each geographic region. The results of the Pearson correlations can be found in Table 10.

Table 10

*Pearson correlation of Financial Responsibility Composite Score and Student Loan Default Rate by Geographic Region*

<b>Geographic Region</b>	<b><i>r</i></b>	<b><i>n</i></b>	<b><i>p</i></b>	<b><i>r</i><sup>2</sup></b>
Central	.182	78	.110	.033
Mid-Atlantic	.116	66	.355	.013
New England	.199	24	.352	.040
Northwest	.469	6	.349	.220
South	.312	25	.128	.097
West	.335	14	.241	.112

None of the six geographic regions had statistical significance in their Pearson correlation. More importantly, all six geographic regions had a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and enrollment.

### **Chapter Summary**

This chapter provided the findings of the statistical analyses through descriptive and inferential statistics in the forms of figures and narrative descriptions. Descriptive statistics were discussed for religious order, program length, geographic region, and financial responsibility composite scores. The findings related to the predictor and criterion variables showed statistically significant relationships but a small effect size when looking at financial

responsibility composite scores and student loan default rates when using the full census of 213 Catholic colleges and universities. When examining specific religious orders both Independent and Jesuit institutions met statistical significance. The religious orders of Diocesan, Lasallian, and Sisters of Charity did not have a statistically significant relationship, but did have a medium effect size in the relationship between financial responsibility composite scores and student loan default rate. There are no program lengths or geographic region that had larger than a small effect size for the relationship between financial responsibility composite scores and student loan default rate. The findings related to the predictor and criterion variables showed statistically significant relationships, but a small effect size when looking at financial responsibility composite scores and enrollment when using the full census of 213 Catholic colleges and universities. There were no religious orders, program lengths, or geographic regions that had larger than a small effect size for the relationship between financial responsibility composite scores and enrollment. Therefore, the findings rejected the null hypothesis for both research questions. Chapter five will further explore the practical significance of this research, inferred from the trends noted above in each analysis.

### **Chapter Five: Conclusions and Recommendations**

Creswell (2014) stated “quantitative research is an approach for testing objective theories by examining the relationship between variables” (p. 4). This study was designed to further explore financial responsibility composite scores, specifically within Catholic higher education. The information gives educational leaders information on financial responsibility composite scores and the ways in which they may influence economic models of Student Choice Theory. In an increasingly competitive market for students, any information regarding higher education finance may benefit educational leaders.

The Fall 2019 semester was the eighth consecutive year that fall enrollments had declined across all higher education institutions (National Student Clearinghouse, 2019). Given the competitiveness for students across higher education, it is critical that higher education leaders are able to understand the financial motivators that influence college selection. Student Choice Theory predicts which institution a student will decide to attend for college (Hossler, Schmit, & Vesper, 1999; Manski & Wise, 1983). Economic Student Choice Theory models suggest that students use a cost-benefit analysis in their decision-making process, selecting the lowest-cost institution with the highest-quality education (Hossler, Schmit, & Vesper, 1999). The college selection decision is based upon tuition and other college costs, as well as the financial aid package as students and their families are concerned about the rising cost of college (Hossler, Schmit, & Vesper, 1999; St. John & Asker, 2001). Knowing this, higher education leaders can better predict and respond to student needs and concerns, making intentional decisions about financial aid awards and marketing financial factors to these prospective students in order to influence each students’ college choice (St. John & Asker, 2001).

The reliance on student loans has come about from changes at the federal level of higher education finance (Baum, Davis Bell, & Sturtevant, 2010; Hearn, 2001). The Higher Education Act of 1965 was designed to increase and improve need-based aid for higher education through Pell Grants, Supplemental Educational Opportunity Grants, and loans (Hearn, 2001). The access to need-based aid is critical, especially for low-income students, which is of special concern to Catholic colleges and universities that were often founded on the principle of educating the poor within their communities (Rizzi, 2018). As the reliance on student loans has increased, so has the default rate of repayment of these loans (Mueller & Yannelis, 2019). This research provides additional knowledge concerning financial responsibility composite score and the relationship with both student loan default rate and enrollment. This knowledge informs educational leaders of the usefulness of this information for their institution in the ongoing desire to understand higher education finance issues and concerns.

### **Discussion of the Results**

The purpose of this non-experimental, descriptive research study was to understand the relationship of the demographic variables of religious order, program length, and geographic region with the score that a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive and inferential statistics. The study sought to understand the relationship between the financial responsibility composite score and student loan default rate. Additionally, the study sought to understand the relationship between the financial responsibility composite score and enrollment. The study questioned whether financial responsibility composite scores should be a consideration in economic factors of college student selection. Additionally, the study posited higher education leaders could use this information to

examine the positions of their universities as they attend to important functions like program development, recruitment, and retention..

**Religious Order.** Within Catholic higher education the founding religious order distinguishes institutions from one another. All Catholic colleges and universities uphold Catholic mission, however, each religious order maintains their own mission and values, distinct from one another. Catholic colleges and universities use their religious order charisms to ground and to guide their work in educational leadership (Saunders, 2010). A deeper understanding of religious order informs educational leaders of potential best practices that could better improve their own practices.

This study showed demographic information about the 213 Catholic colleges and universities that participate in Title IV funding. Fifty-five percent (n=29) of the religious orders oversaw a single institution, and 44% (n=24) of the religious orders oversaw multiple institutions, ranging from two to 28 institutions. Eighteen institutions are independent and are not connected to a religious order.

Both Independent and Jesuit institutions met statistical significance when looking at the relationship between financial responsibility composite score and student loan default rate. Since this research was a population study, statistical significance was not as impactful as effect size and understanding the practical significance of the relationships between variables. Diocesan, Lasallian, and Sisters of Charity do not have statistical significance in their Pearson correlation, but do have a medium effect size according to Cohen's (1988) effect size ranging from 33% to 40% shared variance. The practical significance of a medium effect size informs educational leaders that further investigation into practices by Diocesan, Lasallian, and Sister of

Charity institutions may garner best practices in the field in how to utilize the relationship between financial responsibility composite score and student loan default rate.

No religious orders have statistical significance when looking at the relationship between financial responsibility composite score and enrollment. All of the religious orders have a small effect size according to Cohen's (1988) effect size when looking at the relationship of financial responsibility composite score and enrollment. With no statistical significance and only a small effect size, religious order does not appear to be a useful demographic variable when examining the relationship between financial responsibility composite score and enrollment. While this information added to the body of knowledge available, it did not provide further understanding of financial responsibility composite score and enrollment in a useful way for educational leaders.

**Program Length.** Program length at Catholic colleges and universities grew out of the six-year German model into fully accredited institutions generally offering a four-year bachelor's degree (Rizzi, 2018). As Catholic institutions grew the majority of institutions, 89% (n=189) now offer a Master's Degree or Doctoral Degree as their highest degree. Eight percent (n=18) offered a Bachelor's Degree as their highest degree. There were a small number of institutions with other program lengths including: Non-Degree 2 years (1), Associate's Degree (3), First Professional Degree (1), and Non-Degree 3 Plus Years (1). There were no institutions with a program length of Short-Term (300–599 hours), Graduate/Professional ( $\geq$  300 hours), Non-Degree (600–899 hours), Non-Degree 1 Year (900–1799 hours), Professional Certification, or Undergraduate (Previous Degree Required).

Master's Degree or Doctoral Degree institutions met statistical significance when looking at the relationship of financial responsibility composite score and student loan default rate.

Bachelor's Degree institutions do not have statistical significance in their Pearson correlation for financial responsibility composite score and student loan default rate. Both Bachelor's Degree institutions and Master's Degree or Doctoral Degree institutions have a small effect size according to Cohen's (1988) effect size when looking at the relationship of financial responsibility composite score and student loan default rate. This shows educational leaders that by providing either master's degree or doctoral degree they may have an increase in their financial responsibility composite score or a decrease in their student loan default rate, however, it would have a small effect. This information did show educational leaders the influence of the program level on the relationship between financial responsibility composite score and student loan default rate.

Master's Degree or Doctoral Degree institutions met statistical significance when looking at the relationship between financial responsibility composite score and enrollment. Bachelor's Degree institutions do not have statistical significance in their Pearson correlation for the relationship between financial responsibility composite score and enrollment. Both Bachelor's Degree institutions and Master's Degree or Doctoral Degree institutions have a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and enrollment.

**Geographic Region.** Catholic colleges and universities are located across the country as Catholic higher education followed immigration patterns within the United States (Rizzi, 2018). The Central region has the largest population with 37% (n=78) of the Catholic institutions. The Northwest region has the small population with three percent (n=6) of the Catholic institutions.

Both the Central and New England geographic regions meet statistical significance when looking at the relationship between financial responsibility composite score and student loan

default rate. All six geographic regions have a small effect size, according to Cohen's (1988) effect size, when looking at the relationship of financial responsibility composite score and student loan default rate. The Central and New England geographic regions have the largest number of Catholic colleges and universities, which could influence the statistical significance as the larger the sample, the easier it is to gain statistical significance with a Pearson correlation (Pallant, 2013).

None of the six geographic regions had statistical significance in their Pearson correlation for financial responsibility composite score and enrollment. All six geographic regions had a small effect size (Cohen, 1988) when looking at the relationship of financial responsibility composite score and enrollment. With no practical significance in geographic region, educational leaders know that while Catholic institutions historically followed immigration patterns, as institutions have grown over the years, the geographic region does not hold the same importance it may once have held. While all effects sizes were small, the Northwest region had the greatest shared variance at 22%. This could be impacted by having the fewest institutions, but is important to note, as the next largest shared variance was 11% in the West.

**Relationship between financial responsibility composite scores and student loan default rates.** There was a negative, statistically significant correlation between financial responsibility composite score and student loan default rate. Meaning, the higher the institutions' financial responsibility composite score, the lower the institution's student loan default rate. While the correlation coefficient shows statistical significance for this test, the correlation coefficient shows a small effect size (Cohen, 1988) of 3% of shared variance between the two variables, meaning that the financial responsibility composite score helped explain three percent of the variance in student loan default rate. This study showed that while there is a

statistically significant relationship, there is a small practical significance in the relationship between financial responsibility composite score and student loan default rate. As educational leaders seek to educate their students on financial literacy, this information showed that institutional financial responsibility is not a variable that is a quick solution for the growing problem of student loan default rates.

### **Relationship between financial responsibility composite scores and enrollment.**

There was a positive, statistically significant correlation between financial responsibility composite score and enrollment. While the correlation coefficient shows statistical significance for this test, the correlation coefficient showed a small effect size set forth by Cohen's (1988) effect size of 4%, meaning that financial responsibility composite score helped explain four percent of the variance in enrollment. Enrollment does not appear to be the driving factor for an improved financial responsibility composite score. The arms race for enrollment may resolve the immediate financial needs of an institution, but does not offer practical significance in improving financial responsibility. Financial responsibility composite score is calculated by the primary reserve ratio, which measure the institution's viability and liquidity; equity ratio, which measures the institution's capital resources and ability to borrow money; net income ratio, which measures the institution's profitability (Federal Student Aid, 2019). Increasing enrollment increases income, but this is only one aspect of overall financial responsibility. While there is not statistical practical significance, this research shows educational leaders that increasing enrollment is not a quick fix to financial challenges.

### **Challenges of the Study**

The first challenge of this study was the availability of the data. The data were collected from existing national data sets. In order to have data consistent across multiple variables, data

were used from the 2015-2016 fiscal year. Not having more current data was a challenge as those results may have impacted these results. Additionally, there was not one source that provided all 53 religious orders for Catholic colleges and universities.

A second challenge was the clarity of the data. The U.S. Department of Education calculated financial responsibility composite scores based on three ratios; primary reserve ratio, equity ratio, and net income ratio. The U.S. Department of education has a consistent formula to calculate a financial responsibility composite score; however, institution specific financial records were not utilized in this study.

A third challenge was the number of variables that could have been included in this research study. While this research study was designed to add to the body of knowledge based on existing research in the field, it was not inclusive of all potential demographic variables. The study justified why the variables studied were selected, but were not inclusive of all demographic variables that could be and should be studied related to financial responsibility composite scores. This has been addressed further in recommendations for future research.

### **Implications of the Study**

The results of the study are important for higher education leaders, specifically for Catholic higher education, as results informed leaders of further demographic variables related to financial responsibility composite score at Catholic colleges and universities. As educational leaders work to address financial issues and concerns within their institutions, this study further informs the statistical and practical significance of religious order, program length, and geographic region within the relationship of financial responsibility composite score and student loan default rate as well as financial responsibility composite score and enrollment.

The research study showed that simply increasing enrollment did not have a practically significant impact on financial responsibility composite score. While increasing enrollment may bring in more revenue, this income is not a solution for larger financial responsibility concerns. Higher education finance is a complicated issue, and does not have a simple solution. Educational leaders must seek to improve financial concerns from multiple avenues, and enrollment is not a quick fix to financial problems. The information from this study will provide information to both financially struggling institutions, as well as those in good standing in the hope of avoiding financial challenges to this degree.

Catholic higher educational leaders gained knowledge of how religious order influenced financial responsibility composite score and student loan default rate and financial responsibility composite score and enrollment. This information could lead to understanding of best practices within Catholic higher education. As Catholic institutions seek to showcase their distinctiveness from both public education and other private education options, Catholic educational leaders can seek out information from those religious orders having the largest practical significance.

### **Recommendations for Future Research**

This research study was conducted to add to the body of knowledge concerning financial responsibility composite scores. This study built on the current literature available by adding information specific to Catholic higher education to the field, alongside research concerning HBCUs and Lutheran higher education. After conducting the study and analyzing and interpreting the data there are several recommendations for future research.

First, it would be beneficial to expand on the research of financial responsibility composite scores. There is a general lack of research on financial responsibility composite scores, even though the Department of Education has made these available since 1997. Research

should focus on financial responsibility composite scores and other variables to determine which, if any, variables may have a stronger correlation with financial responsibility. Potential areas include admission standards (such as high school GPA, SAT or ACT scores) acceptance rates, retention rates from first year to second year, and graduation rates. These variables are a part of the Student Choice Theory process, either from the student or the university, and may provide more insight to financial responsibility composite scores.

Second, this research should be expanded to other institution types. Financial responsibility composite scores are limited to private institutions, and prior research on financial responsibility composite scores only included information on HBCU's and Lutheran institutions. This research study added information on Catholic higher education to the body of knowledge. Future research should focus on other populations within private education, potentially including for-profit education or other religiously affiliated institutions. The research should also expand on the understanding of financial responsibility composite scores at universities focused on access versus universities with highly selective enrollment. Catholic higher education includes both of these missions. However, studying these separately across private institutions, and not within a specific religious context, may add beneficial knowledge to the body of research available on financial responsibility composite scores.

Third, a mixed methods research approach should be conducted to further understand religious order and financial responsibility composite score. Creswell (2014) stated that a mixed methods approach is utilized when the "combination of qualitative and quantitative approaches provides a more complete understanding of the research problem than either approach alone" (p. 4). Religious order was the only area of the study to have a medium effect size and show practical significance. A mixed methods research study would allow for further insight into the

differences between the religious orders, and potentially explain why certain religious orders have a practical significance and others religious orders do not have a practical significance when looking at the relationship between financial responsibility composite score and student loan default rates. A mixed methods approach would allow the most successful campuses' educational leaders to answer questions specific to their institutions' approaches toward the variables within this study that are adaptable. The philosophy of financial responsibility would be shown alongside the actual data of financial responsibility composite score and student loan default rate.

### **Chapter Summary**

The results of this research study provided a deeper understanding of financial responsibility composite scores at Catholic colleges and universities. The purpose of this non-experimental, descriptive research study was to understand the relationship of the demographic variables of religious order, program length, and geographic region with the score a Catholic institution receives on the U.S. Education Department test for financial responsibility using descriptive and inferential statistics. The study sought to understand the relationship between the financial responsibility composite score and student loan default rate. Additionally, the study sought to understand the relationship between the financial responsibility composite score and enrollment.

This research study found statistical significance in the relationship between financial responsibility composite score and student loan default rate and financial responsibility composite score and enrollment. However, the study only found a small effect size and no practical significance in the relationship between financial responsibility composite score and student loan default rate and financial responsibility composite score and enrollment. The results

of this study support that higher education finance, student loan default rates, and enrollment are all complex systems with complicated challenges that lack simple solutions. Student Choice Theory addresses the importance of tackling these complicated issues to attract new students in an increasingly competitive college admissions market. Additionally, addressing higher education finance needs allows institutions to retain students as they persist towards graduation, as college affordability has an indirect relationship with both persistence and graduation (St. John & Asker, 2001).

This chapter addresses additional gaps of knowledge that exist and future research that could address these gaps in the literature. While this research study added to the body of knowledge for financial responsibility composite scores, there is more work to be done in this area of research within higher education finance. Privitera (2017) stated “we systematically record data, and we make decisions on the basis of these data as well. The decisions we make in science often relate to the populations we are interested in” (p. 459). As stated earlier in the guidelines at the end of each of the variables analyzed in this research, these findings hold the potential to inform educational leaders within Catholic higher education with important and usable data that could positively affect choices they make when serving their students.

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## Appendix A

### Nominal Data for Religious Order

Table 11

*Nominal Data for Religious Orders*

Religious Order	Nominal Data Code
Adorers of the Blood of Christ	1
Augustinian	2
Augustinians of the Assumption	3
Basilian	4
Benedictine	5
Benedictine Monks of Saint Joseph	6
Brothers of Christian Instruction	7
Cabrinian	8
Congregation of Christian Brothers	9
Congregation of Divine Providence	10
Congregation of Sisters of St. Agnes	11
Congregation of the Holy Spirit	12
Congregation of the Most Holy Name	13
Diocesan	14
Dominican	15
Felician Sisters	16
Franciscan	17

Franciscan Missionaries of Our Lady	18
Grey Nuns of the Sacred Heart	19
Holy Cross	20
Independent	21
Jesuit	22
Lasallian	23
Mercy	24
Missionaries of the Holy Apostles	25
Missionary Oblates of Mary Immaculate	26
Norbertine	27
Oblates St. Francis de Sales	28
Order of Preachers	29
Pontifical	30
Poor Handmaids of Jesus	31
Religious of the Sacred Heart of Mary	32
School Sisters of Notre Dame	33
Servants of the Immaculate Heart of Mary	34
Sisters of Charity	35
Sisters of Mercy	36
Sisters of Notre Dame	37
Sisters of Notre Dame de Namur	38
Sisters of Providence	39
Sisters of Saint Joseph	40

Sisters of St. Anne	41
Sisters of St. Joseph of Peace	42
Sisters of the Blessed Sacrament	43
Sisters of the Holy Family	44
Sisters of the Holy Names of Jesus and Mary	45
Sisters of the Presentation of Mary	46
Society of Mary	47
Society of St. Edmund	48
Society of the Divine Word	49
Society of the Holy Child Jesus	50
Society of the Precious Blood	51
The Sisters of the Third Order of St. Francis	52
Ursuline	53
Vincentian Fathers	54

## Appendix B

### Nominal Data for Program Length

Table 12

*Nominal Data for Program Length*

<b>Program Length</b>	<b>Nominal Data Code</b>
Short-Term (300–599 hours)	1
Graduate/Professional ( $\geq 300$ hours)	2
Non-Degree (600–899 hours)	3
Non-Degree 1 Year (900–1799 hours)	4
Non-Degree 2 Years (1800–2699 hours)	5
Associate's Degree	6
Bachelor's Degree	7
First Professional Degree	8
Master's Degree or Doctoral Degree	9
Professional Certification	10
Undergraduate (Previous Degree Required)	11
Non-Degree 3 Plus Years ( $\geq 2700$ hours)	12
Two-Year Transfer	13

**Appendix C**

**Nominal Data for Geographic Region**

Table 13

*Nominal Data for Geographic Region*

<b>Geographic Region</b>	<b>Accreditation Agency</b>	<b>States Located within the Geographic Region</b>	<b>Nominal Data Code</b>
Central	Higher Learning Commission	AZ, AR, CO, IL, IN, IA, KS, MI, MN, MO, NE, NM, ND, OH, OK, SD, WV, WI, WY	1
Mid Atlantic	Middle States Commission on Higher Education	DE, District of Columbia, MD, NJ, NY, PA	2
New England	New England Commission on Higher Education	CT, ME, MA, NH, RI, VT	3
Northwest	Northwest Commission on Higher Education	AK, ID, MT, NV, OR, UT, WA	4
South	Southern Commission on Higher Education	AL, FL, GA, KY, LA, MI, NC, SC, TN, TX, VA	5
West	Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges	CA, HI	6

## Appendix D

## Number of Institutions per Religious Order

Table 14

*Number of Institutions per Religious Order*

<b>Religious Order</b>	<b>Number of Institutions</b>
Adorers of the Blood of Christ	1
Augustinian	2
Augustinians of the Assumption	1
Basilian	2
Benedictine	12
Benedictine Monks of Saint Joseph	2
Brothers of Christian Instruction	1
Cabrinian	1
Congregation of Christian Brothers	1
Congregation of Divine Providence	3
Congregation of Sisters of St. Agnes	1
Congregation of the Holy Spirit	1
Congregation of the Most Holy Name	1
Diocesan	10
Dominican	13
Felician Sisters	1
Franciscan	20

Franciscan Missionaries of Our Lady	1
Grey Nuns of the Sacred Heart	1
Holy Cross	9
Independent	18
Jesuit	28
Lasallian	5
Mercy	15
Missionaries of the Holy Apostles	1
Missionary Oblates of Mary Immaculate	1
Norbertine	1
Oblates St. Francis de Sales	1
Order of Preachers	3
Pontifical	1
Poor Handmaids of Jesus	1
Religious of the Sacred Heart of Mary	2
School Sisters of Notre Dame	2
Servants of the Immaculate Heart of Mary	3
Sisters of Charity	10
Sisters of Mercy	1
Sisters of Notre Dame	2
Sisters of Notre Dame de Namur	3
Sisters of Providence	1
Sisters of Saint Joseph	9

Sisters of St. Anne	1
Sisters of St. Joseph of Peace	1
Sisters of the Blessed Sacrament	1
Sisters of the Holy Family	1
Sisters of the Holy Names of Jesus and Mary	1
Sisters of the Presentation of Mary	2
Society of Mary	3
Society of St. Edmund	1
Society of the Divine Word	1
Society of the Holy Child Jesus	1
Society of the Precious Blood	1
The Sisters of the Third Order of St. Francis	1
Ursuline	3
Vincentian Fathers	3

## Appendix E

## The 213 Catholic Colleges and Universities Utilized in this Research

Table 15

*The 213 Catholic Colleges and Universities Utilized in this Research*

University	Religious Order Code	Program Length Code	Geographic Location Code	Financial Responsibility Composite Score	Student Loan Default Rate	Enrollment
Albertus Magnus College	15	8	3	3.0	9.2	1515
Alvernia University	17	8	2	2.8	8.2	2856
Alverno College	17	8	1	2.4	7.0	2209
Ancilla Domini College	31	5	1	2.1	17.7	504
Anna Maria College	41	8	3	2.8	7.3	1451
Aquinas College	15	8	1	2.8	3.4	1894
Aquinas Institute of Theology	29	8	1	3.0	8.0	128
Assumption College	3	8	3	2.3	4.4	2675
Ave Maria School of Law	21	7	5	1.5	0.8	269
Ave Maria University	21	8	5	2.2	4.3	1110

Avila University	40	8	1	2.1	7.3	1885
Barry University	15	8	5	2.5	4.7	7971
Bellarmino University	21	8	5	3.0	4.2	3846
Belmont Abbey College	5	6	5	1.6	12.0	1495
Benedictine College	5	8	1	3.0	3.1	2189
Benedictine University	5	8	1	2.5	5.0	5954
Boston College	22	8	3	2.2	1.5	14354
Brescia University	53	8	5	3.0	9.7	1060
Briar Cliff University	17	8	1	2.0	10.5	1149
Cabrini University	8	8	2	2.2	8.2	2428
Caldwell University	15	8	2	1.5	6.8	2138
Calumet College of Saint Joseph	51	8	1	3.0	14.7	1100
Canisius College	22	8	2	2.5	3.2	3900
Cardinal Stritch University	17	8	1	2.3	8.3	3176
Carlow University	24	8	2	2.6	7.9	2272
Carroll College	14	8	4	3.0	2.3	1469
Catholic Theological Union	21	8	1	2.2	2.5	336
Chaminade University of Honolulu	47	8	6	3.0	6.5	2466
Chatfield College	53	5	1	2.8	14.2	396
Chestnut Hill College	40	8	2	1.6	9.0	1951
Christian Brothers University	23	8	5	2.4	7.9	1842
Clarke University	35	8	1	2.2	4.2	1075
College of Mount Saint Joseph	35	8	1	2.5	7.7	2073

College of Mount Saint Vincent	35	8	2	2.4	6.8	1807
College of Saint Benedict	5	6	1	3.0	1.0	1943
College of Saint Elizabeth	35	8	2	3.0	8.6	1247
College of Saint Joseph	40	8	3	2.2	19.0	327
College of Saint Mary	24	8	1	3.0	6.3	1001
College of Saint Scholastica	5	8	1	2.6	2.8	4329
College of the Holy Cross	22	6	3	2.3	1.8	2729
Creighton University	22	8	1	2.4	1.2	8435
De Paul University	54	8	1	3.0	4.1	23539
DeSales University	28	8	2	2.5	4.9	3136
Divine Word College	49	6	1	3.0	5.4	81
Dominican College	15	8	2	2.0	8.2	2061
Dominican House of Studies	29	8	2	2.2	0.0	90
Dominican School of Philosophy and Theology	29	8	6	2.5	4.7	57
Dominican University	15	8	1	2.4	4.9	3696
Dominican University of California	13	8	6	2.8	4.0	1863
Donnelly College	21	6	1	2.3	4.7	382
Duquesne University of the Holy Spirit	12	8	2	2.4	2.8	9404
D'Youville College	19	8	2	2.6	3.8	2909
Edgewood College	15	8	1	2.9	2.1	2678
Elms College	40	8	3	3.0	7.3	1712
Emmanuel College	38	8	3	1.6	4.2	2201

Fairfield University	22	8	3	3.0	1.9	5138
Felician University	17	8	2	2.5	10.1	1957
Fontbonne University	40	8	1	2.2	4.3	1713
Fordham University	22	8	2	2.2	2.6	15286
Franciscan Missionaries of Our Lady University	18	8	5	2.1	7.4	1651
Franciscan School of Theology	17	8	6	2.2	4.7	48
Franciscan University of Steubenville	17	8	1	2.6	3.2	2716
Gannon University	14	8	2	2.8	4.0	4416
Georgetown University	22	8	2	2.1	1.2	18459
Georgian Court University	24	8	2	3.0	5.2	2122
Gonzaga University	22	8	4	3.0	1.5	7491
Good Samaritan College of Nursing and Health Science	21	6	1	1.9	6.4	398
Gwynedd-Mercy College	24	8	2	2.7	4.6	2582
Hilbert College	17	8	2	2.4	6.6	946
Holy Apostles College & Seminary	25	8	3	3.0	5.8	442
Holy Cross College	20	6	1	1.7	9.8	578
Holy Family University	44	8	2	2.7	5.7	2711
Holy Name Medical Center School of Nursing	42	4	2	2.6	3.7	171
Holy Names University	45	8	6	1.1	7.3	1049
Immaculata University	34	8	2	2.3	5.2	2961

Iona College	9	8	2	3.0	5.5	3977
John Carroll University	22	8	1	2.2	3.8	3673
John Paul the Great Catholic University	21	8	6	2.8	1.2	317
King's College	20	8	2	2.8	5.0	2310
La Roche University	10	8	2	2.3	4.6	1523
La Salle University	23	8	2	2.2	4.6	5683
Labouré College	21	6	3	2.9	5.7	803
Le Moyne College	22	8	2	3.0	3.5	3478
Lewis University	23	8	1	2.9	3.8	6679
Loras College	14	8	1	1.8	3.7	1528
Lourdes University	17	8	1	2.1	11.6	1530
Loyola Marymount University	22	8	6	2.8	1.8	9392
Loyola University Chicago	22	8	1	2.6	3.2	16437
Loyola University Maryland	22	8	2	2.8	2.0	6050
Loyola University New Orleans	22	8	5	2.2	6.5	4087
Madonna University	17	8	1	2.2	5.5	3704
Magdalen College	21	6	3	-0.4	17.2	89
Manhattan College	23	8	2	3.0	3.7	4071
Manor College	4	6	2	2.4	18.4	696
Maria College	24	6	2	2.2	5.9	824
Marian University	17	8	1	2.1	4.9	2897
Marian University	11	8	1	2.6	7.1	2897
Marquette University	22	8	1	2.6	2.0	11491

Marygrove College	34	8	1	-0.1	11.1	1380
Marymount California University	32	8	6	2.2	6.8	1099
Marymount University	32	8	5	2.6	4.0	3363
Marywood University	34	8	2	1.8	3.8	3010
Mercy College of Health Sciences	24	6	1	1.9	6.3	789
Mercyhurst University	24	8	2	1.4	8.7	2828
Merrimack College	2	8	3	2.9	3.7	3620
Misericordia University	24	8	2	3.0	4.1	2963
Molloy College	15	8	2	2.9	2.8	4894
Mount Aloysius College	24	8	2	3.0	7.1	1877
Mount Carmel College of Nursing	20	8	1	2.5	3.7	1063
Mount Marty College	5	8	1	2.2	5.3	1190
Mount Mary University	33	8	1	2.3	5.6	1313
Mount Mercy University	24	8	1	2.5	3.5	1877
Mount Saint Mary College	15	8	2	2.2	5.1	2508
Mount Saint Mary's University	40	8	6	2.5	3.3	3431
Mount Saint Mary's University	21	8	2	2.9	4.1	2257
Neumann University	17	8	2	2.6	9.8	2901
Newman University	1	8	1	2.2	6.4	3595
Niagara University	54	8	2	2.5	5.2	4128
Notre Dame College	38	8	1	0.5	9.0	2094
Notre Dame de Namur University	38	8	6	2.8	5.8	1855
Notre Dame of Maryland University	33	8	2	2.2	4.8	2612

Oblate School of Theology	26	8	5	2.2	18.1	134
Ohio Dominican University	15	8	1	1.9	6.1	2534
Our Lady of the Lake University	10	8	5	2.6	9.9	3334
Presentation College	46	8	1	2.5	8.1	769
Providence College	15	8	3	3.0	3.7	4562
Quincy University	17	8	1	0.8	8.7	1293
Regis College	40	8	3	2.5	4.8	1954
Regis University	22	8	1	2.7	3.7	8725
Resurrection University	21	8	1	2.5	1.7	494
Rivier University	46	8	3	2.6	4.2	2599
Rockhurst University	22	8	1	0.9	3.2	2825
Rosemont College	50	8	2	2.0	9.5	887
Sacred Heart University	21	8	3	3.0	3.3	8235
Saint Ambrose University	14	8	1	2.3	5.9	3266
Saint Anselm College	5	6	3	2.2	1.9	1927
Saint Anthony College of Nursing	21	8	1	2.0	0.9	322
Saint Bernard's School of Theology and Ministry	21	8	2	2.2	16.6	82
Saint Bonaventure University	17	8	2	2.5	3.6	1992
Saint Catherine University	40	8	1	2.5	3.4	4961
Saint Charles Borromeo Seminary	21	8	2	1.5	0.0	211
Saint Edward's University	20	8	5	3.0	5.9	4620
Saint Elizabeth College of Nursing	35	5	2	-0.2	2.4	206

Saint Elizabeth School of Nursing	35	11	1	3.0	3.4	206
Saint Francis College	17	8	2	2.2	8.2	2672
Saint Francis Medical Center College of Nursing	52	8	1	2.2	3.7	678
Saint Francis University	17	8	2	2.6	4.2	2664
Saint John's University	5	8	1	2.8	1.3	1869
Saint John's University	54	8	2	2.5	5.4	20877
Saint Joseph Seminary College	6	6	5	1.3	0.0	140
Saint Joseph's College	21	8	2	1.9	3.6	4749
Saint Joseph's College of Maine	24	8	3	2.5	3.3	2581
Saint Joseph's University	22	8	2	3.0	3.6	8625
Saint Leo University	5	8	5	2.5	7.3	15800
Saint Louis University	22	8	1	2.2	2.5	17047
Saint Martin's University	5	8	4	0.7	2.8	1719
Saint Mary-of-the-Woods College	39	8	1	0.5	5.2	873
Saint Mary's College	20	8	1	3.0	2.0	1657
Saint Mary's University	47	8	5	2.2	7.5	3625
Saint Mary's University of Minnesota	23	8	1	3.0	3.6	5931
Saint Meinrad School of Theology	6	8	1	2.6	0.0	181
Saint Michael's College	48	8	3	2.4	2.2	2367
Saint Norbert College	27	8	1	3.0	2.2	2180
Saint Peter's University	22	8	2	1.5	11.0	3406
Saint Thomas Aquinas College	15	8	2	2.2	6.7	1836

Saint Thomas University	14	8	5	2.3	4.9	4918
Saint Vincent College and Seminary	5	8	2	2.5	4.0	1857
Saint Xavier University	24	8	1	1.9	6.5	3949
Salve Regina University	24	8	3	2.8	2.8	2757
Santa Clara University	22	8	6	2.5	0.7	8680
Seattle University	22	8	4	2.7	1.9	7405
Seton Hall University	14	8	2	2.4	3.8	9824
Seton Hill University	35	8	2	2.6	4.3	2359
Siena College	17	8	2	2.3	2.2	3176
Siena Heights University	15	8	1	3.0	6.8	2707
Silver Lake College of the Holy Family	17	8	1	1.9	7.9	522
Spalding University	35	8	5	3.0	6.1	2202
Spring Hill College	22	8	5	1.7	5.9	1479
Stonehill College	20	8	3	2.2	1.7	2400
The Catholic University of America	30	8	2	2.5	2.5	6521
The College of New Rochelle- Mercy College	36	8	2	3.0	13.1	3593
The College of Saint Rose	40	8	2	2.2	4.2	4345
Thomas Aquinas College	21	6	6	2.2	0.0	377
Thomas More College of Liberal Arts	14	6	3	1.7	4.2	87
Thomas More University	37	8	5	1.3	8.4	1909
Trinity Washington University	38	8	2	3.0	13.8	2161
Trocaire College	24	6	2	2.6	7.3	1369

University of Dallas	14	8	5	3.0	2.0	2387
University of Dayton	47	8	1	2.7	2.1	11250
University of Detroit Mercy	22	8	1	2.3	3.8	4920
University of Holy Cross	20	8	5	2.9	9.0	1135
University of Mary	5	8	1	3.0	5.0	2872
University of Notre Dame du Lac	20	8	1	2.2	0.7	12292
University of Portland	20	8	4	3.0	0.6	4338
University of Providence	10	8	4	2.2	7.4	1134
University of Saint Francis	17	8	1	3.0	5.5	2240
University of Saint Joseph	24	8	3	1.9	2.5	2553
University of Saint Mary	35	8	1	2.7	6.4	1427
University of Saint Mary of the Lake	14	8	1	-0.7	6.2	275
University of Saint Thomas	14	8	1	2.4	1.1	10140
University of Saint Thomas	4	8	5	3.0	2.1	3357
University of San Diego	21	8	6	2.6	1.8	8251
University of San Francisco	22	8	6	2.8	2.1	10797
University of Scranton	22	8	2	2.8	3.0	5422
University of the Incarnate Word	35	8	5	3.0	5.9	8666
Ursuline College	53	8	1	2.8	4.6	1178
Villa Maria College of Buffalo	16	6	2	2.4	16.1	543
Villanova University	2	8	2	2.9	1.4	10711
Viterbo University	17	8	1	2.9	4.2	2756
Walsh University	7	8	1	2.6	4.0	2860

Wheeling Jesuit University	22	8	1	2.0	4.0	1385
Xavier University	22	8	1	2.7	5.2	6260
Xavier University of Louisiana	43	8	5	2.5	7.9	2969