# DECISION USEFULNESS OF GOODWILL IN FINANCIAL STATEMENT REPORTING

by

B. Mechelle Lafon

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Dissertation

Submitted in Partial Fulfillment

of the Requirements for the Degree of

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**Abstract**

The subsequent accounting for goodwill has been and continues to be debated among standard setters, financial statement users, and the academic community. Accounting guidance surrounding the subsequent accounting for goodwill has been amended over the past 2 decades to address cost and complexity, comparability, and faithful representation. This study attempted to determine if faithful representation of goodwill improved with the passage of ASU 2011–04, which amended SFAS 142 and could be adopted by companies with fiscal years beginning after December 15, 2011. ASU 2011–04 offered a qualitative assessment of the faithful representation of goodwill based on certain events and circumstances prior to performing the two-step quantitative test. The researcher determined the existence and strength of the relationship between the recognition of impairment expense and two indicators of the impairment of goodwill upon the acquisition of a target company. The two impairment indicators included the use of common stock as consideration for the purchase price and the percentage of the purchase price recognized as goodwill. The results of the study showed that the use of common stock as consideration for the purchase price continued to be an indicator of impairment expense and, therefore, the value of goodwill was faithfully represented. However, the results of the study showed that the percentage of the purchase price allocated to goodwill had a smaller than typical relationship with impairment expense, which indicated that faithful representation under ASU 2011–08 had declined.

*Keywords:* goodwill, faithful representation, ASU 2011–08, qualitative assessment, impairment expense

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## Section 1: Foundation of the Study

This research study focused on the initial and subsequent accounting for goodwill, which is a long-term asset on a company's balance sheet. Goodwill is intended to represent the creation of synergy when one company acquires another company. However, debate surrounding recent accounting guidance in the past several decades persist due to the subjectivity in capturing the creation of synergy, which translates into economic value for the acquiring company.

### Background of the Problem

Standard setters have wrestled with the initial recognition and subsequent accounting for goodwill in the past few decades (Burger & Wen, 2021). Goodwill is recognized on a company's balance sheet upon the acquisition of another company, or target company, and is the difference between the purchase price and the fair value of the target company's net assets. Goodwill is intended to represent the synergy created by the business combination and the going concern of the target company, or core goodwill (Linsmeier & Wheeler, 2021). A company acquires another company in a merger and acquisition (M&A) for a variety of reasons including, but not limited to, synergy creation, economies of scale, and reducing competition (Bartov et al., 2021). Based on those benefits described, a resulting increase in profitability and operating cash flows are expected to occur if the acquiring company invested well (Johnson et al., 2021).

Prior to the passage of the Statement of Financial Accounting Standards-142, *Goodwill and Other Intangible Assets* (SFAS 142) in 2001, Accounting Principles Board Opinion No. 17, *Intangible Assets* (APB No. 17), allowed the systematic amortization of goodwill recognized in accordance with the purchase method over a maximum 40-year period (Bartov et al., 2021). Criticism of the pooling-of-interest method prompted the Financial Accounting Standards Board ("FASB") to pass SFAS 142, which became effective for all M&A transactions entered into after

June 30, 2001 (Guler, 2018). According to the FASB, SFAS 142 was supposed to increase the reliability of financial statements by improving the information provided to financial statement users and eliminate periodic amortization of an asset that may not be decreasing in economic value (Johnson et al., 2021). SFAS 142 implemented an impairment-only evaluation of goodwill on an annual basis (Linsmeier & Wheeler, 2021). In addition, SFAS 142 instituted a two-step process for determining goodwill impairment and calculating the impairment expense (Guler, 2018).

One of the significant criticisms of SFAS 142 was the cost and complexity of the two-step process (Johnson et al., 2021). In 2011, the FASB issued Accounting Standards Update No. 2011–08 Intangibles–Goodwill and other (Topic 350): Testing for Impairment (ASU 2011–08; Black et al., 2021; Guler, 2018). ASU 2011–08 provided an optional qualitative step (Step 0) that enabled companies to assess whether an impairment was more likely than not (Black et al., 2020; Guler, 2018). If the company determined an impairment was likely, then the two-step process under SFAS 142 was followed. The FASB implemented ASU 2014–02, *Intangibles – Goodwill and Other* (Topic 350), which allowed private companies an option to amortize goodwill over a maximum 10-year period (FASB, n.d.). ASU 2014–02 excluded publicly traded companies and not-for-profit companies. The FASB issued ASU 2017–04, Intangibles–Goodwill and Other (Topic 350): Simplifying the Test for Goodwill (Allen & Baez, 2020). This guidance eliminated Step 2.

The FASB's focus on reducing the cost and complexity of SFAS 142 does not address the significant issue of the decision usefulness of financial statements (Linsmeier & Wheeler, 2021). Subsequent to the passage of SFAS 142, the purchase price allocation to goodwill has increased, which has resulted in significant increases in goodwill recorded on companies'

balance sheets and subsequent increases in impairment expenses (Black et al., 2021; Linsmeier & Wheeler, 2021). The overall consequence is that the current accounting guidance does not appear to capture the core goodwill that the balance sheet account should represent. According to Wheeler (2020) and Linsmeier and Wheeler (2021), standard setters are currently in the process of reviewing alternative methods to the current guidance on the subsequent accounting for goodwill.

**Problem Statement**

The general problem to be addressed was the lack of faithful representation of goodwill under the current accounting standards resulting in the reduced decision usefulness of the financial statements. Although the FASB claimed SFAS 142 would increase the reliability of the financial statements, Li and Sloan (2017) stated that the actual application of SFAS 142 potentially decreases reliability due to the subjective nature of the impairment test and issues with verifying the fair value estimate. Li and Sloan (2017) found that management's discretion may result in delaying goodwill impairments in some circumstances. Concerns over the reliability of goodwill under the annual impairment test in accordance with SFAS 142 has resulted in the FASB considering alternatives to subsequent goodwill accounting (Guler, 2018). Linsmeier and Wheeler (2021) stated that the subsequent accounting for goodwill continues to be a controversial subject among financial statement users, the accounting profession, and the academic community due to accounting guidance having significant deficiencies in addressing the true economical value of goodwill, or core goodwill. Burger and Wen (2021) concurred that there continues to be debate surrounding SFAS 142 the accounting profession, academia, and standard setters on the potential reduction of value relevance in recognized goodwill. The specific problem addressed was the potential lack of faithful representation of goodwill under the

current accounting standards within publicly traded companies in the United States that have completed a business combination between 2012 and 2018 resulting in the potential reduced decision usefulness of the financial statements.

**Purpose Statement**

The purpose of this fixed design research study was to determine if ASU 2011–08 improved the faithful representation of goodwill through testing if an impairment expense was recorded in the financial statements of publicly traded companies with completed acquisitions between 2012 and 2018. This study advanced a study previously performed by Olante (2013), which had the objective of assessing the faithful representation of a company's goodwill by scrutinizing the reason for the recognition of impairment expense. Significant findings from Olante (2013) provided evidence that impairment expense was highly likely if a substantial amount of the purchase price was in stock and/or goodwill recognized was a significant percentage of the purchase price. These findings were based on pre- and post-SFAS 142 but did not include companies that were eligible to adopt ASU 2011–08. This research sought to determine if Olante's (2013) findings remain valid or have changed with the optional qualitative Step 0 afforded by ASU 2011–08. As Olante (2013) explained, companies should record core goodwill and any subsequent impairment should relate to deteriorating performance of the reporting entity. However, citing FASB's 1999 Exposure Draft (ED), impairment expenses can be predicted under certain conditions and signals overpayment for the acquired target company versus the representation of core goodwill (Linsmeier & Wheeler, 2021; Olante, 2013). In addition, Olante (2013) tested the timeliness of goodwill impairment recognized, which this research will continue to evaluate in accordance with ASU 2011–08. This research supplements the literature regarding accounting for goodwill.

**Research Questions**

The research questions were intended to examine the faithful representation of goodwill by measuring the relationship between certain conditions that potentially signal an overpayment and the recognition of impairment expense. The research focused on publicly traded companies headquartered and incorporated in the United States that completed a merger and acquisition transaction during the period beginning January 1, 2012 through December 31, 2018 and recognized goodwill on their balance sheet. The subsequent financial statement filings of these companies with the Securities and Exchange Commission ("SEC") were reviewed through December 31, 2021 to determine if a full or partial write-down of goodwill occurred.

RQ1: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense?

Consideration paid would primarily include the acquiring company's own common stock, cash on hand, debt financing, contingent consideration, or a combination of two or more types of consideration. According to Olante (2013) and Bartov et al. (2021), an acquiring company that acquires a target company using a majority of its own common stock is more likely to recognize a full or partial impairment of goodwill. As both Olante (2013) and Bartov et al. (2021) noted, accounting literature speculated that acquiring companies are inclined to use their own stock as full consideration when they perceive their stock to be overvalued. Olante (2013) theorized that acquiring firms view overvalued stock to be less risky than cash and are inclined to pay a higher purchase price resulting in a larger amount of goodwill. This potential increase in goodwill could result in reduced decision usefulness of the financial statements.

RQ2: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period?

According to Yehuda et al. (2019), accounting guidance states that an adjustment should be made for potential overpayments. However, most companies do not adjust the goodwill balance immediately, but assess it on a periodic basis as part of their subsequent evaluation of goodwill. Impairment of goodwill that is recognized in a timely manner suggests that the acquiring company is adjusting for a possible overpayment versus a decline in operating performance.

RQ3: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense?

Goodwill is the remainder of the purchase price after subtracting the estimated fair value of the net assets of the target company. There is some level of subjectivity included in the fair valuation of the assets and liabilities being acquired by the acquiring company (Olante, 2013). Goodwill, which is supposed to represent core goodwill, would involve a higher level of judgement and subjectivity when negotiating a purchase price between the acquiring company and the target company. In citing a purchase price allocation study by Houlihan and Lokey (2018), Linsmeier and Wheeler (2021) stated that, on average, goodwill comprised 40% of the total purchase price for M&A transactions completed in 2017. This increase in goodwill as a portion of the acquisition purchase price coincides with the implementation of SFAS 142 (Linsmeier & Wheeler, 2021). Based on their research, Linsmeier and Wheeler (2021) calculated the growth of goodwill compared to total assets on the balance sheets of publicly traded

companies included on the S&P 500 from 2005 to 2018 to be 5.3 to 9.1%, respectively. The overall increase of the dollar value of goodwill was 153%. Goodwill has grown exponentially since the passage of SFAS 142 and evidence shows that goodwill impairments have increased in magnitude (Black et al., 2021). The increases in total assets on the balance sheet and in impairment expenses on the income statements due to accounting standards potentially result in lack of faithful representation of the financial statements.

RQ4: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense within a certain time period?

As noted above, an acquiring company that has potentially overpaid for a target company must recognize impairment of goodwill as soon as possible for goodwill to be faithfully represented on the company's balance sheet (Ernst & Young, 2021; Yehuda et al., 2019). Olante (2013) found that with the passage of SFAS 142, the recognition of impairment expense had decreased from a 4 to 5-year period to a 2- to 3-year period. Since the recognition of goodwill has increased as a percentage of purchase price and SFAS 142 has been amended with the Step 0 addition, this study aimed to find if the time period remained between a 2- and 3-year period.

**Hypotheses**

H1o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense (DV).

Alternative H1a. There is a statistically significant relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense.

Relationship to Research Questions. H1 addresses RQ1, which seeks to compare the common stock paid by the acquiring company for the target company to the recognition of a full or partial impairment expense.

Variables included. The recognition of impairment expense or not would be the dependent variable. The percentage of common stock used as consideration would be the independent variable.

H2o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

Alternative H2a. There is a statistically significant relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period.

Relationship to Research Questions. H2 addresses RQ2, which seeks to compare the common stock used by the acquiring company to acquire the target company and the timing of recognizing full or partial impairment expense.

Variables included. The year of the recognition of impairment expense would be the dependent variable. The percentage of common stock used as consideration would be the independent variable.

H3o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense (DV).

Alternative H3a. There is a statistically significant relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense.

Relationship to Research Questions. H3o addresses RQ3, which seeks to determine if the percentage of the purchase price allocated to goodwill has a relationship with the recognition of a full or partial impairment expense.

Variables included. The dependent variable would be the recognition of impairment expense or not. The percentage of the purchase price allocated to goodwill would be the independent variable.

H4o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

Alternative H4a. There is a statistically significant relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense within a certain time period.

Relationship to Research Questions. H4o addresses RQ4, which seeks to determine if the percentage of the purchase price allocated to goodwill has a relationship with the timing of a recognition of a full or partial impairment expense.

Variables included. The dependent variable would be the recognition of impairment within a certain number of years. The percentage of the purchase price allocated to goodwill would be the independent variable.

**Nature of the Study**

This research study was conducted with a fixed design using quantitative methods; specifically, a correlational design was used. The research questions were intended to quantify the relationship between one of the independent variables and one of the dependent variables. Attribute independent variables were used to determine the strength and existence of a

relationship with the dependent variables, recognition of goodwill impairment expense and recognition of impairment expense within a certain number of years. The research design and methodology selection were foundational to the research study, and guided the data collection, analysis, and interpretation of the research study results. It is also important for a researcher to assess their worldview, which is a researcher's unique background and perspective that influences their research study.

***Discussion of Research Paradigms***

There are four primary philosophical worldviews of applied business research, which is a type of social research (Robson & McCartan, 2016). These worldviews provide a framework for research methodology that is distinct to each researcher, and heavily influences the research performed. According to Robson and McCartan (2016), understanding the connection between research methodology and a researcher's philosophical worldview supplies a much-needed foundation and structure when designing a research project. Knowing another researcher's philosophical basis will aid in understanding the results of that research, which could lead to different research paths. Without a foundation or standards to follow, research can become too subjective, which can lead researchers perform unnecessary procedures or even irrelevant research. In contrast, acknowledging different philosophical views enable researchers to have a broader focus (Robson & McCartan, 2016). The four philosophical worldviews are as follows: positivism, post-positivism, constructivism, and pragmatism.

The positivism approach is based in natural science and is objective (Robson & McCartan, 2016). The positivist states that only direct observation or experience is accepted as science. A positivist looks at the general law as absolute, and this does not allow for the reality. While this researcher believes that objectivity is important especially in interpreting data, there is

a realization that there can be valid, explainable reasons behind data versus a strict adherence to that data. There is a strict adherence to the general law that has been previously developed, which allows for a separation of facts and values (Robson & McCartan, 2016). Science is based in facts and hypotheses are developed to test against these facts. All scientific research is objective without any room for individual perspective or interpretation.

The post-positive philosophical view incorporates objectivity like its positivist predecessor but acknowledges that the researcher cannot be completely objective (Robson & McCartan, 2016). This viewpoint was created as an extension of positivism for social science research application (Creswell & Poth, 2018). The researcher comes into any study with prior experience, knowledge, and values that are not easily stripped away. There will always be a certain bias that is brought into the research study that will need to be addressed and reduced to ensure reliability and validity in the research. The post-positivist's philosophical worldviews allow flexibility and understanding while remaining structured (Robson & McCartan, 2016).

The social constructionist philosophy basically states that perception is reality. This philosophy appears to not follow any type of standard except that research subjects and the researcher have their own realities (Robson & McCartan, 2016). With research results built on perception and no set standard, there is no meaning in the results other than understanding a situation. The social constructionist is subjective and relies on an individual's view of the research (Creswell & Poth, 2018).

The researcher's perspective for most things is through the lens of an accountant. With the years of experience in the field of accounting, there is a realization that there can be valid, explainable reasons behind data versus a strict adherence to that data. The pragmatic philosophical worldview is more closely aligned with this researcher's worldview. Being

pragmatic, as Robson and McCartan (2016) stated, is “guided by practical experience rather than theory” (p. 28). Real world experience is more relevant to a certain task or approach than what is stated in a theory or textbook. In fact, the requirements to become a licensed certified public accountant include both education and experience due to the profession recognizing the importance of real-world experience in developing the professional (AICPA, n.d.). It takes years of experience to understand how to handle certain issues as they arise. Real-world experience is vital in the decision-making process. Real-world research would require flexibility because humans are complex and react differently to a variety of situations.

When addressing an issue, the researcher’s style is to gather all the facts and then choose the option that is the most efficient and effective to get the job done. Multiple meetings without a resolution is frustrating. If the underlying reason for a certain process has changed, then the process needs to be re-evaluated versus doing something just because it has always been done that way. Processes should be constantly re-evaluated if new information is available. One feature of the pragmatic approach is that theories are true, but truth depends on the current application of those theories (Robson & McCartan, 2016).

The pragmatists’ view is to embrace values when performing research and concluding on the findings (Robson & McCartan, 2016). In contrast with most pragmatists’ beliefs, the influence of those values should be acknowledged upfront so that the reader knows where the researcher stands. Similar to post-positivism, the reader should be aware of any inherent biases’ that may affect research. However, the pragmatist viewpoint of a value-oriented approach, where the researcher studies what they feel is significant research, is key to gaining understanding and real, actionable results. This approach also allows for multi-directional paths based on where the original research leads the researcher. With a pragmatic approach, the structure allows the

researcher the freedom to delve deeper into different paths of research. It also guides the researcher in their chosen research field when studying how other researchers are addressing a particular subject that is of interest.

Christians believe that God's nature is unchanging. While humans change their opinions or views on certain subjects, God never does and that gives comfort and strength to overcome worldly issues. As Robson and McCartan (2016) noted, the philosophical views of social research have changed overtime. Researchers refine methodology to hopefully obtain better results. In six days, God created heaven and earth and rested on the seventh day. God's creation, although perfect at origination, was undeveloped because He wanted human beings to use their God given creativity to further cultivate and subdue the earth (Keller & Alsdorf, 2014). He wants humankind to research and find better ways of doing things. Therefore, social research itself is part of a Christian worldview.

As humans created in God's image, there is an inherent need to follow a standard. Christians know that God and His moral law are the standards that human beings crave to follow (Geissler, 2010). As noted above, the four philosophical views of social research give a framework for research methodology. However, they are not completely congruent with a Christian worldview. Ephesians 2:8 says, "For it is by grace you have been saved, through faith – and this not from yourselves, it is the gift of God–not by works, so that no one can boast" (New International Version, 1981/1996). As Christians, faith is a central part of the worldview, which conflicts with a positivist philosophy. Faith is not observable and cannot be experienced by all people unless their hearts are open. As noted above, a positivist looks at the general law as absolute and this does not allow for the reality. Christians try to follow the moral law that God has laid out in the Bible, but know that, as sinners, only God's grace provides coverage. The

social constructionist philosophy is, basically, perception is reality. As a Christian, there is objectivity in truth and values and there is right and wrong. There is a moral principle to follow that trumps all other rules but that infers that there are rules.

This researcher believes the post-positivist and pragmatic philosophical worldviews more closely align with a Christian worldview. The post-positive philosophical view incorporates objectivity like its predecessor but acknowledges that the researcher cannot be completely objective. The researcher comes into any study with prior experience, knowledge, and values that are not easily stripped away. The pragmatist embraces that prior experience, knowledge, and values to direct how the research is designed and performed. Both philosophical worldviews allow flexibility and understanding while remaining structured. As Christian researchers, values will be part of that research. Post-positivism and pragmatism permit a Christian integration into applied business research studies.

### *Discussion of Design*

In a research study, there are three main approaches that are available for the researcher to select. The research approaches consist of a fixed design, flexible design, and mixed methods design with the researcher's choice dependent on the business problem, the research questions, and the purpose of the study (Liberty University, 2021).

The fixed design uses quantitative methods where the design and framework are planned in advance and followed without delineation from the process (Robson & McCartan, 2016). The fixed nature of the design is due to the advance planning whereby the researcher examines if a significant relationship exists between two or more variables to address the business problem (Morgan et al., 2013). The quantitative method refers to the quantification or measurement of the selected variables. Quantitative research involves proposing a theory, or hypothesis, and testing

that hypothesis to determine if it can be proven or disproven (McCartan & Robson, 2016). Due to its scientific approach, quantitative research is known to be rigorous with experiments that can be tested with the same results achieved (Robson & McCartan, 2016). When hypotheses are formed, as Morgan et al. (2013) explained, they will predict whether a relationship exist or does not exist between the variables. To begin testing each hypothesis, research questions are developed. These questions are broader than the hypotheses and do not predict a relationship. Statistical analysis is performed once the results of the relationships between the variables have been obtained to determine the significance.

In the quantitative approach, validity and reliability are necessary in the measurement of results. According to Robson and McCartan (2016), reliability is defined as remaining consistent over a period of time; while validity is proving the researcher measured what was intended to be measured to be able to conclude on the results. Measures of validity and reliability for quantitative research include internal validity, external validity, and reliability (Liberty, 2021). Internal validity shows whether the research study measures what it is supposed to measure. External validity refers to the causal relationship found in the study and the ability to apply it to other populations. Reliability is the replication of the research study. Based on the detail provided in the study, other researchers should be able to perform the study with the same results. Although fixed design using quantitative methods is intended to be purely objective, as Robson and McCartan (2016) pointed out, this is difficult because humans are not robots and data are typically derived from human beings. Context would still need to be incorporated into the findings, but the fixed design and methodology must be established prior to testing.

The flexible design, on the other hand, uses qualitative methods and is flexible with the design and framework being developed as the research progresses (Robson & McCartan, 2016).

This type of structure allows a researcher to avoid being confined at the beginning of research and allows for more exploration. Qualitative research is inductive meaning a theory emerges based on data collection. According to Creswell and Poth (2018), a qualitative research study incorporates three interrelated elements, which are assumptions, interpretative framework, and the approach to inquiry. All three must be in place at the beginning of a research study for the study to be deemed credible and rigorous. From that point, the research problem to be addressed as well as the research questions to pose can be developed. The qualitative method focuses on the researcher being in the field versus in a laboratory to observe real-world experiences and results. Researchers are observing the real actions and interactions of research subjects and documenting through a variety of collection methods, such as notes, interviews, and conversations (Robson & McCartan, 2016). The research results include the voices of the subjects (Creswell & Poth, 2018).

In terms of qualitative research studies, rigor refers to the trustworthiness of the analytical process (Maher et al., 2018). Qualitative research uses different terminology to measure validity and reliability (Liberty, 2021). Qualitative research uses credibility, transferability, and dependability, respectively. Credibility refers to whether the study sufficiently communicated the information that it was intended to communicate (Liberty, 2021). Per Maher et al. (2018), credibility is achieved a research study must meet its own measurement standard and provide an accurate portrayal of its research participants. A research study's transferability is the ability to be applied to other situations (Maher et al., 2018). Dependability is a detail description of the research design for the purpose of repeatability by other researchers (Maher et al., 2018). Maher et al. (2018) included an additional measure in qualitative research and that is confirmability. Confirmability is the acknowledgement of biases by the researcher.

The mixed methods, also known as multi-strategy, design uses both quantitative and qualitative methods (Robson & McCartan, 2016). While not completely integrated, the quantitative and qualitative methods are interactive. The choice of which method to use initially depends on the research questions, which then leads to the type of research study. As an example, this proposed research study could begin with the quantitative method in terms of data collection and statistical analysis. The qualitative method could then be employed to interpret and communicate the results of the quantitative study. As Robson and McCartan (2016) and Malina et al. (2011) noted, the combination of both methods potentially produces stronger and more complete findings with the ability to address the problem in a more thorough manner. The disadvantage of mixed methods for a novice researcher would be the lack of skills in multiple data collection techniques and the potential time constraints (Robson & McCartan, 2016).

This research study was conducted with a fixed design approach using quantitative methods. This research study used a pre-specified design that focused on companies that are publicly traded on stock exchanges in the United States and have completed an acquisition of a target company. The acquiring companies were incorporated in the United States and the transactions must have been completed, not pending, during the following time period. The effective dates of the completed M&A transactions were between January 1, 2012 and December 31, 2018. The researcher obtained M&A data from the Deals section of the Marketline database and identified companies that have completed acquisitions and recognized goodwill on their balance sheets. The public financial statement filings on the SEC website were reviewed from January 1, 2012 through December 31, 2021 to confirm the M&A information obtained in the Deals section of the Marketline database and to determine if an impairment expense has been recognized subsequent to the original transaction.

***Discussion of Method***

Each research design approach includes different courses of action that the researcher can use (Liberty University, 2021). This ensures that a researcher has a design and method that is compatible with the nature of the intended study. The paths that can be taken for fixed design using quantitative methods are as follows: experimental, quasi-experimental, and nonexperimental. Nonexperimental methods can be further categorized into the following: descriptive, correlational, and causal comparative.

The experimental method, as described by Robson and McCartan (2016), is the "control and active manipulation of variables" by the researcher (p. 112). The term variable refers to an item that must vary or have a range of variations (Morgan et al., 2013). As noted above, a fixed design is used to determine if a relationship does or does not exist between two or more variables. Variables can be either independent, dependent, or extraneous. Independent variables can be classified by attribute or active. An attribute variable denotes a pre-existing trait that cannot be changed or manipulated during a research study. Independent variables that can be manipulated are called active variables. To infer a causal relationship, an active independent variable is necessary. An active independent variable is introduced to research participants during the experiment by either the researcher or another person. An active independent variable is not pre-existing and, therefore, data can be used to infer a cause-and-effect relationship with a dependent variable. Although necessary, an active independent variable may not result in a causal relationship. This may be due to the active independent variable having no effect on an outcome. A dependent variable refers to the outcome after introducing the independent variable. An extraneous variable, according to Morgan et al. (2013), is one that is not part of the research study but could have an effect on the dependent variable.

The quasi-experimental method within a fixed design is one that follows the experimental method, but the researcher is unable to allocate research participants randomly into groups (Robson & McCartan, 2016). As explained by Handley et al. (2018), a quasi-experimental method is employed at the point in an experiment when random allocation is not ethically or practically possible. The benefit of random allocation in an experimental study is it increases the validity of the experiment.

The nonexperimental method is a research study that utilizes only attribute independent variables only (Morgan et al., 2013). The researcher does not modify the variables. This type of fixed design method is appropriate for explanatory research where a researcher's goal is to explain a specific, resulting event or occurrence (Robson & McCartan, 2016). The researcher may not be able to predict the event but may be able to establish a pattern. As noted above, nonexperimental can be further categorized into either descriptive, correlational, or causal comparative. According to Morgan et al. (2013), the descriptive method summarizes data collection from the research study sample. There are no inferences made, but statements made based on scores of a variable without generalizing to certain population. Correlational seeks to determine if a corresponding relationship exists between two or more variables. This category would be used for research attempting to predict the dependent variable based on the ordinal, independent variables. Finally, causal comparative is a comparison of two distinctive groups (Morgan et al., 2013). Each group represents a different value of the independent variable, which means individuals within one group all share the same value. This method of research question strives to find out if the impact of each group on the dependent variable is different.

Within a flexible design using qualitative methods, a researcher has the following options: narrative, phenomenology, grounded theory, ethnography, and case study (Creswell &

Poth, 2018; Liberty University, 2021). The reason that this selection is important is that it adds validity to the qualitative research by providing structure and demonstrating the complexity of the research problem. Inquiry means the method of addressing the problem with one approach to inquiry being a narrative design. A narrative design in research is utilizing the stories of lived experiences for either one or multiple individuals and developing an overall theme (Creswell & Poth, 2018). The phenomenology design is based on a shared experience among a group of individuals; therefore, a shared theme can emerge and be used to contextualize a specific issue within the phenomenon. Grounded theory design is developing a theory based on the actual groundwork of data collection amongst a significant number of research participants. This large group of research participants have experienced the same process, where an overall theory is formulated based on their shared perspectives (Robson & McCartan, 2016). Similar to the grounded theory design approach, ethnography involves studying a large group of individuals (Creswell & Poth, 2018). However, ethnography regards this group as sharing the same culture that, in turn, influences the group member's individual behaviors, language, beliefs, and values, referred to in totality as shared patterns. The researcher develops themes about this shared group culture to interpret and explain the impact to and by the group's shared patterns. A case is a certain individual, small group, organization, or a situation, such as a relationship or decision process, that a researcher and others find interesting. A case study is then studying a specific case in its real-life context using a bounded system, which refers to parameters specifying a time and place.

Mixed methods design methods offer convergent parallel, explanatory sequential, and exploratory sequential transformative (Liberty University, 2021; Robson & McCartan, 2016). Convergent parallel involves the qualitative and quantitative research studies being performed

separately, but simultaneously (Robson & McCartan, 2016). The results are compared to determine their convergence. Explanatory sequential is exemplified by the example given above. The quantitative method takes precedence with data collection and analysis followed by the qualitative method. The two methods merge when the results are interpreted and communicated. In the exploratory sequential transformative method, the qualitative method is prioritized followed by the quantitative phase. The two methods merge at the point as the explanatory sequential. The exploratory sequential transformation method is best applied with the phenomenology or a theoretical approach.

This research study was conducted with a fixed design using quantitative methods; specifically, a correlational design was used. The four quantitative research questions formulated by the researcher were intended to quantify the relationship between at least two variables. Attribute independent variables were used to determine the strength and existence of a relationship with the recognition of impairment expense and the recognition of impairment expense within a certain time period. Attribute variables were not introduced by the researcher, nor were they manipulated by the researcher as part of the study (Morgan et al., 2013). The potential relationships between variables were statistically evaluated to test each of the four hypotheses (Morgan et al., 2013).

### *Summary of the Nature of the Study*

The nature of a research study incorporates a researcher's philosophical worldview and the research design and methodology. A researcher begins with their philosophical worldview, which will become a basis for how research is addressed and performed. Of the four main philosophical worldviews, the pragmatic worldview is more closely aligned with the researcher's

Christian worldview. Pragmatism is the belief that real world experience is more relevant than theory with the goal to find the best solution for a problem.

The next step in setting the study foundation is the design approach. The three design approaches are fixed design using quantitative methods, flexible design using qualitative methods, and mixed methods design using both quantitative and qualitative. Each design offers different methods that can be selected to insure compatibility with the nature of the intended study. This research study was performed with a fixed design using quantitative methods; specifically, a correlational design was used. This research study focused on the decision usefulness of goodwill in financial statements by examining the relationship between certain factors and the recognition of goodwill impairment expense.

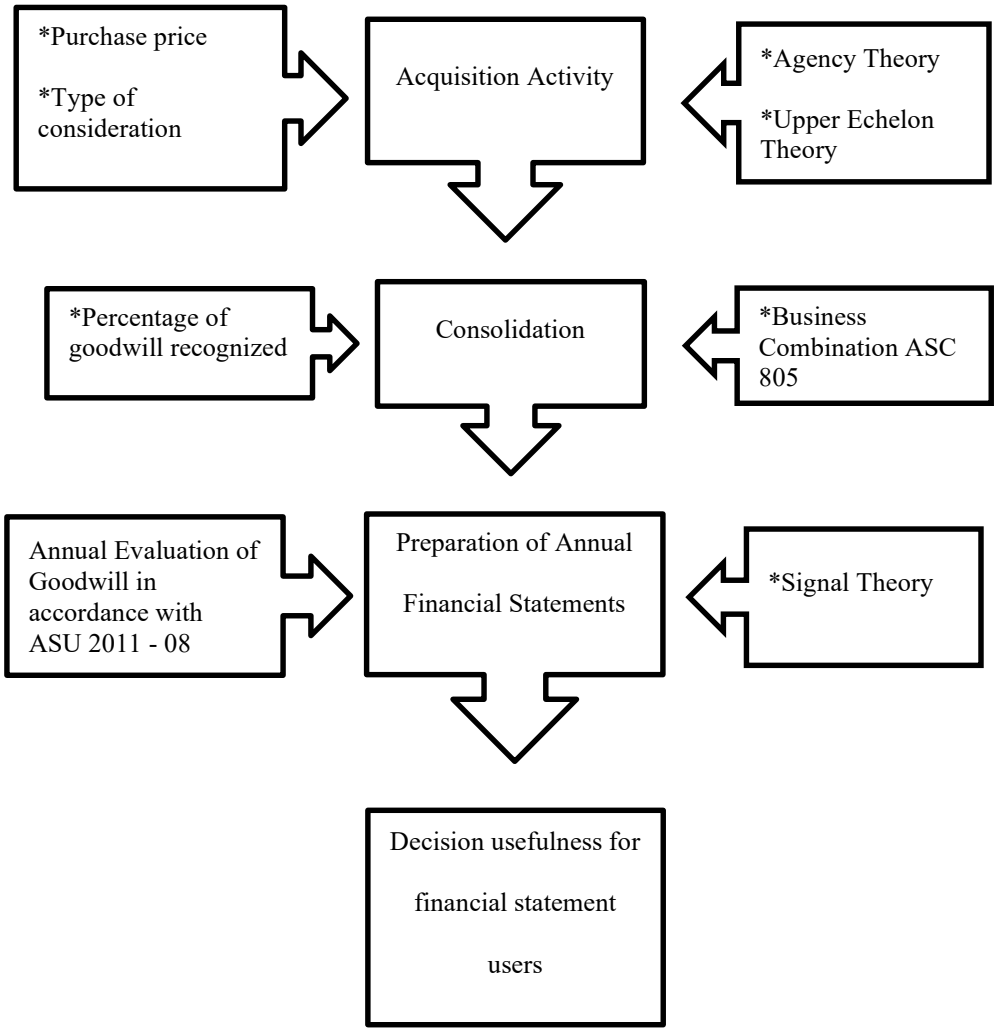
**Theoretical Framework**

When a United States publicly traded company assumes control of a target company through an acquisition, certain accounting guidance must be followed for financial reporting purposes. The accounting guidance that applies when the acquiring company gains control of the target company, Accounting Standards Codification No. 805 *Business Combinations* (ASC 805), is used to account for the initial acquisition (Ernst & Young, 2021). ASC 805 was known, prior to recodification, as SFAS 141. ASU 2011–08, which amended SFAS 142, is used for subsequent accounting of goodwill in completed acquisitions between 2012 and 2018, which is the time period covered by this research study (FASB, 2011; Guler, 2018). In 2007, FASB revised SFAS 142 and it is now known as Accounting Standards Update 350, *Intangibles–Goodwill and Other* (ASC 350; Black et al., 2021). However, most research studies continue to refer to the guidance as SFAS 142. Accounting for an acquisition, or business combination, begins with the agreed upon purchase price. Goodwill that is recognized in the acquiring

company's balance sheet is determined by the purchase price. The purchase price can be driven by agency theory, signal theory, and upper echelon theory. The subsequent accounting for goodwill, which includes the annual evaluation and potential goodwill impairment, can also be driven by those three theories. The following diagram shows the relationships between the theories and variables when accounting for goodwill (Figure 1).

**Figure 1**

*Relationships between theories and variables*



### *Theories*

There are four main theories that address the above diagram. The first theory is the accounting guidance that dictates how the acquiring company will recognize the target company in their financial statements. This type of acquisition, referred to as a business combination, follows ASC 805 when the acquiring company gains control of the target company (Ernst & Young, 2021). In accordance with ASC 805, the acquiring company recognizes the target company's assets acquired and liabilities assumed at fair value with any residual amount of the purchase price recognized as goodwill. ASU 2011–08 is used in subsequent accounting for goodwill in completed acquisitions between 2012 and 2018, which is the focus of this research study (Black et al., 2021; FASB, 2011; Guler, 2018). The FASB's stated purpose of ASC 805 and ASU 2011–08 is to provide improvement in the faithful representation and consistency of financial statements (Burger & Wen, 2021; Johnson et al., 2021). However, accounting guidance can produce substantial economic consequences to companies and, as a result, the FASB faces immense pressure in the standard setting process.

Agency theory strives to explain accounting practices and standards and is a positive accounting theory (Schroeder et al., 2014). The basic premise of agency theory is that individuals are motivated to do what is in their best interest and this is a conflict in the agent relationship. In a company, that agent relationship is between the executive management or decision makers and the investors or owners. In a study performed by Ramanna and Watts (2012), the findings showed that impairments of goodwill were due to agency theory where self-interest is the motive behind executive management's decision (as cited by Guler, 2018). According to Qin et al. (2020), the agent problem between executive management and shareholders is due to the misalignment of objectives and information resulting in a management focus on short-term

benefits such as mergers and acquisitions, which may not necessarily translate to long-term benefits for shareholders. However, when the objectives of the company's shareholders and executive management are aligned through compensation packages that are based on financial and non-financial measures, then executive management decisions will be in the interest of the company (Gamble et al., 2021).

Signal theory is predicated on public information that an organization discloses, which signals its operating status to financial statement users (Qin et al., 2020). According to the signal theory, an enterprise can release the signal of its operating status to investors and the market through public information (Fu & Shen, 2020 as cited by Qin et al., 2020). Per Harford et al. (2012), impairment of goodwill is an indication of poor management decisions in the original acquisition (as cited by Qin et al., 2020). In contrast, Burger and Wen (2021) found that the timeliness of goodwill impairment recognition could diminish information asymmetry between the company and financial statement users by conveying private information, such as future cash flow ability.

The Upper Echelon Theory, as described by Neely et al. (2020) is a theory developed by Hambrick and Mason (1984) that asserts the characteristics and experiences of executive management significantly influences their decision-making and eventually their applicable organization's financial outcomes. In addition, executive management is ultimately responsible for instilling the ethical values of the organization (Patelli & Pedrini, 2015 as cited by Hope & Wang, 2018). As Choi and Nam (2020) found, the decision to impair goodwill was related not only to an organization's declining economic performance but was also a specific management strategy tied to incentives based on financial performance. In accordance with ASU 2011–08, core goodwill would be impaired due to a steady decline in economic performance, which would

represent executive management's commitment to abide by and uphold accounting guidance. However, Welch et al. (2020) cited numerous characteristics of executive management that are prone to make riskier acquisition decisions and Killins et al. (2021) found that overconfident CEOs are highly likely to delay the recognition of goodwill impairment.

### *Actors*

The actors directly involved and affected by the decision to recognize goodwill on the balance sheet and subsequently impair goodwill on the income statement are the financial statement users, the accounting profession, and the academic community. Black et al. (2021) stated that the actors within the three groups continue to express concern over impairment tests due to the cost, complexity, and prevalence. Users of financial statements mainly include investors and creditors (Schroeder et al., 2014). Financial statement users need to understand the underlying economic viability of an organization and decision usefulness of the financial statements are a significant piece of that understanding (Olante, 2013). Financial statement investors include owners or potential owners in an organization while creditors include lenders and other third parties, such as vendors. Investors and creditors provide much needed capital for an organization (Schroeder et al., 2014). Other users would include the organization's board of directors, executive management, and employees. Federal agencies, such as the SEC and Internal Revenue Service, would also be financial statement users.

The accounting profession would include the standard setters (i.e., SEC and FASB) and practicing accountants whether in public accounting or in industry. Standard setters need to comprehend the overall impact of accounting guidance implementation to financial statement users and the academic community as well as practicing accountants in the profession. Although standard setters request comments on accounting guidance prior to passage, feedback subsequent

to implementation is important (Guler, 2018). Practicing accountants would evaluate an acquisition and determine the proper method or journalizing and reporting the transaction. Accountants must interpret, follow, and communicate accounting guidance or standards set by FASB (Schroeder et al., 2014). Accountants follow accounting guidance or standards that have been set by the FASB, which was delegated this duty by the SEC (Schroeder et al., 2014). Not only do accountants journalize and report transactions, but they are also normally responsible for interpreting and analyzing financial statements.

The academic community includes those individuals that teach and study accounting theory and concepts and would need to understand the implications of recognizing goodwill on the balance sheet and any subsequent impairment. This group of users would also need current information about potential changes in the guidance covering the valuation of goodwill and subsequent impairment (Burger & Wen, 2021). Individuals that research accounting theory and concepts, specifically the recognition of goodwill and the subsequent accounting, would be interested in the results for future research studies. This study contributes to the body of knowledge surrounding this heavily discussed topic.

### *Variables*

To address the potential lack of faithful representation of goodwill under ASU 2011–08 that may result in reduced decision usefulness of the financial statements, the researcher determined if the impairment of goodwill had a relationship with certain overpayment indicators. Each of the indicators are independent, ordinal variables that were derived from the FASB 1999 ED (Olante, 2013). One of the overpayment indicators was the common stock used by the acquiring company as consideration paid for the target company. Consideration paid by the acquiring company could consist of cash on hand, cash from debit financing, the acquiring

company's securities such as common stock, the acquiring company's intangible or tangible assets, promised future payments, or a combination of two or more of the types listed (Ernst & Young, 2021). The second overpayment indicator was the percentage of purchase price allocated to goodwill. These two independent variables were tested to see if they potentially resulted in the recognition of impairment expense in the acquiring company's income statement. The two dependent variables were the recognition of impairment expense and the recognition of impairment expense within a certain time period. The recognition of impairment expense was a dichotomous variable, while the recognition of impairment expense within a certain time period was an ordinal variable.

This study advanced a previous study by Olante (2013), which covered business combinations and the recognition of impairment expense in accordance with pre- and post-Statement of Financial Accounting Standards 141 (SFAS 141) and SFAS 142. In 2007, FASB revised SFAS 141 now known as ASC 805; SFAS 142 is now known as Accounting Standards Update 350, *Intangibles–Goodwill and Other* (Black et al., 2021). The period covered did not include business combinations where the acquiring company could opt for accounting in accordance with ASU 2011–08. During the annual evaluation of goodwill required by ASC 350, ASU 2011–08 provides the option of Step 0 or a qualitative assessment of impairment. Olante's (2013) research studied the effects of eight overpayment indicators of potential impairment of goodwill as independent variables based on the four stated by FASB's 1999 ED and the other four based on previous research studies. This study selected two of those eight indicators based on the most significant findings from Olante's (2013) research study. Olante (2013) found that significant relationships exist between two of the overpayment indicators and the recognition of goodwill impairment expense. The two indicators included the percentage of the acquiring

company's common stock used as consideration and the percentage of the purchase price allocated to goodwill. Olante (2013) created a model that correctly predicted impairment expense realized for around 40% of the sample for the post-ASC 350 period based on the eight overpayment indicators. In addition, Olante (2013) found that impairment expense was typically recognized between 2 and 3 years after the acquisition.

### *Relationships Between Theories, Actors, and Variables*

United States publicly traded companies file their financial statements and related disclosures on a quarterly and annual basis with the SEC (Investor.gov). These financial statements, which are prepared in conformity with generally accepted accounting principles in the United States ("U.S. GAAP"), communicate the financial performance of a company to its users (Schroeder et al., 2014). Signal theory is the communication of a company's financial performance through their public financial statement filings with the SEC (Qin et al., 2020). When a United States publicly traded company gains control of a target company through an acquisition, specific accounting principles in accordance with U.S. GAAP are followed for financial reporting purposes. ASC 805 is used to account for the initial acquisition and ASU 2011–08 was used in subsequent accounting for goodwill in completed acquisitions between 2012 and 2018 (Ernst & Young, 2021; Guler, 2018). Accounting for an acquisition, or business combination, begins with the agreed upon purchase price. The purchase price less the fair value of the target company's net assets acquired equals goodwill. Goodwill is a long-term asset in the acquiring company's balance sheet and is evaluated at least annually for potential impairment.

The amount of goodwill is directly related to the purchase price. As the purchase price increases in relation to the fair value of net assets acquired of the target company during the negotiation phase of the transaction, the goodwill that will potentially be recognized increases.

The purchase price can be driven by agency theory and upper echelon theory. In a company, the agent relationship is between the shareholders and their agents, which are the company's board of directors and executive management (Schroeder et al., 2014). Agency theory suggests that the agents are motivated to make decisions based on their own best interests versus the best interest of the shareholders who they represent. Agents may want to acquire the target company for personal benefit that may, in turn, increase the purchase price. Bartov et al. (2021) found that SFAS 142 contributed to agency conflict due to accounting playing a significant role in executive management's bidding process for a target company. The upper echelon theory applies to executive management and asserts that the characteristics and experiences of executive management significantly influences their decision-making (Hambrick & Mason, 1984, as cited by Neely et al., 2020). Their decisions will eventually affect their applicable company's financial outcomes, such as the purchase of another company and the agreed upon purchase price (Killins et al., 2021). To complete the transaction, the purchase price may be paid by the acquiring company using the following consideration: cash, tangible or intangible assets, securities of the acquiring company such as common stock, a subsidiary, business of the acquiring company, and future promises of payments and/or a combination of the different types of consideration (Ernst & Young, 2021). The book value of the target company's net assets represents the stockholders' equity, which includes the owners' investment in the company and the accumulation of their net income/loss (Spiceland et al., 2019). As executive management contemplates the acquisition of the target company, one part of their due diligence is to view the books of the target company to gage past performance and potential future performance. According to Gaughan (2002, as cited by Li et al., 2011), book value may indicate an undervalued company and is typically the floor in purchase price negotiation.

The annual evaluation of goodwill and potential impairment involves comparing the book value and fair value of goodwill for the reporting unit where the goodwill was originally allocated (Killins et al., 2021; Wangerin, 2019). The reporting unit is an operating segment of the acquiring company or one level below an operating segment of the acquiring company (Guler, 2018). If the book value exceeds the fair value of the reporting unit, then the company will calculate and potentially recognize goodwill impairment expense. With the passage of ASU 2011–08, a company is able to assess potential goodwill impairment using qualitative methods prior to the quantitative methods of comparing the book value and the fair value of the reporting unit. Qualitative methods would be management's discretion in determining if the likelihood of impairment of goodwill exists (Black et al., 2021).

With subjective nature of management's determination of goodwill, the agency theory and upper echelon theory could influence these decisions and possibly extend the recognition of goodwill impairment based on the Olante (2013) study. Once annual financial results are filed with the SEC, the company is employing signal theory to communicate their results to financial statement users and others in the accounting profession. Those in the academic community would be interested in the initial recognition and subsequent accounting for goodwill.

***Summary of the Research Framework.***

This research study advanced a previous study performed by Olante (2013) by determining if there is a relationship between the presence of a subsequent goodwill impairment and two overpayment indicators. The findings enhanced previous research studies on the decision usefulness of the subsequent accounting for goodwill in financial reporting. The research framework consisted of the theories, actors, and variables that interrelate to cause the potential decision usefulness issue with an acquiring company's financial statements. The

theories begin with the accounting guidance, ASC 805, SFAS 142, and ASU 2011–08, which the company must follow when recording the business combination and the subsequent accounting. Signal theory is the communication of financial performance through public financial statement filings with the SEC while agency theory and upper echelon theory influence the subjective decision-making by executive management.

The actors involved with or affected by the recognition and subsequent accounting for goodwill would be financial statement users, the accounting profession, and the academic community. In order to address the potential lack of faithful representation of goodwill under ASU 2011–08 that may result in reduced decision usefulness of the financial statements, the researcher determined if a positive relationship existed between an impairment of goodwill and two overpayment indicators. These overpayment indicators were common stock used as consideration to pay for the target company and the percentage of purchase price allocated to goodwill. Each of these overpayment indicators were independent variables and the potential impairment of goodwill, as well of the potential impairment of goodwill in the years following the acquisition, were the dependent variables.

**Definition of Terms**

*Book value:* the value of a company's assets, liabilities, and equity as stated in their general ledger or books at the end of a period (Spiceland et al., 2019). Simplistically, assets equal liabilities plus equity. Equity is the net book value of a company or the assets less the liabilities (Schroeder et al., 2014). Equity represents the ownership in the company.

*Consideration:* refers to the purchase price of the target company and the type of payment that will be used to complete the acquisition (Yehuda et al., 2019). Consideration includes payment in cash, noncash, or a mixture of both. Noncash would include the following

from the acquiring company: securities, such as common or preferred stock; tangible and intangible assets; a business or subsidiary; and/or contingent payments (Ernst & Young, 2021).

*Fair value:* the estimation of an asset or liability' value as on the date of acquisition (Wangerin, 2019). These values are based on the due diligence of the acquiring company and should signify the projected net benefits of the acquisition.

*Generally accepted accounting principles (U.S. GAAP):* accounting standards, consisting of general and specific principles, which are adhered to by companies in the United States (Spiceland et al., 2019).

*Goodwill:* the difference between the purchase price of a target company and the fair value of its net assets (Linsmeier & Wheeler, 2021). The fair value of its net assets is the difference between the target company's assets at fair value and its liabilities at fair value on the acquisition date. It is a long-term asset on a company's balance sheet.

*Impairment:* a decrease in the book value of goodwill subsequent to the acquisition date (Killins et al., 2021). It is a non-cash charge whereby the goodwill asset account decreases with an offsetting expense recognized in a company's income statement in the period incurred.

*Intangible assets:* assets owned or controlled by a company that lack a physical existence but provide the company an economic benefit due to special rights or privileges (Schroeder et al., 2014; Spiceland et al., 2021). Goodwill is an example of an intangible asset.

*Market value:* a company's common stock outstanding multiplied by the market price per share as of a specified closing date (Burger & Wen, 2021). The closing date is typically a month-end, quarter-end, or fiscal year-end. The market refers to the exchange where the common stock is listed such as the New York Stock Exchange or NASDAQ.

*Tangible assets:* assets owned or controlled by a company that have a physical existence, such as inventory, property, plant, and equipment (Banker et al., 2017).

*United States publicly-traded company:* A company headquartered in the United States that issues securities, such as common stock, to the public for purchase on a United States stock exchange, such as the New York Stock Exchange or NASDAQ (Olante, 2013).

## Assumptions, Limitations, Delimitations

In this section, the researcher will discuss the three assumptions and the two potential limitations and three delimitations of this research study. The researcher assumed that all acquiring companies adhere to U.S. GAAP, that management has integrity, and that optional Step 0 was utilized. The two limitations are the inclusion of two overpayment indicators and the inability to recreate the economic conditions present during the time period selected for research. The three potential delimitations involve the exclusion of accounting guidance, ASU 2014–02 and ASU 2017–04 and the parameters set for completed transactions from January 1, 2012 through December 31, 2018.

### *Assumptions*

The first assumption was that the acquiring company followed U.S. GAAP. The basis of this research study was to advance a previous study by Olante (2013). Olante's (2013) study was based on the existing accounting guidance, SFAS 142, during the time period studied. This research study focused on a subsequent time period where subsequent accounting guidance, ASU 2011–08, had been passed and adopted. Since the study was to determine the decision usefulness of financial statements under current accounting guidance, the researcher assumed that the acquiring company follows U.S. GAAP. This risk can be mitigated as the researcher cross-references all completed acquisitions and subsequent accounting for goodwill with the acquiring

company's annual financial statement filings (Form 10–K) with the SEC. The SEC requires that all financial statements be presented in accordance with U.S. GAAP, including all significant subsidiaries (SEC, n.d.). In addition, the acquiring company is required to state their significant accounting policies in disclosure notes that accompanies the financial statements (Spiceland et al., 2019). The auditors' report, which precedes the financial statements, provides the auditors' opinion as to whether the financial statements are prepared in accordance with U.S. GAAP.

The second assumption was management's integrity in recognizing impairment expense immediately and accurately. In performing this study, the researcher followed the Form 10-Ks that the acquiring company filed with the SEC subsequent to their completed acquisition. The researcher was dependent on management's discretion in evaluating the economic value of goodwill on, at least, an annual basis (Burger & Wen, 2021; Linsmeier & Wheeler, 2021; Zhang & Zhang, 2017). The Form 10–K provided financial information regarding goodwill and subsequent impairment, if any. If an impairment of goodwill occurred, it was disclosed in the disclosure notes to the financial statements with a description of management's process and resulting determination to impair goodwill (Spiceland et al., 2019). In their research studies, Ayres et al. (2019) and Zhang and Zhang (2017) found that external valuation analyst and financial analyst have a positive impact on the recognition of goodwill on a timely basis.

The third assumption is that the optional qualitative Step 0 established with the passage of ASU 2011–08 was selected by the acquiring companies. Instead of using a qualitative approach initially, the acquiring company could proceed directly to the two-step quantitative approach in accordance with SFAS 142. The goal of the research was to determine if the same existence and strength of relationship existed between two overpayment indicators and the recognition of impairment expense within a certain time period that existed in the Olante (2013)

study, which did not include the optional qualitative option. Black et al. (2021) mitigated this identical risk by reading disclosure notes to the financial statements which stated the use of the qualitative evaluation option or stated that the company followed FASB's statement regarding making a positive assertion if fair value of a reporting unit is less than its book value.

***Limitations***

The first limitation was that the study narrowed from eight overpayment indicators used by the Olante (2013) study to two overpayment indicators. The two overpayment indicators or variables selected were the ones where Olante (2013) found a significant relationship between the variable and the impairment of goodwill. The relationship between each of the other six overpayment indicators and impairment expense could potentially have occurred under ASU 2011–08. The researcher included all completed acquisitions between 2012 and 2018, along with reviewing for the subsequent impairment of goodwill through the end of 2021. The researcher compiled the reasons for the subsequent goodwill impairment of all the sampled acquiring companies and concluded that additional overpayment indicators did not exist. In addition, acquiring companies do not state if they overpaid for a target company and the researcher would have to infer a cause.

The second limitation was the inability of the researcher to recreate the economic environment and related events present from 2012–2018. Economic factors would impact the recognition of impairment expense. Although companies are required to assess goodwill on at least an annual basis, the adoption of ASU 2011–08 added events and circumstances that may increase the likelihood of goodwill impairment during interim periods (FASB, 2011; Li & Sloan, 2017). During interim periods, companies should evaluate goodwill for impairment when there is an event that may trigger the fair value of a reporting unit to be less than the book value. In

evaluating the economic value of goodwill for potential impairment, the applicable reporting unit's performance decline is the key since this would have a direct impact on the fair valuation (Yehuda et al., 2019). Economic downturns oftentimes prompt the impairment of goodwill (Allen & Baez, 2020). For example, Olante (2013) noticed that during 2008, there was a significant increase in recognition of impairment expense and attributed the cause to the recession that began in that time period. A recent economic downturn for publicly traded organizations in the United States would be the impact of COVID-19 and, according to Allen and Baez (2020), goodwill impairment announcements were expected to increase during 2020 and 2021. The researcher reviewed each year to see if an anomaly existed in the data and will researched further. As noted in Section 3, there was a significant increase in the recognition of impairment in 2020 with companies citing the COVID-19 pandemic as the reason for performance deterioration.

### *Delimitations*

The first delimitation was the focus on publicly-traded companies in the United States who adopted ASU 2011–08. This study did not consider the passage and implementation of ASU 2014–02, which applies to private companies only and excludes publicly traded and not-for-profit companies (Burger & Wen, 2021). This accounting guidance provides private companies the option to amortize goodwill over a period not to exceed 10 years in addition to annually evaluating for the impairment of goodwill.

The second delimitation was that the study did not consider ASU 2017–04 due to its recent passage and implementation. ASU 2017–04 eliminates Step 2 of the two-step impairment process under SFAS 142 (Allen & Baez, 2020). This accounting guidance is effective for publicly traded companies with fiscal years beginning after December 15, 2019, therefore, the

transition by companies would officially being in 2020 (Allen & Baez, 2020). At the time of this study, there would not be sufficient information on goodwill and potential subsequent impairment in a company's financial statement.

The third delimitation was that this study used completed transactions from January 1, 2012 through December 31, 2018. The researcher followed potential impairment of goodwill recognized from the completed transaction through December 31, 2021. However, the researcher did not include completed transactions through December 31, 2019, 2020, and 2021 due to the shortened period of available data, which may skew the results provided.

## Significance of the Study

This study supplemented the existing research studies that address the initial and subsequent accounting for goodwill. The accounting guidance for the subsequent accounting for goodwill has changed in the past few decades with the FASB's intention to not only increase the decision-usefulness for financial statement users but reduce the cost and complexity for companies. However, there can be conflict between these two goals. This study provided additional insight into the decision-usefulness of goodwill in a company's financial statements by reducing gaps in the literature, applying Biblical integration, and discussing the benefits to business practice and accounting.

### *Reduction of Gaps in the Literature*

The initial recognition and potential impairment of goodwill can have a significant impact on an acquiring company's financial statements. Goodwill is intended to represent core goodwill, which is the synergy creation from the business combination as well as the target company's going concern value (Linsmeier & Wheeler, 2021). Although negotiations are involved and the purchase price can be excessive, accounting guidance stipulates an adjustment

should be made for potential overpayments (Yehuda et al., 2019). However, as Yehuda et al. (2019) observed, most companies do not make an immediate adjustment. Instead, the excess of the purchase price is recognized as goodwill with the economic value assessed on a periodic basis. Prior to the passage of ASU 2011–08, this assessment was performed annually in accordance with SFAS 142. The passage of ASU 2011–08 offered a rare occurrence in financial reporting in allowing a qualitative evaluation to be used by management of a company (Black et al., 2021). This subjective evaluation leaves the determination of whether to proceed to the two-step quantitative process solely at management's discretion.

There have been few studies that address the decision usefulness of a publicly traded company's financial statements after the passage and implementation of ASU 2011–08. The addition of the optional Step 0 was passed in 2011 and implemented in 2012 by the passage of ASU 2011–08 (Black et al., 2021; FASB, n.d.; Guler, 2018). Prior to this accounting guidance, companies did not have the option of a qualitative approach, but only the quantitative, two-step approach. In Olante's (2013) study, she tested the hypothesis that some goodwill impairment losses are due to overpayment rather than subsequent events resulting in performance deterioration. In testing, Olante (2013) used a sample of United States publicly traded companies that completed acquisitions from 1999–2007. The time period utilized was prior to the passage and implementation of ASU 2011–08. This researcher determined if the addition of a qualitative threshold impacted the results of Olante's (2013) original study.

### *Implications for Biblical Integration*

Human beings were created in the image of God and have a purpose here on earth to serve God first and others second (New International Version, 1981/1996, Genesis 1:27). Human beings were designed by God to work. Not only does work fulfill human beings, but it is a way

to serve the Lord and others. Human beings were created with different skillsets to accomplish God's providence of providing for all humankind (Keller & Alsdorf, 2014). One of the ways to realize God's providence is through creativity in work, specifically in creation of culture. In Genesis 1:28 (New King James Bible, 1982/2017) after human beings are blessed, the Lord instructs them to "be fruitful and multiply; fill the earth and subdue it; have dominion over…every living thing that moves on the earth." Per Keller and Aldorf (2014), procreation refers to creating civilization or society. Ruling is a directive to be stewards and protect God's creation and to subdue indicates developing the earth without it getting out of control.

Although God created the world perfectly, He intentionally left it undeveloped so procreation, ruling, and subduing could be accomplished through work and creativity. The pattern for work should be creative and assertive (Keller & Alsdorf, 2014). It is proactively making order out of chaos or further developing a tangible or intangible item. The intent of this research study was to further the field of accounting, which involved this researcher's creativity and assertiveness. Both are required to identify a problem, to design the research study, to perform the research including data collection and interpretation, and to conclude on findings from the research. Through research work, God is glorified and His providence for others is fulfilled by advancing the field of accounting research.

The time and energy invested coupled with the research results made an impact in the field of accounting research. To make an impact, according to Keller and Alsdorf (2014), is to choose work wisely so a difference can be made in serving God and providing for others. Keller and Aldsdorf (2014) noted that one way to accomplish this is by selecting work that benefits a researcher's field of study. In this research study, the researcher added to the field of accounting study, specifically the initial recognition and subsequent accounting for goodwill. In addition,

this research study offered insight for financial statement users, the accounting profession, and the academic community to the decision-making practices employed by executive management at publicly traded companies in the United States. This knowledge will be helpful in evaluating a company's financial statements and the applicable management's decision-making ability. The accounting profession and academic community are in the midst of proposing changes to accounting for goodwill and this study will further those discussion and, hopefully, impact the outcome (Linsmeier & Wheeler, 2021).

### *Benefit to Business Practice and Relationship to Cognate*

This researcher's cognate is accounting. This research study directly addressed the faithful representation of goodwill and the decision usefulness of a company's financial statements after the passage and implementation of key accounting guidance, ASU 2011–08. This accounting guidance updated SFAS 142 to include a qualitative assessment as a screening process prior to performing the more costly and complex two-step quantitative test. In addition, this qualitative assessment can be performed on an interim basis throughout the year when circumstances arise that increase the likelihood of goodwill impairment (FASB, 2011). ASU 2011–08 expanded on the events and circumstances that may indicate an impairment and provided examples such as general economic decline, deterioration in a specific industry or market, increase in cost of inventory, decline in actual and projected cash flows and income, sale of the applicable reporting unit, and other events specific to the reporting unit. These circumstances should result in the decline in the economic value of core goodwill, which is different than the overpayment by the acquiring company. This study helped to differentiate between these two main components of goodwill. The overpayment component should be written down immediately with the core goodwill component evaluated on an interim basis.

As Black et al. (2021) noted, this was the first time the FASB allowed an optional, qualitative assessment that is dependent on the subjective judgment of management. Although Black et al. found that ASU 2011–08 did not reduce the timeliness of goodwill impairment recognition, they were not specifically studying acquiring companies' potential overpayment for the target company, which has a significant effect on balance of goodwill in their financial statements. While the FASB has addressed the cost concerns related to the subsequent accounting for goodwill, there are still questions regarding the decision usefulness of goodwill and the merits of an impairment approach versus the pre-SFAS 142 approach of amortization and impairment (Burger & Wen, 2021). The FASB is currently in the process of reviewing subsequent accounting for goodwill and have developed potential alternative methods (Burger & Wen, 2021; Linsmeier & Wheeler, 2021). The goal of alternative methods should be, as Linsmeier and Wheeler (2021) explained, to offer a more faithful representation of goodwill in an acquiring company's financial statements.

***Summary of the Significance of the Study.***

This study enhanced the previous research studies on goodwill by focusing on the subsequent accounting for goodwill in accordance with ASU 2011–08. The intention of goodwill recognition is that financial statement users will understand the future economic benefit obtained by the acquisition of the target company. If an acquiring company overpays for the acquisition, the overpayment will also become a part of the goodwill balance that is recognized and may reduce the decision usefulness of the financial statements. This study reduced the gaps in the literature since there have been few studies that address the decision usefulness of a publicly traded company's financial statements after the passage and implementation of ASU 2011–08. This study advanced a previous study by Olante (2013) study. The Olante (2013) study focused

on United States publicly traded companies that completed acquisitions from 1999 through 2007, prior to the passage of ASU 2011–08. This researcher determined if the addition of a qualitative threshold impacted the results of Olante's (2013) original study. This study and its research results supplements the existing research literature that impacts the field of accounting. This is part of God's providence in serving Him and serving others. This researcher was created in the image of God and bless with a skillset in accounting that can be used to help others.

## A Review of the Professional and Academic Literature

The literature review begins with the acquisition process including the reasons a company may decide to purchase a target company, the negotiation process, and the impact on the calculation and recognition of goodwill as part of the acquisition accounting. The literature covering the history of the accounting guidance, which has changed several times in the last 2 decades, was reviewed along with the reasons for the changes. The reasons are the basis for the existing problem, which is the lack of faithful representation of goodwill under the current accounting standards has potentially resulting in the reduced decision usefulness of the financial statements. Support and criticisms of the current accounting guidance were discussed. The researcher examined the literature supporting the underlying theories that apply to this topic as well as the variables used to determine relationships in the research. Finally, the related studies that support or contradict the potential relationships between the variables and the recognition of impairment expense were reviewed.

### *Business Practices*

The business practices related to goodwill begin with a business combination or acquisition of the target company by the acquiring company. After negotiations have been completed and the purchase price decided, the acquiring company uses one or more forms of

consideration to pay the owners of the target company and will then need to account for the acquisition in their books. This is the initial recognition of goodwill to an acquiring company's balance sheet. In subsequent periods, the acquiring company will evaluate the economic value of goodwill to ensure it is still faithfully represented.

### *Acquisition Process*

An acquiring company contemplates the acquisition of a target company in a M&A for a variety of reasons, which include synergy creation, economies of scale, and reducing competition (Bartov et al., 2021). Caplan et al. (2018) stated that M&A transactions could be significant and have long-lasting consequences to both companies involved, the acquiring company and the target company. While Alhenawi and Stilwell (2019) concurred that synergy creation represents one main reason for M&A, they offer a second main reason of diversification. The latter is due to strengthening cash flows by having a variety of revenue sources. Additionally, as Welch et al. (2020) stated, the acquiring company's M&A contemplation is part of their larger strategic plan, which includes organic growth and forming alliances. This contemplation becomes serious when negotiations between the two companies begin, due diligence is performed, and the purchase price is determined.

### *Purchase Price*

The recognition of goodwill is based on the purchase price of the target company in an M&A transaction. The determination of the purchase price includes the target company's current value and the future value of the anticipated synergy creation. Both value calculations, as Caplan et al. (2018) described, are complex and subjective with the decision-making skills of the acquiring company's management being the deciding factor in the acquisition. Johnston et al.

(2018) discussed the inability to project cash flows accurately in a volatile environment could inhibit management's M&A decisions, specifically the negotiated purchase price.

Although multiple bidders for a target company have been found to influence the purchase price, sellers tend to narrow the field to the more serious and attractive candidates for acquisition (Welch et al., 2020). In their study, Marquardt and Zur (2015, as cited by Welch et al., 2020) found that exclusivity in the bidding process can affect the purchase price due to increased transparency and availability of the target company's information as perceived by the acquiring company. When the acquiring company and target company agree to the terms of the deal, a formal contract is entered by both parties (Welch et al., 2020).

### *Forms of Consideration*

Once the purchase price has been determined and agreed upon, the acquiring company must provide payment to the owners of the target company in the form of consideration decided upon. As Welch et al. (2020) explained, the acquiring company continually performs valuations on the target company prior to and during the entire negotiation and due diligence process. Not only are valuations pivotal in the continued pursuit of the target company, but they also help the acquiring company in making certain financial decisions, such as form of consideration. According to Ernst and Young (2021), the consideration paid could consist of cash, issuing the acquiring company's common stock, debt financing, equity financing, the acquiring company's intangible or tangible assets, promised future payments, or a combination of consideration. Although there are a variety of payment methods, acquiring companies typically use stock, cash, or a combination of both (de Bodt et al., 2018; Welch et al., 2020).

### *Common Stock as Consideration*

One popular form of consideration in acquiring a target company is for the acquiring company to issue their own common stock. When this form of consideration is used, the target company's owners would become shareholders or owners of the acquiring company (Schroeder et al., 2014; Spiceland et al., 2019). de Bodt et al. (2018) noted that stock-only payment methods have experienced a significant downward trend since 2001, which coincides with the passage of the accounting guidance that eliminated the pooling-of-interest method and the 40-year systematic amortization of goodwill that was used in the purchase method. Prior to 2001, around half of all M&A transactions were paid with stock-only while that percentage has dwindled to around 10% in recent years (de Bodt et al., 2018). According to Welch et al. (2020), a purchase price that is paid entirely with the acquiring company's own stock typically indicates that the stock is overvalued, which can lead to a decline in the market value. de Bodt et al. (2018) noted that the market reacted positively if the target company was private, but negatively if the target company was public in stock only transactions.

### *The Problem*

The general problem to be addressed was the lack of faithful representation of goodwill under the current accounting standards resulting in the reduced decision usefulness of the financial statements. The accounting guidance surrounding the initial recognition and subsequent accounting for goodwill has changed over the past several decades to address comparability, cost and complexity, and faithful representation concerns. In 2007, the FASB recodified SFAS 141, which is now known as ASC 805; SFAS 142 is now known as Accounting Standards Update 350, *Intangibles – Goodwill and Other* (ASC 350; Black et al., 2021). Although recodification

by FASB resulted in SFAS 142 now known as ASC 350, this research will continue to refer to the guidance as SFAS 142 to be consistent with other recent research studies on this topic.

### *History of Accounting Guidance*

The goal of accounting guidance, as described by Barth (2018), is to provide useful information to financial statement users for their decision-making purposes. The foundation of financial information is accounting guidance (Burger & Wen, 2021). Prior to the passage of SFAS 141 in 2001 (now referred to as ASC 805), which is the current accounting standard for business combinations, Accounting Principles Board Opinion No. 16, *Business Combinations* (APB No. 16) issued in 1970, allowed companies to select either the purchase or pooling-of-interest methods (de Bodt et al., 2018; Guler, 2018). The determination of the applicable method was dependent on certain qualifications. If a company met all 12 specific criteria, the pooling-of-interest method was required with no goodwill recognized on the balance sheet. As de Bodt et al. (2018) explained, the pooling-of-interest method was intended for a merger of equals and typical M&A transactions were between large United States companies. However, if a company used the purchase method, then goodwill was recognized on the balance sheet if the purchase price was more than the target company's fair value of net assets. In accordance with APB No. 17, issued concurrent with APB No. 16 in 1970, goodwill was then systematically recorded as amortization expense to the income statement over a period not to exceed 40 years with impairment expense recorded if book value of goodwill was higher than the expected undiscounted future cash flows (Bartov et al., 2021; Guler, 2018; Linsmeier & Wheeler, 2021).

Per APB No. 17, management was also required to evaluate the book value of goodwill compared to the fair value of goodwill for potential impairment at the entity level and on a periodic basis (Guler, 2018; Wheeler, 2020). In 1995, the FASB issued Statement of Financial

Standards 121 (SFAS 121), which was a general impairment standard applicable to all long-lived tangible and other identifiable intangible assets (Allen & Baez, 2020; Guler, 2018). SFAS 121 introduced a two-step impairment test that utilized undiscounted cash flows compared to the book value of the assets. Impairment of goodwill would be recognized if the book value was more than the undiscounted cash flows were less than the book value. An asset is not disclosed in a company's balance sheet at an amount above its fair market value (Slavin & Fang, 2018).

**ASC 805 and SFAS 142**. Criticism of the pooling-of-interest method prompted the FASB to pass ASC 805 (formerly SFAS 141) and SFAS 142, which became effective for all M&A transactions entered after June 30, 2001 (Guler, 2018). According to Johnson et al. (2021), criticisms included the lack of comparability in financial statements and the limit to competition in the M&A market with two methods in use for business combinations. The FASB's stated purpose for the passage of ASC 805 and SFAS 142 was to increase the reliability of financial statements and increase consistency in the accounting treatment of acquisitions among companies (Burger & Wen, 2021; Johnson et al., 2021).

ASC 805 removed the pooling-of-interest method as an option (de Bodt et al., 2018), while SFAS 142 ended the systematic amortization and impairment of goodwill and implemented an impairment-only evaluation of goodwill on an annual basis (Linsmeier & Wheeler, 2021). According to Guler (2018), the FASB viewed goodwill to have an indefinite useful life versus classification as a wasting asset. In addition, SFAS 142 instituted a two-step process for determining goodwill impairment and calculating the impairment expense (Guler, 2018). Although annual evaluation of goodwill was required, a company would need to evaluate on an interim basis if certain events or circumstances occurred that were likely to reduce the economic value of goodwill.

**Two-Step Process Instituted by SFAS 142**. The first step (Step 1) would be a comparison of the book value of the reporting unit and the estimated fair value of reporting unit (Chen et al., 2019). If the book value is higher than the estimated fair value compared to the reporting unit's undiscounted cash flows, then Step 1 has failed and the company would proceed to step two (Step 2; Guler, 2018; Linsmeier & Wheeler, 2021). Step 2 is the calculation of the actual goodwill impairment expense that would be recorded and includes a comparison between the book value and the implied fair value of the reporting unit. Implied fair value is defined as "the difference between the fair value of the reporting unit (including goodwill) and the fair value of net assets other than goodwill (including unrecognized assets)" (Guler, 2018, p. 565). The fair value calculated in Step 2 utilizes discounted cash flows (Guler, 2018; Johnson et al., 2021).

The financial statement effects of a goodwill impairment are a decrease in long-term assets on the balance sheet and an increase in expenses, via an impairment expense, on the company's income statement for the period of recognition (Hassine & Jilani, 2017). As Killins et al. (2021) stated, goodwill impairment is a non-cash charge that reduces the value of goodwill and decreases earnings for the period the impairment is recognized.

**Response to ASC 805 and SFAS 142**. The response to ASC 805 and SFAS 142 has been both positive and negative. While some financial statement users and the accounting profession deemed it an improvement in the faithful representation of goodwill, others pointed to the increase in cost and complexity and management's subjective judgement as detrimental to the faithful representation of goodwill. As Burger and Wen (2021) noted, previous studies have provided mixed results regarding the effect of SFAS 142 on the value relevance of goodwill. The statistical relationship between financial information and market prices is defined by Francis and

Schipper (1999 as cited by Burger & Wen, 2021) as value relevance. Value relevance and faithful representation are driven by decision usefulness of financial information (Spiceland et al., 2019).

**Support for ASC 805 and SFAS 142**. According to the FASB, SFAS 142 would increase the reliability of financial statements by improving the information provided to financial statement users and eliminating periodic amortization of an asset that may not be decreasing in economic value (Johnson et al., 2021). SFAS 142 and ASC 805 would increase the financial statements users' ability to understand goodwill and intangible assets and project future earnings and cash flows by providing better information. Chen et al. (2019) and Killins et al. (2021) stated that the FASB believes SFAS 142 better reflects the economic value of goodwill and predictive value of earnings and cash flow.

In their research study with a sample of United States publicly traded companies over a time period from 1988 to 2017, Burger and Wen (2021) concluded that despite the criticisms of SFAS 142 due to its broad management discretion, the value relevance of goodwill increased after the passage of SFAS 142 using other accounting information and long-lived tangible assets as benchmarks. Accounting information varies over time in conjunction with internal and external environmental factors so comparing goodwill to other book values as well as net income during the same time period was deemed a strong benchmark for value relevance.

In reviewing United States publicly traded companies over a period from 1999–2005, Guler (2018) found that a significant relationship did not exist between stock prices and goodwill for companies that postpone impairments of goodwill. Barth et al. (2001) stated stock prices and accounting balances will only have a significant relationship when the latter is reliable and relevant (as cited by Guler, 2018). Additionally, the findings suggested that impairments of

goodwill had a negative relationship with long-term stock returns in companies where executive management had broader discretion over the goodwill evaluation process.

Guler (2018) determined that SFAS 142 improved the decision usefulness of goodwill and the impairment of goodwill but stressed that the research study was from the perspective of the financial users and not all actors concerned with the accounting guidance for the subsequent accounting for goodwill. In addition, the findings suggested that financial statement users understand the value relevance of goodwill reported on the balance sheet in comparing different companies.

Based on the results of their study of United States publicly traded companies between 1996 and 2007, Johnson et al. (2021) found that financial statements users have a better understanding and evaluation of goodwill and its subsequent accounting after the passage of ASC 805 and SFAS 142, but the opposite is true for intangible assets. The results indicated that the accounting guidance did not improve financial statements users' understanding or ability to project earnings and cash flows of intangible assets.

Kwon and Wang (2019) found that the market reacted more positively to acquired intangible assets including goodwill, with a tendency to overprice the transaction, of privately held companies than of public companies. However, the positive initial market reaction to acquired goodwill was corrected within a 2-year period after the M&A transaction date. This downward pricing adjustment to goodwill was taken whether the company recorded an impairment of goodwill or not. The researcher's further findings indicated that the market's subsequent markdown of goodwill was more pronounced in the post-ASC 805 period. Based on their findings, Kwon and Wang (2019) suggested that ASC 805 helped financial statement users to be better able to forecast impairments of goodwill. The sample included United States publicly

traded acquiring companies with completed M&A transactions for the period from 2002 to 2016, with acknowledgement that 2002 would have been a SFAS 142 transition period.

de Bodt et al. (2018) stated that both ASC 805 and SFAS 142 did appear to support more efficient capital allocation and transparency of information citing specifically the annual impairment test. The annual impairment test provides, as de Bodt et al. (2018) explained, a method for shareholders to recognize the overpayment of an acquisition. In addition, de Bodt et al. (2018) found that there was a significant relationship between the decline in stock-only M&A payments and the passage of ASC 805 and SFAS 142.

**Criticisms of ASC 805 and SFAS 142**. While the FASB's goal in the fair valuation of business combinations and subsequent impairment evaluations was improved relevancy of financial statements, previous research studies offered mixed results with some claiming relevancy came at the cost of reliability (Johnson et al., 2021). Critics of SFAS 142 claim that not only does the standard increase the cost and complexity in application, but the fair value assessments are subjective, prone to management's incentives, and do not truly address core goodwill (Johnson et al., 2021). As part of their research study findings over a time period from 1996 to 2011, Li and Sloan (2017) concluded that management's discretion may result in delaying goodwill impairments in some circumstances and that financial statement users tended to overvalue companies with overstated goodwill in the post-SFAS 142 period.

Killins et al. (2021) agreed that under SFAS 142, executive management has greater discretion and influence in the determination of not only the factor indicating a potential decline in fair value, but in the calculation of fair value resulting in an impairment charge. In the subsequent accounting for all intangible assets per SFAS 142, goodwill was evaluated at least annually for impairment while identifiable intangible assets were subject to systematic

amortization (Zhang & Zhang, 2017). The accounting treatment for identifiable intangible assets would decrease net income, which potentially affected executive management's compensation packages and the company's market value, which Zhang and Zhang (2017) posited gave executive management incentive to allocate more of the purchase price to goodwill. Adame et al. (2021) stated that although financial statement users and the accounting profession acknowledged the two-step impairment test created a potential significant cost burden to companies, the criticism stemmed from the concern that the value of goodwill would not be faithfully represented, resulting in a reduction of decision usefulness.

Killins et al. (2021) also suggested that there is inconsistent application under SFAS 142 due to management's discretion in the goodwill process, which could impact the decision usefulness of the financial statements when comparing companies. As Chen et al. (2019) stated, SFAS 142 has more characteristics of principles-based accounting versus the majority of U.S. GAAP, which tends to be rules-based. In fact, one of the criticisms of principles-based accounting, according to Chen et al. (2019) is its lack of comparability due to the discretion involved in applying accounting standards resulting in unverifiable amounts. In studying United States publicly traded companies during the time period from 2000 to 2003, Chen et al. (2019) found that comparability declined subsequent to the implementation of SFAS 142 between goodwill-intensive companies and also between goodwill-intensive and non-goodwill-intensive companies. Non-goodwill intensive companies were defined as companies that recognized goodwill of less than 5% of total assets while goodwill intensive companies recognized goodwill equal to 5% or more of total assets. The significance of the decline correlated with increased unverifiable net assets. This contradicts the goal of SFAS 142, which is to provide better information to financial statement users.

Bartov et al. (2021) theorized that the lack of periodic goodwill amortization expense in accordance with SFAS 142 provides an incentive for management to overbid with no immediate impact to earnings. Killins et al. (2021) concurred that SFAS 142 increased management's discretion in the acquisition phase and subsequent accounting for goodwill. To test for overbidding, Bartov et al. (2021) compared three different samples of United States publicly traded companies between 1992 and 2014 for the purpose of comparing pre-SFAS 142 and post-SFAS 142. Although the goal of SFAS 142 was to increase the reliability of financial statements by improving the information, the researchers found that there was a significant increase in overbidding subsequent to the passage of the accounting guidance.

**Continued Cost and Complexity Issues with SFAS 142**. As noted above, one of the significant issues with SFAS 142 was the cost and complexity of the two-step process. Depending on the size of the company, a third-party valuation firm may need to be engaged to perform the two-step process based on the measurement of fair values (Black et al., 2021; Wheeler, 2020). In addition, this could potentially increase the cost of external audits due to the verification of the annual evaluation and potential impairment of goodwill (Chen et al., 2019). The audit engagement becomes more complex when subjective decision-making, such as indications for impairment testing, have been introduced. Wheeler (2020) stated that insufficient audits could potentially be the result of these additional audit procedures. The Public Company Accounting Oversight Board, which audits the auditors, found that accounting for goodwill was a key area for audit deficiencies (Burke, 2019).

**Passage of ASU 2011–08**. In 2011, the FASB issued ASU 2011–08, which was effective for companies with fiscal years beginning after December 15, 2011 (Black et al., 2021; Guler, 2018). The FASB's stated objective with the passage of ASU 2011–08 was to lessen the burden

on companies due to the cost and complexity of the quantitative two-step impairment test (Slavin & Fang, 2018). Li and Sloan (2017) stated that the passage of ASU 2011–08 relaxed the strict accounting guidance under SFAS 142. Burke (2019) noted that ASU 2011–08 provided less stringent accounting guidance evaluating goodwill. As Allen and Baez (2020) stated, ASU 2011–08 is one of the substantial accounting guidance changes passed by the FASB and represents their commitment to reducing the cost and complexing of subsequent accounting for goodwill.

ASU 2011–08 provided an optional Step 0 that enabled companies to assess whether an impairment was more likely than not and removed annual goodwill impairment testing (Black et al., 2020; Guler, 2018). Black et al. (2021) noted that Step 0 was the first instance of the FASB allowing a qualitative assessment by a company's management in financial reporting. During the Step 0 phase, management should consider multiple factors, including the macroeconomic environment, industry and market conditions, cost increases, overall decline in financial performance, and significant internal changes (FASB, 2011). Annual impairment testing was replaced by management's determination that impairment was likely based on certain events and circumstances (Li & Sloan, 2017). This could occur during interim periods, as well as, on an annual basis. Per Chen et al. (2019), impairment testing of goodwill is performed when an impairment indicator is present or, at least, on an annual basis. If any of these factors indicate that an impairment of goodwill is likely, then the two-step quantitative tests under SFAS 142 is performed.

**Effects of ASU 2011–08**. There is not a significant amount of research studies that focus primarily on ASU 2011–08. The plethora of previous research studies mainly discussed the effects of SFAS 142, which was amended by ASU 2011–08. The majority of research studies cover time periods affected by ASU 2011–08 and, therefore, are pertinent to this research study.

**Cost Savings Effect of ASU 2011–08**. In their pilot study aimed toward the academic community, Slavin and Fang (2018) stressed the need for future accountants to understand the implications of the changes that have occurred in the accounting guidance for the subsequent accounting for goodwill. The study focused on the passage of ASU 2011–08 with the introduction of Step 0 and its potential cost saving effects if the company opted to adopt the new accounting guidance. The sample size included only companies in the Dow 30 since these companies were large and presumably had more depth in terms of accounting and financial resources. The time period was from 2011 – 2015. Overall, the researchers found that 75.86% of the companies did not opt for Step 0 and, therefore, did not realize the cost savings.

**Frequency and Timeliness Effect of ASU 2011–08**. Black et al. (2021) performed a study to ascertain the characteristics of companies that opt to enact Step 0 afforded by ASU 2011–08 and if the Step 0 option changed the frequency and timeliness of goodwill impairments. The goal was to see if management's discretion resulted in a reduction in the frequency and timeliness of goodwill impairments. The latter was due to the potential manipulation and latitude of management's determination of events and circumstances that could trigger an impairment of goodwill. Black et al. (2021) selected a sample of United States publicly traded companies that presented goodwill on their balance sheets between 2009 and 2015. They divided the companies into the following two groups by reviewing their footnote disclosures in their SEC financial statement filings: companies that disclose Step 0 was utilized and companies that do not. In addition, Black et al. (2021) found that opted for Step 0 did not decrease the frequency or timeliness of goodwill impairments. They concluded that Step 0 was beneficial to United States companies in terms of cost and complexity without delaying the recognition of goodwill impairment.

Adame et al. (2021) conducted a study using a sample of United States publicly traded companies that relied solely on the qualitative impairment test between 2011 and 2019. Adame et al. (2021) studied the likelihood of goodwill impairment based on a company's reliance on the qualitative versus the quantitative valuation. Adame et al. (2021) found that the qualitative assessment is more likely to be relied upon by executive management when the risk and complexity level of goodwill is low and there is a straightforward justification for its use. The most interesting finding of this recent research study applicable to my study was that executive management that relied exclusively on Step 0 are less likely to recognize a significant impairment of goodwill within the next four years. Adame et al. (2021) concluded that, on average, executive management does not opportunistically use their discretion in applying Step 0 and that the accounting guidance is being used as intended by the FASB.

Burke (2019) tested a sample of United States publicly traded companies, during the period from 2004 to 2016, to determine the likelihood that a company does not recognize impairment of goodwill when the evidence strongly suggest otherwise. The beginning year was chosen as the point where the transition period for SFAS 142 had settled with the ending year chosen to assess the effect of ASU 2011–08. Only companies five or more acquisitions during the period studied were included in the sample. Burke (2019) concluded that the recognition of goodwill impairment decreases as a company's acquisitions increase. Companies with five acquisitions had a 14.04% frequency of impairment recognition, whereas companies with 20 acquisitions had a 1.75% frequency of impairment recognition. The frequency of impairment continued to trend downward for companies with more than 20 acquisitions.

**Effect of ASU 2011–08 and Stock Price Changes**. Previous studies indicated that stock prices reacted negatively to goodwill impairment announcements under the existing, stricter

guidance during the time periods studied with the researchers' goal to see if there was a significant change in findings with the passage and implementation of Step 0 (Allen & Baez, 2020). To determine the relationship between the potential change in stock prices and the impairment of goodwill subsequent to the passage and implementation of ASU 2011–08, Allen and Baez (2020) found that there was not a statistically significant relationship between stock prices and goodwill impairment announcements since the passage of ASU 2011–08. The time period covered in this study was fiscal years 2015–2017 with a sample size of 38 goodwill impairment announcements from United States publicly traded companies. The dollar impact of the goodwill impairment announcements ranged from $13.2 million to $4.2 billion. Furthermore, Baez and Allen (2020) found that goodwill impairment announcements did not provide additional information to financial statement users, which directly addresses the value relevance and decision usefulness of the subsequent accounting for goodwill.

**Adoption of ASU 2011–08**. In determining the application of Step 0 by United States publicly traded companies, Slavin and Fang (2018) found that related disclosure notes were inconsistent and not forthcoming in their detailed use of the optional qualitative assessment. Of the 636 companies in Black et al.'s (2021) study, 373 companies disclosed that Step 0 was performed with 263 companies remaining silent on the Step 0 option. In a reviewing financial statement disclosures of United States publicly traded companies from 2011 to 2019, Adame et al. (2021) found that 26% of the S&P 500 companies and 23% of the non-S&P 500 companies relied exclusively on Step 0 for their impairment testing. Adame et al. (2021) noted some companies did not disclose whether they used the quantitative or qualitative assessment and, in addition, companies are allowed to utilize both quantitative and qualitative impairment test for their different reporting units.

Although many companies did not provide adequate disclosures about the adoption of ASU 2011–08, Slavin and Fang (2018) identified an increase in the adoption of ASU 2011–08 from 2011 through 2015. This finding aligned with Black et al. (2021) who found that less than half the companies elected Step 0 in the first 2 years since adoption of the most recent accounting guidance and only 54 % in the third year. Subsequent to the 2011 transition period, companies are increasingly opting for Step 0 (Slavin & Fang, 2018). Slavin and Fang (2018) found that when the cost of the quantitative tests is relatively high, companies typically employed Step 0.

### *Most Recent Accounting Guidance*

Based on additional comments from the accounting profession and companies, the FASB implemented ASU 2014–02, which allowed private companies an option to amortize goodwill over a period not to exceed 10 years (FASB, n.d.). ASU 2014–02 was effective for private companies with fiscal periods beginning after December 15, 2014 and excluded publicly traded companies and not-for-profit companies. The FASB began a project in 2015 to address the continued cost issues and decision usefulness of goodwill voiced by the accounting profession in applying SFAS 142 (Burger & Wen, 2021).

Due to further criticisms of cost and complexity from publicly traded and not-for-profit companies, the FASB issued ASU 2017–04, which was effective for publicly traded companies with fiscal years beginning after December 15, 2020 and eliminated Step 2 (Allen & Baez, 2020). The calculation of goodwill to be impaired will now be based on Step 1. As Black et al. (2021) pointed out, the passage of ASU 2017–04 eliminated Step 2, but continues to allow Step 0. This implies FASB's support of a qualitative assessment. Due to the recent passage and implementation of ASU 2017–04, this study did not address this accounting guidance.

### *Specific Problem with Current Accounting Guidance*

The specific problem to be addressed was the potential lack of faithful representation of goodwill under the current accounting standards within publicly traded companies in the United States that have completed a business combination between 2012 and 2018 resulting in the potential reduced decision usefulness of the financial statements. Recognized goodwill on a company's balance sheet should be at an amount that represents its economic value as of the presentation date and not extraneous items that overstate that amount. However, there has been an increase in the amount of goodwill recognized since the passage of ASC 805 and SFAS 142. The fair value of an acquisition is the agreed upon purchase price, which is verifiable, whereas the allocation of the fair value to individual assets cannot be easily verified (Zhang & Zhang, 2017). While this is the case for all individual assets, it is to a greater extent with goodwill and identifiable intangible assets versus tangible assets. The overall consequence is that the current accounting guidance does not appear to capture the core goodwill that the balance sheet account should represent. Killins et al. (2021) urged that skepticism be utilized when reviewing financial statements due to the possibility of an inaccurately stated goodwill value and/or inopportune impairment expense.

**Description of Goodwill**. Accounting for goodwill is a key part of financial reporting (Ayres et al., 2019). Goodwill is an intangible long-lived asset on a company's balance sheet and is created upon the acquisition of a target company (Killins et al., 2021; Linsmeier & Wheeler, 2021). Although goodwill can be internally generated, it can only be recognized as an asset through a business combination (Slavin & Fang, 2018). Goodwill is the excess value of a target company over the fair value of that target company's assets and liabilities. Goodwill is intended

to represent the future economic benefit of the acquisition resulting from the synergy created from the business combination and going concern, referred to as core goodwill (Olante, 2013).

**Increase in the Recognition of Goodwill**. The FASB's focus on reducing the cost and complexity of SFAS 142 does not address the significant issue of the decision usefulness of financial statements (Linsmeier & Wheeler, 2021). In addition to cost and complexity concerns, questions regarding potential postponement of goodwill impairment and significant amounts recognized as goodwill have been discussed (Wheeler, 2020). The value of goodwill presented on companies' balance sheets has increased significantly in recent years, according to Nugent et al. (2016), with accounting guidance deemed the culprit. SFAS 142 provided an incentive for acquiring companies to overpay for target companies in anticipation of increased market value and operating performance without the systematic goodwill amortization expense reducing net income. Johnson et al. (2021) stated that companies are highly likely to recognize goodwill since the passage of ASC 805. Furthermore, subsequent to the passage of SFAS 142, Black et al. (2021) and Linsmeier and Wheeler (2021) found that the purchase price allocation to goodwill has increased, which has resulted in significant increases in goodwill recorded on companies' balance sheets and subsequent increases in impairments of goodwill.

In the time period examined between 1996 and 2011, Li and Sloan (2017) found that goodwill balances have increased, while the recognition of goodwill impairment is less timely post-SFAS 142. Findings also suggested that the probability of goodwill impairment increased in correlation with the increase in goodwill balances and decrease in profitability. The sample excluded the recessionary period from 2008–2009 and those companies using the pooling-of-interest method pre-SFAS 142. As Yehuda et al. (2019) noted, the increase of goodwill as a

percentage of the purchase price is not consistent with the faithful representation of the asset's value.

Nugent et al. (2016) observed that there has been significant growth in goodwill recognized on balance sheets and posited that companies in mature markets tend to enter business combinations to achieve growth. As Killins et al. (2021) explained, goodwill can account for a large share of the purchase price. On average, per Shalev (2009), goodwill comprised over half of the purchase price for the target company (as cited by Killins et al., 2021). Yehuda et al. (2019) found in their study that goodwill had a 55% mean and a 57% median of the purchase price of the acquiring companies from 2002 to 2006. In 2015, the acquiring companies paid, on average, a 38% premium over the market price of the target company (Condon, 2016 as cited by Nugent et al., 2016).

In studying the goodwill disclosed on the 100 largest publicly traded companies in the United States, Nugent et al. (2016) excluded 14 financial and insurance service companies. Of the 86 remaining companies, 27 companies disclosed goodwill more than 20% of their total assets based on the Form 10-Ks filed with the SEC as of June 15, 2016. Adame et al. (2021) found that almost 40% of companies had a goodwill balance at some point during the period from 2011–2019. The average of reported goodwill was 14.7% of total assets. Per Linsmeier and Wheeler (2021), the total goodwill balances reported by S&P 500 companies in the United States increased by 153% from 2005 to 2018, $1.26 trillion to $3.2 trillion, respectively. In terms of a percentage of total assets of S&P 500 companies, goodwill was 9.1% of total assets in 2018 compared to 5.3% of total assets in 2005. Using a sample of companies with five or more acquisitions, Burke (2019) noted that acquisition activity decreased from 2004 to 2016, while the average total value of acquisitions increased by 186% over the same period of time. In addition,

the average value of related goodwill remained a steady percentage of the total acquisition value. The result of allocating more of the purchase price to goodwill instead of identifiable intangible assets was the lack of faithful representation of reported assets on a company's balance sheet, thereby eroding their decision usefulness (Zhang & Zhang, 2017).

**Impairment of Goodwill**. Goodwill can potentially create artificial value for an organization and full or partial impairment of goodwill can be an indication (Nugent, 2016). Per Zhang and Zhang (2017), the disadvantage of overstating goodwill is the potential write-down or impairment of goodwill in the future. Impairment of goodwill is evaluated on at least an annual basis or when impairment indicators exist and is based on management's judgement of future cash flows of the applicable reporting unit (Burke, 2019). Impairment of goodwill occurs when the economic value deteriorates resulting in goodwill being written down to reflect its accurately estimated value with an offsetting non-cash charge to the income statement as impairment expense (Killins et al., 2021). Impairment of goodwill affects all financial statements by reducing assets, stockholders' equity, and net income (Hassine & Jilani, 2017). These reductions potentially result in a capital structure that is more heavily dependent on debt and can negatively affect management's compensation packages.

Impairment of goodwill is not a regular occurrence in a company's financial statements and is an acknowledgement by management that the expected synergy creation and increased profitability/cash flows were not realized (Caplan et al., 2018). Impairments of goodwill are typically significant economic events for the company (Ayres et al., 2019) and potentially indicate poor decision-making abilities of executive management along with prospective future earnings of the company (Killins et al., 2021; Li et al., 2011). If core goodwill was initially

recognized upon the acquisition, then a subsequent decline in performance should be recognized in reduced goodwill on a company's balance sheet.

However, as Killins et al. (2021) explained, another reason for goodwill impairment could be an overpayment when acquiring the target company. Caplan et al. (2018) used a real-world example in explaining the impact of poor managerial decisions through the impairment of goodwill within a 2- to 3-year period of an acquisition. The researchers highlighted the lack of analytical skills in the management team that resulted in overpaying for the acquisitions with recording goodwill equivalent to over 60% of the purchase price. Core goodwill should represent expected synergies from an acquisition and not overpayment (Caplan et al., 2018; Ernst & Young, 2021).

The beginning of a recession in the mid-to-late 2000s resulted in a significant increase in the recognition of goodwill impairment and emphasized visibility on the related accounting guidance (Ayres et al., 2019). During the period between 2005 and 2010, the failure rate of business combinations was around 60% to 90% while, in contrast, recognized goodwill impairment was between 2% and 5% from 2005 to 2007 and between 7% and 16% from 2008 to 2010 (Burke, 2019). Burke (2019) concurred with Ayres et al. (2019) that the latter was due to the economic recession during that time period. Although the acquisitions were not successful in generating additional shareholder value, the value of goodwill on the companies' balance sheets remained the same.

Although publicized goodwill impairments are infrequent, the same cannot be said of the actual number of impairments that occur. In their research study for the time period 2004–2015, Ayres et al. (2019) found that of the 3,691 United States publicly traded companies that recognized impairment expense included in their sample, the mean impairment expense was

$285 million, which equated to roughly 36.8% of their revenue. The total impairment expense recognized in 2018 by United States companies was more than $2488.7 billion (Killins et al., 2021). Of the almost 40% of companies recognizing goodwill during the time period from 2011 to 2019, goodwill impairment was recognized by an average of 12% of those companies with the impairment expense averaging above 5% of total assets (Adame et al., 2021).

Combined impairments of goodwill for S&P 500 companies compared to prior year combined goodwill balances for the period 2006–2012, averaged only 1.21% (Linsmeier & Wheeler, 2021). According to Linsmeier and Wheeler (2021), this indicates that goodwill has been decreasing at a slower pace subsequent to the passage of SFAS 142 meaning impairments of goodwill are recognized in a less timely manner. Burke (2019) explained that serial non-impairment of goodwill continues to be a financial reporting issue and occurs when evidence indicates goodwill should be impaired, but the company does not recognize impairment expense. Burke (2019) cited previous research that indicated non-impairments are mainly due to the avoidance of a net loss and/or resulted in the violation of a financial covenant, or would have an adverse affect on executive management's compensation or status.

**Impairment, Management's Discretion, and External Influences**. King et al. (2021) agreed that impairments of goodwill aid in the projection of future cash flows but stated that their timeliness is a function of executive management's subjective judgement. Management's subjective judgement has been cited as both an advantage and disadvantage associated with SFAS 142. In their study on executive management's incentive and discretion to allocate more of the purchase price to goodwill versus other intangible assets, Zhang and Zhang's (2017) findings suggested that external analysts provided a mitigating effect on executive management's discretion with the valuation of intangible assets.

Adame et al. (2021) and Ayres et al. (2019) also found that financial analysts are a mitigating factor in the timeliness of recording an impairment to goodwill. In applying ASU 2011–08, Adame et al. (2021) found that companies with a lack of external monitoring by financial analysts and auditors were more likely to delay the recognition of impairment. Ayres et al. (2019) found that a company's external financial analysts, on the sell-side, influenced the timing of goodwill impairment recognition in one of two main ways. The first way is that financial analysts perform in-depth studies of a company's performance and projections of future performance, which tends to increase information provided by the company. The second way relates to the adverse consequences potentially experienced by management and the company of not recognizing a goodwill impairment when financial analysts project a significant decline in profitability and cash flows. When a financial analyst downgrades a company, it signals to financial statement users that there is a potential issue with the net present value of a company's future cash flows. This is directly tied to the impairment of goodwill and, per Ayres et al. (2019), compels management to recognize goodwill impairment in a timely manner. Adame et al.'s (2021) study covered a time period from 2011 to 2015 and included a sample of companies that were highly likely to recognize goodwill impairment expense determined by certain impairment indicators, which included overpriced acquisitions. The researchers found that management's discretion was used to avoid impairment in companies that where the pressure for increased performance is high and weak external monitoring exists.

In contrast, Han et al. (2021) found that executive management tends to feel pressured to exceed analysts' expectations and, in turn, uses goodwill impairment to manage earnings. However, the influence by analysts is diminished by transparent financial information provided by the company. Han et al. (2021) performed a study to determine the influence of financial

analysts, specifically securities analysts, on the recognition of goodwill impairment in the China market. Their findings suggested that management's discretion in recognizing goodwill in accordance with the FASB and IASB's goodwill accounting guidance could potentially be opportunistic.

Burger and Wen (2021) discussed the effects that internal and external environmental factors have on executive management's decision-making process, which significantly affects the recognition of financial statement elements and, in turn, the decision usefulness of a company's financial statements. Internal environmental factors, as described by Gamble et al. (2021), are resources or assets significant to the organization and capabilities or competencies exclusive to an organization that fit their specific strategy. External environmental factors include the macro-economic environment, competition, customers, and vendors (Gamble et al., 2021). Johnston et al. (2018) found that more volatility in company's environmental factors had a positive correlation with the recognition and magnitude of goodwill impairment. Further, they found that executive management's ability to soundly address uncertainty in environmental factors could mitigate the recognition and magnitude of goodwill impairment.

### *Accounting for the Acquisition*

All publicly traded companies headquartered in the United States must follow U.S. GAAP as their accounting standard (Hoyle et al., 2020). Once the M&A transaction has been completed, the acquiring company adheres to the accounting guidance, ASC 805, to post the acquisition to their general ledger (Ernst & Young, 2021). The basics of ASC 805 are to post the fair value of the target company's assets and liabilities to the acquiring company's general ledger. Any remaining difference between the fair value of net assets and the purchase price is

recognized as goodwill, which is a long-term asset on the acquiring company's balance sheet (Ernst & Young, 2021).

SFAS 142 is the accounting guidance that is used in the subsequent accounting for goodwill (Guler, 2018). In accordance with SFAS 142, goodwill is evaluated at least annually to determine if the balance continues to faithfully represent the economic value of the asset (Linsmeier & Wheeler, 2021). Due to the intangible nature of goodwill, the subsequent fair valuation of goodwill is determined based on other financial information about a company as a whole and the specific reporting unit (Burger & Wen, 2021). Other financial information of a company's reporting unit would be components in the projection of future cash flows used in fair value calculations. If goodwill has declined in economic value, goodwill impairment expense is calculated and potentially recognized as part of the two-step process employed by SFAS 142 (Guler, 2018). Goodwill impairment expense would be recognized in the company's income statement during the applicable period.

Acquisitions completed between 2012 and 2018, which this research study will cover, would follow ASU 2011–08. This accounting guidance provides an optional Step 0 whereby companies can assess whether an impairment is more likely than not (FASB, 2011). In addition, companies are not required to evaluate goodwill impairment annually. Instead, the economic value of goodwill can be evaluated when events and circumstances indicate that there may be a decline (FASB, 2011; Li & Sloan, 2017). If impairment is deemed likely, then the two-step process is followed.

### *Theories*

There are four underlying theories that affect the initial recognition and subsequent accounting for goodwill. The current accounting guidance under U.S. GAAP is the foundation

that United States publicly traded companies must follow, but accounting guidance can conflict with agency theory and upper echelon theory when competing interests are involved. In addition, Signal theory can drive the decision-making process by signaling to financial statement users certain information.

### *Current Accounting Guidance*

The first theory is the accounting guidance that dictates how the acquiring company will recognize the target company in their financial statements. This type of acquisition, referred to as a business combination, follows ASC 805 when the acquiring company gains control of the target company (Ernst & Young, 2021). In accordance with ASC 805, the acquiring company recognizes the target company's assets acquired and liabilities assumed at fair value with any residual amount of the purchase price recognized as goodwill. ASU 2011–08, an amendment to SFAS 142, is used in subsequent accounting for goodwill in completed acquisitions between 2012 and 2018, which is the focus of this research study (Black et al., 2021; FASB, 2011; Guler, 2018).

Due to the significant economic consequences of accounting guidance, the FASB faces immense pressure in their standard setting process (Schroeder et al., 2014), which is relevant in the initial and subsequent account for goodwill. The interpretation and application of the relevant accounting guidance for the time period affects the potential recognition and timing of a decline in the economic value of goodwill. In recent years, the FASB's stated focus on accounting guidance has been to improve comparability and increase consistency (Jiang et al., 2018). In the FASB's conceptual framework, as Jiang et al. (2018) pointed out, comparability and consistency are not a principal qualitative characteristic of the decision usefulness of accounting information. However, as noted above, the FASB's stated purpose of ASC 805 and ASU 2011–08 is to

provide improvement in the faithful representation and consistency of financial statements (Burger & Wen, 2021; Johnson et al., 2021). Faithful representation, as well as relevance, are fundamental qualitative characteristics in the conceptual framework (Spiceland et al., 2019).

### *Agency Theory*

Agency theory strives to explain accounting practices and standards and is a positive accounting theory (Schroeder et al., 2014). The basic premise of agency theory is that individuals are motivated to do what is in their best interest and this is a conflict in the agent relationship. In a company, that agent relationship is between the executive management or decision makers and the investors or owners. Advocates of agency theory stated that it aids in the reduction of financial statement manipulation because the theory itself is "politically and socially unacceptable" (Schroeder et al., 2014, p. 139). Executive management's self-preservation would not allow them to be perceived as such.

**Agency Theory and SFAS 142.** Guler (2018) cited a Ramanna and Watts (2012) research study that provided evidence that management's discretion in the valuation of goodwill was inconsistently applied among companies, which resulted in reduced reliability of the financial statements. The Ramanna and Watts' (2012) study showed that impairments of goodwill were due to agency theory where self-interest is the motive behind executive management's decision. Black et al. (2021) concurred by pointing to agency theory as a concern in applying the two-step impairment test in accordance with SFAS 142. Executive management is primarily responsible for the fair value estimates in the two-step process and could be motivated by their self-interest. Further, Burger and Wen (2021) cited agency theory as the main point of criticism for SFAS 142 due to management's discretion in determining a triggering event to warrant evaluation of goodwill and the unverifiable fair value estimates used in goodwill

impairment calculations coupled with their potential compensation incentives tied to financial results. Hassine and Jilani (2017) also linked management incentives to agency theory and stated that incentives can include not only compensation, but also newly hired executive management, specifically the Chief Executive Officer (CEO), avoiding financial debt covenant violations, and outperforming the competition.

**Conflicts in Agency Theory.** According to Qin et al. (2020), the agent problem between executive management and shareholders is due to the misalignment of objectives and information resulting in a management focus on short-term benefits such as mergers and acquisitions, which may not necessarily translate to long-term benefits for shareholders. Making decisions based on self-interest by executive management can be detrimental to the company and, in turn, all related financial statement users (Killins et al., 2021). Subsequent impairments of goodwill can be traced to bad decisions enacted by the acquiring company's executive management that were not in the best interest of their shareholders. Bartov et al. (2021) concurred in the results of their study, which strongly suggested that accounting guidance plays a pivotal role in overbidding for acquisitions. Overbidding can potentially promote agency conflict when executive management prospers due to the acquisition, but shareholders do not. Executive management with payment structures tied to financial performance are more apt to overbid with optimism that the acquisition will be successful in the long term. As Adame et al. (2021) theorized, ASU 2011–08 potentially extends agency theory in terms of executive management's discretion being used opportunistically. Adame et al. (2021) estimated that the risk of executive management utilizing Step 0 to avoid or delay goodwill impairment was 9% for S&P 500 companies and 17% for non-S&P 500 companies.

**Alignment in Agency Theory**. As Bartov et al. (2021) noted, tying the payment structures of executive management's compensation packages to financial performance only incentivizes overbidding in an acquisition. However, when the objectives of the company's shareholders and executive management are aligned through compensation packages that are based on financial and non-financial measures, then executive management decisions will be in the interest of the company (Gamble et al., 2021). Gamble et al. (2021) advised that rewards should be based on accomplishing performance goals to further the company's long-term strategy versus rewards for performance of assignment tasks, such as meeting a financial, one-year goal. Darrough et al. (2014) found that risky acquisitions by executive management decreased when compensation committees reduced the related component in their compensation packages. This alignment reduces the potential agency theory conflicts.

### *Signal Theory*

Signal theory is predicated on public information that an organization discloses, which signals its operating status to financial statement users (Qin et al., 2020). According to the signal theory, an enterprise can release the signal of its operating status to investors and the market through public information (Fu & Shen, 2020 as cited by Qin et al., 2020). Some financial users assert that the economic value of goodwill disclosed on a company's balance sheet indicates whether the acquisition was successful or not (Linsmeir & Wheeler, 2021). On the other hand, per Harford et al. (2012), impairment of goodwill is an indication of poor management decisions in the original acquisition (as cited by Qin et al., 2020). As Li et al. (2011) explained, recognized impairment expense is usually based on subjective estimates by company's executive management and signals to the financial statement users that a potential decline in earnings and

cash flows will or has occurred. The market typically reacted with lowering expectations of future earnings due to the financial information conveyed.

The results of Chen et al.'s (2019) study between the relationship of goodwill impairment disclosures in the financial statements and audit fees provided evidence that audit fees tend to decrease based on the increase of information asymmetry disclosed or the increase of financial statement users' scrutiny. This is due in part to the signal theory where auditors perceived substantive goodwill impairment disclosures as reducing audit risk because of transparency to the financial statement users. In addition, as Chen et al. (2019) discussed, this type of elective disclosure signals strong internal controls and an ethical executive management. Proponents of SFAS 142, as Burger and Wen (2021) stated, think that management's discretion in the timing of recognizing a goodwill impairment and estimating fair values could be used to diminish information asymmetry between the company and financial statement users by conveying private information. Adame et al. (2021) cited prior research that supported conveyance of private information to financial statement users in terms of future cash flows.

### *Upper Echelon Theory*

The upper echelon theory, as described by Neely et al. (2020) is a theory developed by Hambrick and Mason (1984) that asserts the characteristics and experiences of executive management significantly influences their decision-making and eventually their applicable organization's financial outcomes. Using the upper echelon theory as a foundation, Plöckinger et al. (2016) found evidence in their literature review that executive management's characteristics heavily influence financial accounting. This influence could be positive or negative in disclosing financial results to financial statement users.

**Characteristics of Executive Management**. With their study focused on the pre-acquisition stage of the M&A process, Welch et al. (2020) cited various research studies that pointed to the association of upper echelons theory and the probability of M&A transactions. The executive management characteristics prone to engaging in M&A transactions include, but are not limited to, overconfident, extravert, young male, narcissistic, highly competitive, and non-Republican. In addition, Welch et al. (2020) noted that executive management are more likely to participate in M&A transactions if their compensation packages include stock options. Mello (2019) stated that stock options have the ability to entice executive management in creative accounting for the purpose of increasing the stock value. In contrast, those in executive management that are older and/or have experienced personal tragedies are more risk averse and more hesitant in M&A transaction decisions (Welch et al., 2020).

As part of their research study, Bartov et al. (2021) cited reasons for overbidding in an acquisition, which included agency theory, as noted above, and overconfident, biased, and/or competitive management. Caplan et al. (2018) theorized that a weak internal control environment extends to poor M&A decisions, including overpayment for a target company. This could be due to poor internal information or management's overestimation of their skills. In their study regarding CEO confidence covering a time period from 2002 to 2018, Killins et al. (2021) found that overconfident CEOs are more apt to not only delay the recognition of goodwill impairment, but also underestimate the amount of impairment expense. In addition, these CEOs tend to lack transparency regarding their companies when disclosing impairment of goodwill.

**Ethical Values of Executive Management**. In addition, executive management is ultimately responsible for instilling the ethical values of the organization (Patelli & Pedrini, 2015 as cited by Hope & Wang, 2018). According to Hope and Wang (2018), big bath accounting

decisions are an executive management decision that is either made for the benefit of the organization or for the benefit of management personally. The decision is dependent on management's ethical values. Big bath accounting is a type of earnings management, which occurs when an organization will be reporting a net loss during a particular reporting period so decides to clean up their balance sheet by writing off certain items (Hope & Wang, 2018). These write-offs result in a large net loss in the current period with the objective of realizing higher earnings in future periods. In examining the significance of executive management's ethics in big bath accounting, Hope and Wang (2018) found an increase in information asymmetry when deceptive executive management utilized big bath accounting versus when non-deceptive executive management used it.

**Incentives of Executive Management.** As Choi and Nam (2020) found, the decision to impair goodwill was related not only to an organization's declining economic performance but was also a specific management strategy tied to incentives, which is also a factor in agency theory. This strategy included big bath accounting practices, which results in loss avoidance and income smoothing in previous and future periods. In their research study on French companies, Hassine and Jilani (2017) found that executive management's decision to impair goodwill was motivated by incentives which included a newly hired CEO and worldwide economic events, such as the recession in the mid-2000s. Their findings also indicated a significant relationship between the magnitude of the impairment amount with a newly hired CEO, worldwide economic events, earnings management, and big bath accounting.

### *Variables*

To address the potential lack of faithful representation of goodwill under ASU 2011–08 that may result in reduced decision usefulness of the financial statements, the researcher

determined if a positive relationship existed between the impairment of goodwill and two overpayment indicators based on the strength of association between the variables. Each of the indicators are independent, attribute, ordinal variables that were derived from the FASB 1999 ED (Olante, 2013). The existence and strength of the relationship between the recognition of impairment expense and the year of recognition, the dependent variables, and each of the overpayment indicators will be tested. Overpayment can be an indication that the recognized goodwill on the balance sheet is not core goodwill.

**Overpayment and Core Goodwill**. Henning et al. (2000 as cited by Wheeler, 2020) stated that core goodwill is believed to include not only synergy creation and going concern, but also overpayment. Yehuda et al. (2019) stated that recognized goodwill represented the synergy creation assessment by the acquiring company and the negotiation skills of both the acquiring company and the target company.

**Overpayment and Impairment**. The potential amount of goodwill recognized on the acquiring company's balance sheet increases as the purchase price of the acquisition increases, which potentially leads to an overpayment. An acquisition overpayment is not part of core goodwill and, as Adame et al. (2021) cited is a main driver for subsequent impairment of goodwill. Goodwill should be adjusted for an overpayment when the initial transaction is recorded, as specified in accounting guidance, and is consistent with the economic value of the asset (Yehuda et al., 2019). Although goodwill is recognized in most acquisitions, a downward revision of goodwill due to overpayment is rare.

Li et al. (2011) performed a study to determine, among other things, if overpayments for an acquisition potentially resulted in an impairment of goodwill. The sample spanned the time period from 1991 to 2005. Since acquisition overpayments are not directly observable, the

researchers began with the recognized impairment expense and reviewed the previous 5-year period for potential overpayment of the original acquisition. All acquiring companies were United States publicly traded companies. Li et al. (2011) found that the magnitude of the goodwill impairment can be predicted by the following: overvalued stock as consideration by the acquiring company, premium paid compared to the book value of the target company, premium paid compared to the purchase price of the target company, and to a smaller scale, acquisitions of unrelated target companies and termination fees. These findings suggest that the subsequent impairment of goodwill could potentially be due to overpayment of the target company, which indicates goodwill may have been partially impaired upon acquisition and core goodwill was not faithfully represented in the financial statements.

**Poor Management and Overpayment**. Caplan et al. (2018) found that goodwill recognized in the same year that material weaknesses were disclosed, as evidenced by a company's Sarbanes-Oxley section 404 report, had higher recognized impairment expense in the subsequent 3-year period compared to goodwill recognized with no material weakness disclosed in the same year. The sample included United States publicly traded companies with a time period of completed acquisitions between 2004 and 2010. The researchers concluded that management with poor decision-making skills are more apt to overpay for the target company because they have overvalued the potential creation of synergy.

As Nugent et al. (2016) noted, the potential overpayment represented by a large goodwill balance can actually constrain, not enhance, long-term sustainability in a company. While management is focused on short-term incentives, such as increased market valuations and incentive compensation, it can have a long-term negative effect with goodwill being an illusion of value.

**Common Stock Used as Consideration**. One of the overpayment indicators for this research study was the common stock used as consideration to acquire the target company. Consideration paid could be cash on hand, cash from debt financing, the acquiring company's securities such as common stock, the acquiring company's intangible or tangible assets, promised future payments, or a combination of two or more of the types listed (Ernst & Young, 2021). Bartov et al. (2021) listed an acquiring company's overpriced common stock used in a stock-for-stock acquisition as one of the reasons that companies overbid for a target company. This overpayment, as Bartov et al. (2021) noted potentially leads to subsequent impairment of goodwill. Olante (2013) found a strong relationship between companies that used stock only as consideration for a target company and the recognition of impairment expense.

**Purchase Price Allocated to Goodwill**. The second overpayment indicator for this research study was the percentage of purchase price allocated to goodwill. As Li et al. (2011) noted, premium paid compared to the purchase price of the target company can potentially be an overpayment indicator resulting in the impairment of goodwill. Zhang and Zhang (2017) predicted that executive management would allocate a greater amount to goodwill in cases where the likelihood of goodwill impairment recognition was lessened due to management having increased discretion in the initial and subsequent accounting for goodwill. The latter was identified by applying three characteristics of the acquiring company's executive management from a Ramanna (2008) study. Using a sample of completed acquisitions from July 2001 through April 2007 with a focus on deals above $10 million in the business services industry, Zhang and Zhang (2017) found that subsequent to the passage of SFAS 142, executive management with the identifying characteristics were more likely to allocate a greater amount of the purchase price to goodwill.

### *Related Studies*

This research study advanced a previous study by Olante (2013), which examined business combinations and the recognition of impairment expense in accordance with pre- and post-SFAS 141 (now ASC 805) and 142 (now ASC 350). The period covered did not include business combinations where the acquiring company could opt for accounting in accordance with ASU 2011–08, which instituted the option of Step 0 or a qualitative assessment of impairment with the goodwill assessment occurring during interim periods, not annually, when events and circumstances arose that could potentially trigger an impairment.

While Step 2 has been eliminated with the passage of ASU 2017–04, the qualitative assessment afforded by Step 0 remains a part of current accounting guidance. Not only will this study advance Olante's (2013) study but will add to the ongoing debate regarding the future of the subsequent accounting for goodwill with the goal of core goodwill. Research studies have offered recommendations to improve the subsequent accounting for goodwill to improve decision usefulness.

**Advancement of Previous Study by Olante (2013)**. The primary objective of Olante's (2013) study was to determine if recognized goodwill values were faithfully represented on the acquiring company's balance sheet by examining the causes of goodwill impairments and if these causes were predictable. Olante (2013) hypothesized that the most significant cause, overpayment for the target company's acquisition, indicated that core goodwill was not faithfully represented. As discussed above, previous studies have shown that impairment of goodwill has occurred due to overpayment instead of a subsequent decline in operating performance. Unfortunately, executive management may knowingly overpay with optimism that synergy creation will exceed expectations and result in improved operating performance. This study was

intended to confirm to the accounting profession and financial statement users that ASC 805 is unable to completely capture only core goodwill. Olante's (2013) secondary objective was to assess the timeliness of impairments of goodwill in accordance with SFAS 142 in order to mitigate the shortcomings of ASC 805.

Olante's (2013) research studied the effects of eight overpayment indicators of potential impairment of goodwill as independent variables. The measurement of the eight overpayment indicators was performed at the time of the acquisition. Four of the overpayment indicators were obtained from the FASB 1999 ED and included the following: a significant premium paid relative to the target company's purchase price, the existence of multiple bidders or an auction of the target company, the acquiring company's stock used as the main method of consideration paid, and a significant amount of the target company's purchase price allocated to goodwill. The four additional overpayment indicators were obtained from previous research studies and included the following: a significant premium paid relative to the target company's book value, diversity between the acquiring company and target company, proximity in the physical of the acquiring company and target company, and the size of the target company. Olante (2013) combined the eight overpayment indicators and created a model that correctly predicted impairment expense, the dependent variable, realized for around 40% of the sample for the post-ASC 350 period based on the overpayment indicators. The sample selection consisted of 929 completed acquisitions by United States publicly traded companies from 1999 to 2007 with acquisitions tracked through September 2009 to determine if impairment of goodwill was recognized. Olante (2013) found that 37.4% of goodwill impairments were predictable based specifically on two of the eight overpayment indicators. There existed a positive relationship between the percentage of the acquiring company's stock used as consideration and the

probability of impairment to goodwill, which was the one of the overpayment indicators. The larger the percentage of stock used as consideration, the better chances of impairment expense recognized, which was one of the overpayment indicators. In addition, there existed a positive relationship between the purchase price amount allocated to goodwill and the probability of impairment to goodwill. The larger the percentage of the purchase price allocated to goodwill, the chances of an impairment of goodwill increased. In fact, Olante (2013) found that there was a significant risk of goodwill impairment "when the value of goodwill is more than 67% of the purchase price" with the impairment expense recognized within 2 to 3 years of the completed acquisition (p. 251). As noted by the researcher, previous research studies performed during the pre-SFAS 142 period suggested the time lag between the completed acquisition and goodwill impairment was between 4 and 5 years. However, the Olante (2013) study provided evidence that post-SFAS 142, the time lag had decreased to between two to three years. Olante (2013) concluded that this supported SFAS 142 improving the timeliness of goodwill impairments.

This research study used two of the eight overpayment indicators-based findings from Olante's (2013) research study. The two indicators included the percentage of the acquiring company's common stock used as consideration and the percentage of the purchase price allocated to goodwill. Olante (2013) found that significantly strong relationships existed between first two overpayment indicators mentioned above and the recognition of goodwill impairment expense. Although Olante (2013) did not find a significantly strong relationship between the premium paid relative to the target company's book value and goodwill impairment, the results indicated that a statistically significant relationship was present. However, this research study will not include the third indicator due to the inclusion of private target companies, as well as public target companies, in the research study. With the introduction of Step 0 and goodwill

assessments in interim periods, this study determined if Olante's (2013) findings remain consistent.

**Future of Accounting for Goodwill**. In the accounting field, subsequent accounting for goodwill is a heavily debated issue and the FASB is in the process of reviewing alternative methods to the impairment-only method under SFAS 142 and ASU 2011–08 (Linsmeier & Wheeler, 2021). According to Wheeler (2020) and Linsmeier and Wheeler (2021), the FASB is examining amortization as a potential cost reduction while the International Accounting Standards Board (IASB) reviewing potential improvements to impairment-only. The FASB and IASB have worked for years on a convergence project to better align accounting standards, so it is important to note that accounting goodwill continues to be an issue internationally (Hassine & Jalini, 2017; Spiceland et al., 2019).

In their study regarding subsequent accounting for goodwill and the potential alternative methods, Linsmeier and Wheeler (2021) stated that financial users have cited deficiencies with both the amortize-and-impair method under APB No. 17 and the impairment-only method under SFAS 142. The amortize-and-impair method submits that goodwill is finite and, therefore, should systematically decline in value, while the impairment-only method suggests that goodwill can be infinite, but can potentially decrease in value. This decrease in value can be irregular and/or consists of certain components of goodwill, but not the entire amount. Both methods exhibit weaknesses that diminish the decision usefulness of goodwill and financial statement users' ability to evaluate future earnings and cash flows (Wheeler, 2020).

Linsmeier and Wheeler's (2021) research was to determine which goodwill accounting methods reflected a more accurate economic value of a company's goodwill balance. Wheeler (2020) performed similar research examining the effects of the alternative methods on equity

prices to determine the value relevance of subsequent accounting for goodwill. In addition to the previous method of amortize-and-impair and the current method of impairment-only, the IASB proposed potential improvements to both methods. The IASB's suggested improvements to the amortize-and-impair method were to amortize over the expected period of increased cash flow and earnings, the realization of synergy creation, and the payback period. The two suggested improvements to the impairment-only method by the IASB and FASB were to decrease the cost and complexity without sacrificing effectiveness and/or develop a more effective impairment test.

Additionally, IASB presented a fairly new method called the pre-acquisition headroom approach (PAH; Linsmeier & Wheeler, 2021). The PAH approach calculates "the internally generated goodwill of the acquiring company immediately prior to the acquisition" (Wheeler, 2020, p. 19). Linsmeier and Wheeler (2021) described the calculation of PAH as the acquiring company using the surplus of the recoverable value over the book value of the cash generating unit around the acquisition date. The PAH would be added to the cash generating unit's book value when Step 1 was performed. This is in order to try to distinguish between core goodwill obtained upon acquisition of the target company and existing goodwill of the reporting unit.

Both Linsmeier and Wheeler (2021) and Wheeler (2020) focused their sample on non-serial acquiring companies in the United States over a time period from 2005 to 2018 and 2003 to 2017, respectively. Non-serial is defined by Wheeler (2020) as companies that only have goodwill on their balance sheet related to one acquisition and not multiple acquisitions. In comparing previous and current methods with alternative methods for subsequent accounting of goodwill, Linsmeier and Wheeler (2021) found substantial differences in the pace of decrease in goodwill. The researchers suggested that alternative methods could potentially provide a better

faithful representation of the economic value of goodwill but did not conclude on which method appeared to be better. Wheeler (2020) submitted that financial statement users view the value of goodwill as non-wasting if a better method of subsequent accounting for goodwill is utilized.

**Recommendations for Subsequent Accounting of Goodwill**. In comparing the effects of alternative methods for the subsequent accounting of goodwill suggested by the FASB and IASB on equity prices, Wheeler (2020) concluded that the PAH approach results in significant increases in the explanatory power of equity prices compared to the other methods. Additionally, evidence supports that the timeliness of goodwill impairment recognition improves using the PAH approach. Li and Sloan (2017), on the other hand, recommended that the faithful representation of goodwill would be enhanced with periodic amortization in conjunction with interim impairment testing. Nugent et al. (2016) also recommended that the accounting profession return to the periodic amortization of goodwill over a shorter time period due to today's assets having a shorter life cycle. Amortization with impairment would also potentially discourage the overpayment for target companies in M&A transactions (Nugent et al., 2016). Wheeler (2020) agreed amortization would be appropriate if the majority of goodwill was overpayment, not core goodwill, since it would be considered a wasting asset. The other circumstance where amortization would be suitable, according to Wheeler (2020), is the going concern of a target company with significant earnings power that would be depleted with competition.

In addition to accounting guidance revisions to improve the faithful representation of goodwill while considering the cost and complexity, Burke (2019) suggested that a company's board of directors should take a more active role in ensuring executive management evaluated

the value of goodwill rigorously. The process of impairment testing should be heavily reviewed by a company's audit committee and external auditors.

In their research study, Yehuda et al. (2019) encouraged acquiring companies to calculate the estimated economic profit or loss to better reflect the value of goodwill in their balance sheets. In studying M&A transactions completed from 2002 to 2006 and projecting an economic profit or loss, the researchers calculated an economic net loss for 41% of their sample. Yehuda et al. (2019) stated an economic net loss was not only indicative of an estimated overpayment for the target company but was not representative of core goodwill and future positive economic performance. In addition, an estimated economic loss is positively associated with a projected impairment of goodwill. In fact, there was a positive correlation between the increase in the economic loss and the probability of goodwill impairment.

### *Summary of the Literature Review*

The problem delved into the history of accounting guidance distinguishing between pre-SFAS 142 and post-SFAS 142. This differentiation is important because companies involved in a business combination went from a periodic amortization with impairment approach to an impairment-only approach with regards to the subsequent accounting for goodwill. The debate has continued for decades since the passage and implementation of SFAS 142 during 2001 and 2002, respectively.

The literature review began with a description of goodwill along with the calculation and recognition in a company's financial statements. Goodwill, referred to as core goodwill, is intended to represent the synergy creation in a business combination and the going concern of the target company. Goodwill has increased as a percentage of the purchase price of a target company, which is concerning due to the potential impairment and the implication that the

acquiring company overpaid. The second section of the literature review covered the impairment of goodwill including the description and significance of recognizing a goodwill impairment. As part of the discussion on the impairment of goodwill, the researcher addressed the decision usefulness to financial statements users and the issues with the current accounting guidance on subsequent accounting for goodwill. The third section of the literature review included management's discretion and decision-making ability in the merger and acquisition process. This was pertinent to the research due to the potential overbidding and overpayment for the target company. The more an acquiring company pays for a target company, the larger the amount of goodwill as part of the purchase price. The last section of the literature review discussed the Olante (2013) study, which this study advanced to determine if a significant relationship continues to exist between the two overpayment indicators and the recognition of impairment expense within a certain time period.

**Summary of Section 1 and Transition**

Goodwill is a long-term asset on an acquiring company's balance sheet. Goodwill is recognized when the purchase price is more than the net assets acquired when an acquiring company purchases a target company. Goodwill is intended to represent the synergies created when two companies are combined and the going concern of the target company, or what is considered core goodwill. However, goodwill has increased as a percentage of the purchase price in the past two decades with previous research studies pointing to accounting guidance as the primary reason. When an acquiring company completes the acquisition, they follow ASC 805 in posting the transaction to their general ledger. After the initial recognition of goodwill, companies are required to evaluate the economic value of goodwill on an interim basis in according with ASU 2011–08 if events and circumstances strongly suggest there has been a

change. In accordance with earlier accounting guidance, SFAS 142, goodwill should be evaluated on at least an annual basis. During the evaluation, if the book value of the reporting unit is less than the market value then goodwill is impairment by reducing goodwill on the balance sheet and recognizing impairment expense in the income statement. Due to the increase of goodwill as a percentage of the purchase price on the balance sheet, the risk of an impairment of goodwill is significant. This leads to the question of faithful representation of core goodwill on the balance sheet and the decision usefulness to financial statement users. Olante (2013) posed a similar question with research performed using United States publicly traded companies that completed acquisitions between 1999 and 2007. The study determined if a relationship existed between eight overpayment indicators and the recognition of goodwill impairment. The Olante (2013) study was conducted prior to the passage and implementation of ASU 2011–08. The passage of ASU 2011–08 allows companies the option of using a qualitative evaluation on an interim basis to determine the probability of an impairment of goodwill. The qualitative evaluation is based on management's subjective judgement. If management determines that an event or circumstance is significant enough to warrant a potential impairment, then the two-step quantitative process under SFAS 142 is performed. However, if management does not deem a potential impairment of goodwill, the no impairment charge is recognized, and the economic value disclosed in the balance sheet remains the same. Since ASU 2011–08 introduced the qualitative evaluation option, the researcher advanced Olante's (2013) study by performing research on completed acquisitions by United States publicly traded companies between 2012 and 2018. This study determined if the same relationship exists between two of the eight overpayment indicators and the recognition of goodwill impairment under the accounting

guidance, ASU 2011–08 applicable during that time period. This research supplements the existing research studies exploring goodwill, its decision usefulness, and subsequent accounting.

In the following section, the research project was performed to determine if a significant relationship exists between two overpayment indicators and the recognition of goodwill impairment. The researcher used the two overpayment indicators where not only a significant relationship existed with the recognition of goodwill impairment in the Olante (2013) study, but the findings were significant. The researcher obtained M&A data from the Deals section of the Marketline database and focused on completed acquisitions by United States publicly traded from January 1, 2012 through December 31, 2018. The researcher compared the completed acquisition information obtained to the public statement filings on the SEC website from January 1, 2012 through December 31, 2021. This was done to not only confirm the M&A information obtained from Marketline, but to determine if impairment expense had been recognized subsequent to the acquisition. The steps taken in the research are discussed in Section 2.

## Section 2: The Project

When an acquiring company purchases a target company, there would be no direct indication if an overpayment occurred or not. However, overpayment indicators can signal a potential overpayment. A potential overpayment can indicate that recognized goodwill was overstated on an acquiring company's balance sheet since core goodwill may not have been solely captured. The objective of this study was to determine if a relationship exists between two overpayment indicators and the probability of impairment expense during the time period ASU 2011 – 08 was adopted. This research study was conducted with a fixed design approach using quantitative methods; specifically, a correlational design was used. Statistical analysis was performed to verify approximate normal distribution of the variables and to determine the existence and strength of a relationship between the independent variables and the dependent variables.

### Purpose Statement

The purpose of this fixed design research study was to determine if ASU 2011 – 08 improves or has little to no effect on the faithful representation of goodwill through testing if an impairment expense was recorded in the financial statements of publicly traded companies with completed acquisitions between 2012 and 2018. This study followed a study previously performed by Olante (2013) with the objective of assessing the faithful representation of a company's goodwill by scrutinizing the reason for the recognition of impairment expense. Significant findings from Olante (2013) provided evidence that impairment expense was highly likely if a substantial amount of the purchase price was in stock and/or goodwill recognized was a significant percentage of the purchase price. These findings were based on pre- and post-SFAS 142, but did not include companies that were eligible to adopt ASU 2011 – 08. ASU 2011 – 08

was an amendment to SFAS 142 and optional to adopt. This research sought to determine if Olante's (2013) findings remain valid or have changed with the optional qualitative Step 0 afforded by ASU 2011 - 08. As Olante (2013) explained, companies should record core goodwill and any subsequent impairment should relate to deteriorating performance of the reporting entity. However, citing FASB's 1999 ED, impairment expenses can be predicted under certain conditions and signals overpayment for the acquired target company versus the representation of core goodwill (Linsmeier & Wheeler, 2021; Olante, 2013). In addition, Olante (2013) tested the timeliness of goodwill impairment recognized, which this research will continue to evaluate in accordance with ASU 2011 – 08. This research supplements the literature regarding the subsequent accounting for goodwill.

**Role of the Researcher**

This research study has a pre-specified design focused on a sample of companies that are incorporated and publicly traded on stock exchanges in the United States. In conducting this research study, the researcher began by identifying completed M&A transactions during the time period between January 1, 2012 and December 31, 2018, using data obtained from the Deals section of the Marketline database. The target companies were either public or private companies.

Once the acquiring companies were identified, the researcher confirmed that the transaction actually closed and determined whether the acquiring companies recognized goodwill on their balance sheet. This process was performed by reviewing the quarterly (Form 10-Q) and annual (Form 10-K) public financial statement filings on the SEC website from January 1, 2012 through December 31, 2018. If necessary, the informational filings on the Form 8-K were reviewed. Simultaneously, the researcher assessed whether impairment of goodwill was

recognized on the acquiring company's income statement between January 1, 2012 and December 31, 2021 subsequent to the transaction completion date. Not only did the researcher review the financial statements included in the Form 10-Q and Form 10-K, but also the supporting disclosure notes and management's discussion and analysis within both of those filings.

The researcher hand-collected information on the acquiring company's transaction completion date, total purchase price, the types of consideration used for payment, the portion of the purchase price recognized as goodwill, and the adoption of ASU 2011 – 08, if disclosed. In addition, the researcher compiled information on the dollar amount and timing of the goodwill impairment recognition, if any. Using the statistical software, IBM SPSS, the researcher determined if a statistically significant relationship existed between the common stock used as consideration, the portion of the purchase price recognized as goodwill, and the recognition of impairment expense within a certain time period. In addition, the researcher quantified the length of time between the initial acquisition and the recognition of impairment expense.

## Research Methodology

This research study employed a fixed design using quantitative methods. It was a non-experimental study with the objective of determining if a significant relationship existed between certain overpayment indicators and the recognition of goodwill impairment.

### *Discussion of Fixed Design*

This research study was conducted with a fixed design approach using quantitative methods; specifically, a correlational design will be used. A fixed design was deemed appropriate for this study due to the design and framework being planned in advance without delineation from the process (Robson & McCartan, 2016). The M&A and financial data used

was from secondary sources with completed acquisitions, recognitions of goodwill, and potential recognitions of goodwill impairment having occurred previously without changes incorporated by the researcher or another person. The researcher analyzed completed transactions and subsequent events that are permanent and not subject to manipulation.

***Discussion of Quantitative Method***

To determine the existence of a statistically significant relationship between two or more variables, the variables must be quantified and measurable (Morgan et al., 2013). Two attribute independent variables will be used to determine their relationship with the dependent variables. Since these were attribute variables to measure the strength of a significant relationship, if any, this was a non-experimental research study using correlation statistics. An attribute independent variable is one that cannot be manipulated or changed by the researcher (Morgan et al., 2013). The two attribute independent variables were based on two of the eight overpayment indicators cited by Olante (2013).

The first attribute independent variable was the common stock used as consideration by the acquiring company as part or all of the purchase price for the target company. The consideration paid could be in one form only such as all stock or all cash. It could also be a mix of consideration, with a certain percentage in stock and the remaining percentage in cash, debt financing, or contingent consideration. Although stock only payments have been decreasing (de Bodt et al., 2018), this type of consideration has been directly linked to acquisition overpayments (Bartov et al., 2021; Olante, 2013). In following a similar method by Olante (2013), common stock was calculated as the percentage of purchase price paid by the acquiring company. Common stock was designated as an ordinal variable, with the percentage of common stock used

as consideration grouped into four ordered levels beginning with 0% through 100% (PAIDINSTOCK2).

The second attribute independent variable was the percentage of purchase price allocated to goodwill. The purchase price was allocated between the fair values of assets acquired less the fair values of liabilities assumed with any difference being allocated to goodwill. In following the same approach by Olante (2013), the independent variable was quantified by dividing the recognized goodwill by the enterprise value. The enterprise value was defined as the combination of the purchase price and the financial debt assumed, which includes net deferred tax positions. The result was percentages calculated for this independent variable and grouped into three ordered levels beginning with 0% through 100% (GOODWILL RECOG3). The data type for this independent variable was ordinal.

The two independent variables, which are the overpayment indicators, were tested to determine the existence and strength of each of relationship with the recognition of impairment expense and the timing of the recognized impairment expense in the acquiring company's income statement. The first dependent variable was the recognition of impairment expense, which was a dichotomous variable with "0" designated as no recognition of impairment and "1" defined as a recognition of impairment (IMPAIREXP2). The second dependent variable was the recognition of impairment expense within a certain time period and was an ordinal variable. IMPAIRMENT EXP will consist of the following: 0 = no impairment; 1 = impairment in one year after acquisition; 2 = impairment in the second year after acquisition; 3 = impairment in the third year after acquisition; 4 = impairment in the fourth year after acquisition; 5 = impairment in five years or more after acquisition.

The two independent variables and one of the dependent variables were designated as ordinal variables, while the other dependent variable was a dichotomous variable. A Descriptive Statistics report was generated and confirmed the expectation of the variables' data types. For each of the independent variables, descriptive statistics provided the number of acquiring companies in the sample size; the minimum score in the range; the maximum score in the range; the mean or average of all scores; and the standard deviation. In addition, the descriptive statistics were checked for inconsistencies and errors. A frequency table was generated for the dependent variables confirming the number of acquiring companies in the sample size agrees to the Descriptive Statistics run for the independent variables. In addition, this table showed the percentage of acquiring companies in the sample that recognized subsequent impairment expense versus the acquiring companies that did not.

After the initial Descriptive Statistics report was produced, the researcher reviewed the report's results for reasonableness. Reasonableness meaning the results produced were as expected based on information entered and the researcher's expected results based on knowledge of the variables. At this point, the researcher was able to identify information entered incorrectly and correct it. After the correction, the descriptive statistics report was produced again for verification.

The four hypotheses for this research study were as follows:

H1o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense (DV).

H2o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

H3o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense (DV).

H4o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

The researcher determined the correlation between (H1o) common stock used as consideration toward the purchase price (PAIDINSTOCK2) and the recognition of impairment expense (IMPAIREXP2); (H2o) common stock used as consideration toward the purchase price (PAIDINSTOCK2) and the recognition of impairment expense within a certain time period (IMPAIRMENT EXP); (H3o) purchase price allocated to goodwill (GOODWILL RECOG3) and the recognition of impairment expense (IMPAIREXP2); and (H4o) purchase price allocated to goodwill (GOODWILL RECOG3) and the recognition of impairment expense within a certain time period (IMPAIRMENT EXP). This was performed by generating the Cramer's V nonparametric statistical test (Morgan et al., 2013). Cramer's V was selected due to all variables being ordinal or dichotomous. Although data would be ordered, Cramer's V treats the data as nominal. Nonparametric statistics are applied to data that are not normally distributed. The parametric equivalent to Cramer's V would be multiple regression, which is used with scale data (Morgan et al., 2013). Using Cramer's V, cross-tabulation tables and symmetric measures were

generated and interpreted to determine the strength and existence of a relationship between each of the independent and dependent variables.

### *Summary of Research Methodology*

Due to the existing, unchangeable nature of the financial data being tested, this research study was conducted with a fixed design approach using quantitative methods; specifically, a correlational design was used. The objective was to determine if a relationship existed between two overpayment indicators and the recognition of impairment expense within a certain time period since the passage of ASU 2011 – 08. The secondary objective was to determine the strength of the relationships, if any. The research used the following statistical analysis to verify the expectation of ordinal and dichotomous data and measure the potential relationships: descriptive statistics for confirmation of ordinal data for the two independent and two dependent variables; frequency table for the dependent variables; and Cramer's V to determine if a relationship exists between the independent variables and the dependent variables. This provided the financial statement users, the accounting profession, and the academic community with additional evidence of the effects of accounting guidance on the faithful representation of core goodwill.

## Participants

The participants included companies that are publicly traded on stock exchanges and incorporated in the United States. The companies completed an acquisition of a target company during the time period between January 1, 2012 and December 31, 2018 that qualified as a business combination in accordance with ASC 805. The acquiring companies recognized goodwill as part of the acquisition accounting of the completed transactions. The target company could either be publicly traded or a private company.

## Population and Sampling

To determine the effects of ASU 2011–08 with the inclusion of a qualitative assessment, Step 0, on the faithful representation of core goodwill, the researcher's goal was to ascertain the timeliness of impairment recognition with the existence of overpayment indicators. With the option for the subjective Step 0, executive management could potentially postpone the recognition of impairment, which in turn, could reduce the faithful representation of goodwill. The eligible population of United States publicly traded acquiring companies and the sampling of those companies for the research study was discussed.

### *Discussion of Population*

The eligible population included companies that are publicly traded and incorporated in the United States. The companies must have completed an M&A transaction during the time period between January 1, 2012 and December 31, 2018. An acquiring company must have purchased a target company in the M&A transaction and recognized goodwill on their balance sheet. The target company can include both public and private companies. Since the research study is determining the effectiveness of United States accounting guidance, ASU 2011–08, on the subsequent accounting for goodwill, acquiring companies incorporated and reporting in the United States would be the applicable population. The acquiring companies must be publicly traded on a United States stock exchange due certain information that must be made public to their financial statement users and required financial statements with disclosures that must be filed with the SEC.

### *Discussion of Sampling*

The researcher obtained M&A transaction data from the Deals section of the Marketline database and focused on completed acquisitions from January 1, 2012 through December 31,

2018. The deals listing report from the Deals section provided the announced date, the completed date/year/quarter, deal status, the acquiring and target companies, the deal type and subtypes, the deal country, and the deal value, if provided. The deals listing report was exported to an Excel spreadsheet application ("Excel") for the purpose of sorting the data. The deal type was M&A with two deal subtypes, including a) if the deal was an acquisition or merger and b) if the acquiring company has 100%, majority, or minority ownership. The M&A transactions included in this research study were acquisitions that result in 100% ownership of the target company.

In following Olante's (2013) approach and to obtain comparability, the following sectors were excluded: Agriculture and Forestry, Financial Services, and Government and Not-for-Profit. As Burke (2019) found, sectors that deviate from the overall goodwill impairment average include the Agriculture and Forestry and Financial Services industries. The Government and Not-for-Profit industry is not required to file periodic financial information with the SEC and their public bond issuances are exempt from registration filings with the SEC (Hoyle et al., 2020).

Once acquiring companies with completed acquisitions were identified, the researcher compared the information obtained to the public financial statement and informational filings on the SEC website from January 1, 2012 through December 31, 2018, and verified the accuracy of the M&A information from the deals listing report on Marketline and determined if impairment expense has been recognized subsequent to the acquisition. In addition, the acquisition that resulted in the recognition of goodwill was tracked through December 31, 2021, to determine if the impairment of goodwill had been recognized. These financial and informational statement filings consist of the Form 10–K, the Form 10–Q, the Form S–4, and the Form 8-K (collectively "SEC filings"). The Form 10–K provides a company's annual audited financial statements with

supporting disclosure notes, while the Form 10–Q provides quarterly reviewed financial statements with supporting disclosures (SEC, n.d.). The Form S–4 is filed by the acquiring company if their common stock is issued as consideration for a business combination and the Form 8–K is an informational report that is used to alert financial statement users of significant events (SEC, n.d.). Data obtained from the SEC filings included the transaction date, the purchase price, the form of consideration, financial debt assumed, recognition of goodwill, and recognition of goodwill impairment with the year impaired, if applicable.

ASU 2011–08 was passed in 2011 with an effective adoption date for companies with fiscal years beginning after December 15, 2011, which is the reason the sample period started on January 1, 2012. Based on the findings from Black et al. (2021), the researcher addressed the transition period of the adoption of ASU 2011–08 by the acquiring companies. As part of the SEC filings, the researcher read through each acquiring companies' disclosures to determine if adoption of ASU 2011–08 was specifically disclosed. The researcher selected a 7-year period to obtain a thorough amount of data. The sample period for completed M&A transactions ends on December 31, 2018; however, the researcher reviewed the acquiring companies' SEC filings through December 31, 2021 for recognition of an impairment to goodwill as noted above.

After entering the search parameters in the Deals section of Marketline, the preliminary findings from the deals listing report exported to Excel were 1,549 completed acquisitions between January 1, 2012 and December 31, 2018. Of the completed acquisitions, 942 were deemed ineligible and excluded from the sample. Ineligibility was due to the following: 279 acquiring companies were foreign companies where the M&A transaction was completed in the United States; 264 acquiring companies had no information available because the acquisition was not disclosed in their SEC filings, company was not found on the SEC website, or the

company had limited SEC filings; 185 acquiring companies recognized goodwill, but it was combined with other immaterial acquisitions; 138 acquiring companies did not recognize goodwill in the M&A transaction; 51 acquiring companies did not file the applicable SEC filings during the time period of the acquisition; and 25 acquiring companies with other reasons, such as a duplicate entry, in the financial sector, or the M&A transaction was a joint venture.

After excluding the ineligible acquiring companies from the original 1,549 population, the researcher had 607 acquiring companies eligible for the sample. Sampling risk occurs when the conclusion of the research study based on the sample size would have been different had the entire population been used (Louwers et al., 2015). In this case, the entire population would be the 607 acquiring companies eligible for the sample. To obtain a 95% confidence level and a 5% confidence interval for the results to be generalizable, a sample size of 384 acquiring companies will be selected.

The researcher randomly selected 384 acquiring companies from 607 eligible acquiring companies for the sample. The random sample selection was performed using systematic random selection (Louwers et al., 2015). According to Louwers et al. (2015), systematic random selection is a statistical sampling method that is efficient and gives each acquiring company the same probability of being selected. Typically, a random starting point is selected with every *n*th item included in the sample. The sampling interval determines the frequency of acquiring companies included in the sample. It was determined by using the total eligible population of 607 acquiring companies divided by the sample size of 384 acquiring companies, which equals 1.58. At this point in systematic random selection, the random starting point is selected and is based on a number equal to or less than the sampling interval. In this case, the sampling interval is between “1” and “2.” Since this is the case, a modification was made with the 607 acquiring

companies sorted based on their M&A transaction completion date and then assigned a "1" or "2." All "2s" were included in the sample, which reduced the sample size to 303 acquiring companies. This means that 81 acquiring companies were additionally required for the sample size of 384 acquiring companies.

The remaining 304 acquiring companies (607 original eligible sample less the 303 initially obtained above) divided by 81 acquiring companies equals 3.75. The 304 acquiring companies were numbered 1–4, with every acquiring company assigned a "3" to be included in the sample, which resulted in obtaining the 76 acquiring companies for the sample.

The remaining five acquiring companies included in the sample were selected by using a random number generator. Those acquiring companies that were assigned a "1," "2," or "4" were numbered sequentially from 1 – 228. A random generator selected "155," "180," "20," "31," and "109." Combining the original 303 acquiring companies with the 81 acquiring companies and the five acquiring companies provided the 384 acquiring companies for the sample size.

***Summary of Population and Sampling***

To determine the effects of ASU 2011–08 with the inclusion of a qualitative assessment, Step 0, on the faithful representation of core goodwill, the researcher's goal was to ascertain the timeliness of impairment recognition with the existence of overpayment indicators. In order to test for an association between certain overpayment indicators and the recognition of goodwill impairment within a certain time period, the eligible population consisted of companies that are incorporated and publicly traded on stock exchanges in the United States. The companies must have completed M&A transactions during the time period between January 1, 2012 and December 31, 2018 and recognized goodwill in accounting for the acquisition. The target company included both public and private companies.

The researcher used the Deals section of the Marketline database and selected acquisitions completed from January 1, 2012 through December 31, 2018. The deals listing report generated from the Deals section provided the announced date, the completed date/year/quarter, deal status, the acquiring and target companies, the deal type and subtypes, the deal country, and the deal value, if given. The original data provided 1,549 acquiring companies with completed deals in the United States during the stated time period. To verify the data, the researcher compared each acquiring company with their SEC filings to confirm the parameters for inclusion in the sample were met. Out of the 1,549 acquiring companies, there were 607 acquiring companies eligible for the sample. The researcher utilized the systematic random selection technique to reduce the sample size to 384 acquiring companies. These 384 companies were tested to determine if a relationship exists between two impairment indicators and the subsequent recognition of impairment expense and the strength of that relationship.

**Data Collection & Organization**

The data collection started with the deals listing report, generated from the Deals section of Marketline for acquiring companies that have completed acquisitions during the time period from January 1, 2012 through December 31, 2018 and exported to an Excel spreadsheet application. The deals listing report supplied applicable data including announcement date, completed date, the deal headline, the acquiring company, the target company, and the deal value, if disclosed in the announcement. The researcher added categories to enable the collecting of data relevant to the research study. Each of the 384 acquiring companies in the sample were publicly traded and, therefore, have strict regulatory reporting requirements that have to be met on a periodic basis with the SEC. The categories added were either obtained from the acquiring

company's financial statement filings with the SEC or were calculated based on the acquiring company's financial statement filings with the SEC.

### *Data Collection Plan*

The data collection plan began with the deals listing report, which was generated from the Deals section of the Marketline database and exported to Excel. Not only was Excel used for its organization capabilities, but also for its calculation abilities via the researcher's use of mathematical formulas. The deals listing report provided the following information that the researcher will use for the 384 acquiring companies in the sample: announcement date, completed date, the deal headline, the acquiring company, the target company, and the deal value, if disclosed in the announcement. The deal listing report was sorted by completed date from earliest to most recent, which means from 2012 to 2018. The researcher added the following categories explained in detail below: total purchase price, common stock, cash on hand, debt financing, contingent consideration, PAIDINSTOCK2 calculation, financial debt assumed, goodwill recognized, GOODWILL RECOG3 calculation, recognized impairment expense, year of recognized impairment expense, years between recognized goodwill and impairment expense, and disclosure of ASU 2011–08 in notes to the financial statements.

### *Total Purchase Price*

The total purchase price in the Excel spreadsheet was a formula based on the summation of the common stock, cash on hand, debt financing, and contingent consideration categories. The purchase price may be paid by the acquiring company using the following consideration: cash, tangible or intangible assets, securities of the acquiring company such as common stock, a subsidiary, business of the acquiring company, and future promises of payments and/or a combination of the different types of consideration (Ernst & Young, 2021). However, the main

types are common stock of the acquiring company, cash on hand of the acquiring company, debt issued by a third-party to the acquiring company, and/or contingent consideration, which is the future promise of payment based on certain thresholds that must be met by the acquiring company. This breakdown of consideration used for the purchase is disclosed in the acquiring company's disclosure notes in either the Form 10–K or Form 10–Q. The researcher entered the consideration used or mixture of consideration used to the applicable categories and agreed the purchase price calculated in Excel to the SEC filing. PAIDINSTOCK2 was calculated by taking the amount of the acquiring company's common stock used as consideration and dividing by the total purchase price.

***Financial Debt Assumed***

The financial debt assumed as part of the acquisition accounting was obtained from either the Form 10-K or Form 10-Q. This liability was needed in order to calculate the enterprise value of the target company, which is defined as the purchase price plus the financial debt assumed, including the net deferred tax position (Olante, 2013). The net deferred tax position is the net difference between the acquired deferred tax assets and deferred tax liabilities, if any, of the target company.

***Goodwill***

Goodwill is recognized upon the acquisition of the target company when the purchase price exceeds to fair value of the net assets acquired (Burger & Wen, 2021; Slavin & Fang, 2018). During the reporting period when the transaction is completed, the acquiring company may not have all the necessary information to finalize their purchase price accounting due to the fair valuation of certain acquired assets and liabilities (Ernst & Young, 2021). There is a measurement period where the acquiring company can adjust initial provisional amounts

recognized on the transaction completion date. Based on the additional fair value information obtained, the initial recognition of goodwill could potentially be adjusted. The measurement period does not have a deadline, but the acquiring company does have to disclose the nature of the provisional items and the expectation of when information will be obtained in order to finalize the acquisition accounting (Ernst & Young, 2021). Therefore, the researcher reviewed the subsequent Form 10–Ks and Form 10–Qs to verify the final amount of goodwill recognized, if necessary.

The variable GOODWILL RECOG3 was calculated using Excel and taking the goodwill recognized divided by the purchase price plus the financial debt assumed (Olante, 2013). The researcher calculated the goodwill recognized by the purchase price, which excludes the financial debt assumed in the denominator. The last calculation showed the overall impact of the recognition of goodwill to the acquiring company's assets on their balance sheet.

### *Impairment Expense*

The acquiring company will either recognize goodwill impairment expense in the years subsequent to the transaction completion or not. The researcher reviewed the subsequent Form 10–Ks and Form 10–Qs to determine if goodwill related to the original target company acquisition was impaired or not (IMPAIREXP2). If there was related impairment of goodwill, the total amount of impairment will be obtained along with the year of recognition. The years between the initial recognition of goodwill and the subsequent impairment of goodwill will be calculated (IMPAIRMENT EXP).

**Adoption of ASU 2011–08**. Finally, the researcher reviewed the acquiring company's Form 10–K to see if ASU 2011–08 was specifically adopted or not. In some of the SEC filings, the acquiring company disclosed that a qualitative disclosure is available, and it was adopted if

ASU 2011–08 was not specifically disclosed. The researcher was interested in concurring with Adame et al. (2021), Black et al. (2020), and Slavin and Fang (2018) in which all found this particular accounting guidance was either not initially adopted or not specifically disclosed.

***Instruments***

The SEC filings were the primary sources of data collection, primarily the Form 10–K with the Form 10–Q utilized for additional detail, if necessary. The SEC filings were obtained from the SEC.gov website, which is a public website available to those with internet access. The SEC is a federal government agency granted the responsibility by the U.S. Congress to make sure that financial information available to financial statement users is reliable and complete (Hoyle et al., 2020). All publicly traded companies in the United States are required to file certain forms with the SEC on a periodic basis. Two of those forms are the Form 10–K and the Form 10–Q. The Form 10–K is a company's annual financial statement, and the Form 10–Q is a company's quarterly financial statement, both of which include five financial statements along with supporting disclosure notes and management's discussion and analysis (Hoyle et al., 2020). The financial information within the Form 10–K is required to be independently audited by third-party auditors with most companies engaging a certified public accounting firm for this purpose (Reg S-X). Although interim financial statements do not need to be audited (Hoyle et al., 2020), the financial statements presented in the Form 10–Q are required to be reviewed by the independent third-party auditors and disclose if any significant changes have occurred since the Form 10–K was filed (Reg S-X). Since independent, external auditors' allegiance is to the public and not to the company being audited or reviewed, their independent certification to the SEC and financial statement users provides a higher level of accuracy and assurance (Schroeder et al., 2014)

The five financial statements include the income statement, the statement of comprehensive income, the statement of shareholders' equity, the balance sheet, and the statement of cash flows (Spiceland et al., 2019). The balance sheet shows if goodwill was recognized during the reportable time period, while the income statement shows if an impairment of goodwill was recognized during the reportable time period. The other financial statements, such as the statement of cash flows, provided integral information related to the acquisition including the exact amount of consideration used.

Most of the information, however, was obtained through the disclosure notes, specifically in summary of significant accounting policies, goodwill, and business combinations/acquisitions (Spiceland et al., 2019). The summary of significant accounting policies disclosed, among other things, the company's specific accounting policies regarding goodwill and impairment of goodwill along with the adoption and material effects of new accounting pronouncements that the company adopted. The goodwill disclosure noted not only provided information on the initial recognition of goodwill, but provided the detail of the qualitative process, if Step 0 was adopted, and the two-step quantitative process that a company followed in the determination of the impairment of goodwill or not. If goodwill had been impaired, then information regarding the amount and reasoning for the recognition of impairment expense was stated. The business combinations/acquisitions disclosure note furnished information such as the transaction date, the name of the target company, the purchase price with the consideration used, and a reconciliation of the purchase price with a detail listing of the fair value of assets and liabilities acquired along with the goodwill recognized.

### *Data Organization Plan*

The data necessary to perform the research study were collected via the deals listing report and the Form 10–Ks and Form 10–Qs filed by the acquiring company. The data were organized using Excel with acquiring companies sorted by the acquisition completion date, from earliest to the most recent. The acquisition completion dates were from January 1, 2012 to December 31, 2018. Each of the 384 acquiring companies included in the sample were listed in rows with categories in each column. The first set of columns were obtained by generating the deals listing report from the Deals section of the Marketline database. The second set of columns were added by the researcher to gather pertinent information from the acquiring companies' financial statement filings with the SEC and perform necessary calculation based on that data obtained from those financial statement filings. In addition, the researcher confirmed the data provided by Marketline database to the acquiring companies' Form 10–Ks and Form 10–Qs.

The data gathered from the Form 10–Ks and Form 10–Qs, entered to Excel, and used in the calculations performed in Excel is the basis for each of the following variables: STOCK, GOOD, and IMPAIR. The data are organized in Excel by variable for ease in entry to the IBM SPSS software ("SPSS") that will be used to analyze the relationships, if any, between the independent variables and the dependent variable (Morgan et al., 2013).

### *Summary of Data Collection & Organization*

Data collection began with the deals listing report, generated from the Deals section of Marketline and exported to Excel for its organization and calculation abilities. The deals listing report supplied applicable data including announcement date, completed date, the deal headline, the acquiring company, the target company, and the deal value, if disclosed in the announcement. Categories will be added to Excel for the collection of data needed for the research study. The

following categories were added: segment, total purchase price, stock, cash, debt, contingent consideration, STOCK calculation, cash as a percentage of the purchase price, financial debt assumed, goodwill recognized, GOOD calculation, GOOD calculation excluding the financial debt assumed (goodwill recognized as a percentage of the purchase price), recognized impairment expense, year of recognized impairment expense, years between recognized goodwill and impairment expense, and disclosure of ASU 2011–08 in notes to the financial statements. Each category was pertinent to the calculation of the independent and dependent variables needed to perform the research study. The data were organized in the order needed to enter the variables to the statistical software package, SPSS, for further analysis.

The researcher collected this additional data primarily from the acquiring companies' Form 10–Ks. If the Form 10–K did not have the specific information needed, then the acquiring companies' Form 10–Qs was reviewed. Each of the 384 acquiring companies in the sample were publicly traded and, therefore, have strict regulatory reporting requirements that have to be met on a periodic basis with the SEC. The Form 10–K is the form filed for a company's annual financial statements while the Form 10–Q is the form filed for a company's quarterly financial statements. The Form 10–K is required to be audited and the Form 10–Q is required to be reviewed by independent, external auditors. This certification provides assurance to the public that the financial information provided is materially correct and reliable.

**Data Analysis**

After collecting and organizing the data in Excel, the applicable data were entered to the data editor of SPSS for further analysis. Analysis was performed to determine if a relationship existed and the strength of the relationship between each of the independent variables,

PAIDINSTOCK2 and GOODWILL RECOG3, and the dependent variables, IMPAIREXP2 and IMPAIRMENT EXP.

Prior to and subsequent to the data editor entry, the data were reviewed to ensure it is correct, complete, and reasonable. If the data were not verified at each step of the process, then the results of analysis may not be substantive and could potentially be worthless. Manual verification was used prior to entry to the data editor, while a descriptive statistics report from SPSS was generated for verification of data after entry to the data editor.

Finally, the testing of the four hypotheses was discussed including the related variables and research questions. The researcher furnished detail of the tests that will be run in SPSS to determine if a relationship exists between the applicable variables. The tests created were based on the expectation that the independent and dependent variables were ordinal. If through the Descriptive Statistics report, specifically the skewness statistic of less than the absolute value of "1," it is determined that one or more variables is not approximately normally distributed, then alternative hypotheses testing will need to be performed (Morgan et al., 2013).

***The Variables***

Prior to entering data from Excel, the variables were defined and labeled in a data file. The data file was available in the variable view tab of the data editor in SPSS (Morgan et al., 2013). There were four variables that were tested for statistical significance and each was listed in each row of the data file. There are 11 preset columns with the following headings: Name, Type, Width, Decimals, Label, Values, Missing, Columns, Align, Measure, and Role. Once a name was entered in row 1, the remaining columns' default settings automatically populated. The researcher needed to change certain default settings based on the variable and statistics

required. The name of each variable is discussed in detail below and consists of PAIDINSTOCK2, GOODWILL RECOG3, IMPAIREXP2, and IMPAIRMENT EXP.

All types of data were entered in numeric format, the column and width were both set at the default of 8, and all responses were aligned to the right. Decimal places were set at either two for PAIDINSTOCK2 and GOODWILL RECOG3 or zero for IMPAIREXP2 and IMPAIRMENT EXP. Label refers to a short description of the variable with values based on the range provided in the variables table below (see Figure 2). Missing indicated missing values and, therefore, was set at none since all values will be within the ranges set. Measurement type was ordinal for three variables and dichotomous for one variable. Role defined whether the variable is independent (input), dependent (target), or both.

PAIDINSTOCK2 was the first independent variable and represented the common stock used by the acquiring company as consideration paid for the target company. The consideration paid will include either common stock, cash on hand, debt financing, contingent consideration, or a combination of the previous four types of consideration. PAIDINSTOCK2 was calculated as the percentage of purchase price paid with the acquiring company's common stock. The calculation was performed by the researcher entering the formula to Excel. PAIDINSTOCK2 was designated as an ordinal measurement due to the percentages of common stock paid being grouped into four ordered groups from 0% through 100%. The expectation was this variable was not normally distributed.

GOODWILL RECOG3 was the second independent variable and was calculated as the percentage of purchase price allocated to goodwill. The purchase price was allocated between the fair values of assets acquired less the fair values of liabilities assumed with any difference being allocated to goodwill. GOODWILL RECOG3 was quantified by dividing the recognized

goodwill by the enterprise value using a formula entered by the researcher to Excel. The enterprise value was defined as the combination of the purchase price and the financial debt assumed, which included net deferred tax positions. The result were percentages obtained for this independent variable. GOODWILL RECOG3 was expected to have an ordinal measurement.

PAIDINSTOCK2 and GOODWILL RECOG3 were the overpayment indicators and were tested to determine the existence and strength of each of their relationships with the recognition of impairment expense within a certain time period using the acquiring company's income statement. IMPAIREXP2 was one of the dependent variables and represented whether an acquiring company did not recognize impairment expense ("0") or did recognize impairment expense ("1"). IMPAIRMENT EXP was the second dependent variable and was used to determine the time period in which impairment expense was recognized or not recognized. This dependent variable consisted of the following range: 0 = no impairment; 1 = impairment in 1 year after acquisition; 2 = impairment in the second year after acquisition; 3 = impairment in the third year after acquisition; 4 = impairment in the fourth year after acquisition; 5 = impairment in 5 years or more after acquisition.

**Figure 2**

*Overpayment indicators*

| Variable | Variable Type | Data Type | Range |
|---|---|---|---|
| | | | |
| PAIDINSTOCK2 | Independent | Ordinal | 1 = 0% - 25%; 2 = 25.01% - 50%; 3 = 50.01% - 75%; 4 = 75.01% - 100% |
| | | | |
| GOODWILL RECOG3 | Independent | Ordinal | 1 = 0% - 46%; 2 = 46.01% - 66%; 3 = 66.01% - 100% |
| | | | |
| IMPAIREXP2 | Dependent | Dichotomous | 0 = no impairment; 1 = impairment expense |
| | | | |
| IMPAIRMENT EXP | Dependent | Ordinal | 0 = no impairment; 1 = impairment in one year after acquisition; 2 = impairment in the second year after acquisition; 3 = impairment in the third year after acquisition; 4 = impairment in the fourth year after acquisition; 5 = impairment in five years or more after acquisition |

***Descriptive Statistics***

The data accumulated in Excel for each of the 384 acquiring companies in the sample was entered to the data editor in SPSS for further analysis (Morgan et al., 2013). For the data entry process, the data view tab in the data editor was utilized. Each row represented one participant so 384 rows were used, which represented each acquiring company in the sample. There were four columns which corresponded to the four variables, which were previously labeled and defined as discussed above. To ensure valid and complete data were collected and research findings were able to be reported upon, raw data were checked before and after entry to the data editor.

To avoid unclear or inconsistent data before entering to the data editor, the researcher reviewed each of the 384 rows to make sure that there were no inconsistencies, missing information, duplicate information, keying errors, and/or unclear information. In addition, the cells in Excel with formulas entered for the purpose of calculating the independent variables were reviewed to ensure correctness. If any data issues were identified in Excel, the researcher returned to the applicable period's Form 10–K or Form 10–Q to either verify the accuracy of the original data or make the necessary correction if a valid issue exists. If a formula error was detected, the correct formula was entered.

To avoid unreasonable or inaccurate data after entry to the data editor, a Descriptives report was generated. Descriptives is a statistics program in SPSS that produced a report allowing the researcher to review data entered for reasonableness and determine if there were any errors or problems (Morgan et al., 2013). Reasonableness meaning the results produced were as expected based on information entered and the researcher's expected results based on knowledge of the variables. The Descriptives report produced for this research data included the

number of responses and computed the mean, minimum, and maximum for each of the four variables. In addition to the four variables, the Descriptive Statistics table included a Valid N (listwise) row, which showed the number of participants with no missing data. The expectation was that all 384 acquiring companies have valid responses to the four variables.

The Descriptive Statistics report was also used to answer specific descriptive research questions, which summarizes data without generalizing to a significant population (Morgan et al., 2013). This was accomplished through the minimum, maximum, and mean calculated for all the variables. Depending on the data type of variable, the minimum, maximum, and mean may not be meaningful or relevant. The expectation of ordinal data for three of the variables and dichotomous data for one of the variables did results in those statistics being meaningful and relevant. At this point, the researcher was able to identify information entered incorrectly and identify outliers, if any. Outliers consist of results that are significantly higher or lower than the normal range (Morgan et al., 2013). After the correcting information entered incorrectly and determining outliers are valid, the Descriptive Statistics report was run again for verification.

In addition to checking for entry errors and inconsistencies, the purpose of running the Descriptive Statistics report was to analyze the distribution of data and check for normality for the purpose of selecting the correct statistical tests (Morgan et al., 2013). The researcher's process included understanding the data and assuring its reasonableness for further analysis and statistical purposes. The Descriptives Statistics report also shows the standard deviation, variance, and skewness, which includes skewness statistic and the standard error of skewness. The skewness statistics column can aid in that analyzation of normal distribution. The guideline for checking skewness, as Morgan et al. (2013) noted, is to locate variables that have a skewness statistic of with an absolute value of less than one. Any variables with an absolute value of more

than one will be considered ordinal instead of scale. The researcher's expectation was that the variables were ordinal.

***Hypotheses Testing***

The four hypotheses for this research study are as follows:

H1o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense (DV).

H1o related to RQ1, which states the following: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of common stock used as consideration for an acquisition and the subsequent recognition of impairment expense? This is an associational research question that was intended to find if the type of consideration used to purchase a target company, specifically common stock, had a positive relationship with the acquiring company's recognition of impairment expense after the acquisition date (Morgan et al., 2013). The variables that were utilized were the independent variable, PAIDINSTOCK2, and the dependent variable, IMPAIREXP2. The existence and strength of the relationships between the variables was tested and analyzed. If a positive relationship existed and was statistically significant, then the null hypotheses was rejected.

H2o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

H2o related to RQ2, which states the following: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of common stock used as consideration for an acquisition and the subsequent recognition of impairment

expense within a certain time period? This is an associational research question that was intended to determine if a positive relationship existed between common stock used as consideration to purchase a target company with the acquiring company's recognition of impairment expense in the years subsequent to the acquisition (Morgan et al., 2013). The variables that were utilized were the independent variable, PAIDINSTOCK2, and the dependent variable, IMPAIRMENT EXP. The existence and strength of the relationships between the variables was tested and analyzed. If a positive relationship existed and was statistically significant, then the null hypotheses was rejected.

H3o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense (DV).

H3o related to RQ3, which states the following: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense? This was an associational research question with the intention to find if goodwill recognized as a percentage of the purchase price at the acquisition date has a positive relationship with the recognition of impairment expense after the acquisition date (Morgan et al., 2013). As Olante (2013) found, the higher the percentage of goodwill recognized as a percentage of the purchase price, the higher the probability of subsequent impairment of goodwill. The variables that were utilized were the independent variable, GOODWILL RECOG3, and the dependent variable, IMPAIREXP2. The existence and strength of the relationship between the variables were tested and analyzed. If the relationship was positive and the test was statistically significant, then the null hypotheses was rejected.

H4o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

H4o related to RQ4, which states the following: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense within a certain time period? This was an associational research question with the intention to find if goodwill recognized as a percentage of the purchase price at the acquisition date has a positive relationship with the recognition of impairment expense within a certain number of years after the acquisition date (Morgan et al., 2013). The variables that were utilized were the independent variable, GOODWILL RECOG3, and the dependent variable, IMPAIRMENT EXP. The existence and strength of the relationship between the variables were tested and analyzed. If the relationship was positive and the test was statistically significant, then the null hypotheses was rejected.

Although dependent on the Descriptive Statistics report results, the researcher's expectation was that the variables were either ordinal or dichotomous and were not necessarily normally distributed and, therefore, the Cramer's V statistical test would be created along with the Descriptive Statistics Report. Cramer's V showed the relationship strength and statistical significance of the relationship between PAIDINSTOCK2 and IMPAIREXP2 and IMPAIRMENT EXP, as well as, between GOODWILL RECOG3 and IMPAIREXP2 and IMPAIRMENT EXP. These tests provided definitive evidence of whether the null hypotheses was rejected or failed to be rejected.

### *Hypotheses Testing Alternatives*

The expectation of the variable data types was that they were ordinal based on the ordered levels of data and the Descriptives Statistics report confirmed this assumption based, in part, on the skewness statistic (Morgan et al., 2013). If one or more of the variables were scale, then the parametric test, multiple regression would have been generated to test one or more of the hypotheses. Multiple regression is an associational statistic that can be used to predict a dependent variable that is normally distributed from two or more independent variables (Morgan et al., 2013). The multiple regression would be created for the two-overpayment indicator independent variables with the dependent variables to determine the strength and existence of a relationships and provide the statistical significance of the test.

### *Summary of Data Analysis*

The variables that were used in this research study included two dependent variables, IMPAIREXP2 and IMPAIRMENT EXP, as well as two independent variables, PAIDINSTOCK2 and GOODWILL RECOG3. The dependent variable, IMPAIREXP2, was a dichotomous variable that showed whether an acquiring company recognized impairment to goodwill over the study time period or not. IMPAIRMENT EXP was the second dependent variable, which was ordinal, and showed the time period in which an acquiring company recognized impairment to goodwill or not. PAIDINSTOCK2 and GOODWILL RECOG3 were independent, ordinal variables.

Prior to data analysis, the data entered to Excel was reviewed to ensure that the data were complete, accurate, and had no duplications. After the date were entered to the data editor in SPSS from Excel, a Descriptive Statistics report was created showing the 384 acquiring companies as the number of respondents and computed the minimum, maximum, and mean of

their responses. This allowed the researcher to verify the data entered and begin analysis on the initial findings of the data. In addition, the Descriptive Statistics report was used to determine relevancy of parameters used and to provide summarizations of data collected without specific findings on a particular group.

Once the data were deemed accurate and reasonable, the researcher began to analyze the data for the purpose of accepting or rejecting the four null hypotheses. The four null hypotheses were based on the four associational research questions that were addressed. The variables that were utilized in the first null hypothesis and the applicable research question were the independent variable, PAIDINSTOCK2, and the dependent variable, IMPAIREXP2. The researcher determined if a relationship existed and the strength of that relationship between the common stock used as a percentage of the purchase price (PAIDINSTOCK2) for a target company and the recognition of impairment expense (IMPAIREXP2). The variables that were utilized in the second null hypothesis and the applicable research question were the independent variable, PAIDINSTOCK2, and the dependent variable, IMPAIREXP2. The researcher determined if a relationship existed and the strength of that relationship between the common stock used as a percentage of the purchase price (PAIDINSTOCK2) for a target company and the recognition of impairment expense within a certain number of years (IMPAIRMENT EXP).

The variables that are utilized in the third null hypothesis and the applicable research question were the independent variable, GOODWILL RECOG3, and the dependent variable, IMPAIREXP2. The researcher determined if a relationship existed and the strength of that relationship between the allocation of the purchase price as a percentage of goodwill (GOODWILL RECOG3) and the recognition of impairment expense (IMPAIREXP2). The variables that are utilized in the fourth null hypothesis and the applicable research question were

the independent variable, GOODWILL RECOG3, and the dependent variable, IMPAIRMENT EXP. The researcher determined if a relationship existed and the strength of that relationship between the allocation of the purchase price as a percentage of goodwill (GOODWILL RECOG3) and the recognition of impairment expense within a certain number of years (IMPAIRMENT EXP).

The researcher's expectation was that the variables were either ordinal or dichotomous and, therefore, the Descriptive Statistics report and the Cramer's V nonparametric statistical test would be generated from SPSS. The existence and strength of the relationships between the variables were tested and examined using Cramer's V. If the relationship is positive and statistically significant, then the null hypotheses was rejected. If the Descriptive Statistics report showed that one or more of the independent or dependent variables had normally distributed data and had scale measurement, then a multiple regression test from SPSS have been created instead.

## Reliability and Validity

Prior to testing the four research hypotheses, the data were scrutinized for reliability and validity. Data are the underlying foundation for a conclusion reached in a research study. For the results of the research study to be meaningful and useful, the data in the data editor was examined for measurement reliability. The researcher followed by assessing evidence of data validity. Reliability preceded validity because evidence may be produced that deem the data reliable, but the data may not be valid because it is not relevant to the intended concept (Morgan et al., 2013).

### *Reliability*

Quantifiable data must be reliable. Reliability is defined by Robson and McCartan (2016) as "the stability or consistency with which we measure something" (p. 105). The initial phase of

data collection was to generate the deals listing report from Marketline after entering the applicable parameters. The deals listing report, which listed the transaction completion date, the acquiring company and the target company, among other items, was then compared to the acquiring company's SEC filings as the first step in ensuring the reliability of the data.

The raw data were then obtained from the acquiring company's SEC filings, specifically the Form 10–K and Form 10–Q, which are independently audited or reviewed, respectively. The data were interpreted by the researcher primarily from the disclosure notes of the SEC filings and then entered correctly to Excel. After entry to Excel, formulas were entered to calculate the independent variables, PAIDINSTOCK2, GOODWILLRECOG3, and IMPAIRMENT EXP. There was a possibility of human error that was limited to make sure the data are reliable prior to entry to data editor. As noted above, the researcher reviewed all data and formulas entered for reasonableness. Subsequent to data entry from Excel to data editor, the data were examined again due to potential human error in the manual entry. The Descriptive Statistics report from SPSS was generated and reviewed to confirm the data were entered correctly and could be used for analysis for the purpose of concluding on the results.

In addition, certain industries were excluded in the population that was utilized for the final sample size. The industries included Agriculture and Forestry, Financial Services, and Government and Not-for-Profit. Agriculture and Forestry and Financial Services were omitted due to their recognition of impairments of goodwill being outliers compared to the overall average, which could potentially distort the results (Burke, 2019). Government and Not-for-Profit acquiring companies were excluded due to not being SEC filers (Hoyle et al., 2020). This study followed a previous study by Olante (2013), which excluded these industries and aided in comparability between the research studies.

### *Validity*

As both Morgan et al. (2013) and Robson and McCartan (2016) stated, data must be reliable prior to being valid. Once the researcher ensured reliability, evidence of validity was determined. To be valid, data must be an accurate measure of the potential recognition of goodwill impairment after the acquisition date (Morgan et al., 2013). The researcher used common stock used as consideration paid for a target company (PAIDINSTOCK2) and the portion of the purchase price allocated to goodwill (GOODWILL RECOG3) as indicators of recognition of goodwill impairment (IMPAIREXP2) within a certain time period (IMPAIRMENT EXP) based on FASB's 1999 ED. As discussed previously, this research extended a previous research study by Olante (2013) that confirmed these two independent variables, which are impairment indicators, had a significant and strong association with the recognition of goodwill impairment. In addition, validity of a research study could potentially be threatened if the results are not generalizable (Robson & McCartan, 2016). In this research study, this refers to the sample size. The sample size of 384 acquiring companies was deemed sufficient for generalizability over a large population.

### *Summary of Reliability and Validity*

Reliability precedes validity in a research study. To ensure reliability, the researcher performed verification of the data at each step of the process beginning with the sample selection through entry to the data editor in SPSS. The data obtained from the deals listing report from Marketline was referenced to the applicable SEC filings, specifically the acquiring company's Form 10–K and Form 10–Q, to determine if the acquiring company was eligible for the final population to draw the sample. In addition, certain sectors were excluded from the population in producing the deals listing report due to potential distortion of the research findings and lack of

SEC filing requirements. Once the sample was determined, the SEC filings were used to obtain the data necessary to calculate the variables in Excel. The researcher reviewed the data in Excel for completeness, accuracy, and reasonableness prior to entry to the data editor. After entering the data to the data editor, the Descriptive Statistics was generated and reviewed to again ensure the completeness, accuracy, and reasonableness prior to performing statistical analysis.

Validity of the measurement of data were determined prior to the start of the research study by advancing a previous study based on goodwill impairment indicators drawn from FASB's 1999 ED. The Olante (2013) study found that PAIDINSTOCK2 and GOODWILL RECOG3 had a significant and strong association with IMPAIREXP2 and IMPAIRMENT EXP under the existing accounting guidance. The researcher also selected a sample size of 384 acquiring companies so that the research results would be generalizable.

**Summary of Section 2 and Transition**

The purpose of this research study was to determine the faithful representation of goodwill with the adoption of ASU 2011–08. This was accomplished by testing the existence and strength of an association of two overpayment indicators, PAIDINSTOCK2 and GOODWILL RECOG3, with IMPAIREXP2 and IMPAIRMENT EXP. Olante (2013) found there was a statistically significant and strong relationship between the independent variables, PAIDINSTOCK2 and GOODWILL RECOG3, as predictors for the dependent variables, IMPAIREXP2 and IMPAIRMENT EXP, prior to the passage and adoption of ASU 2011–08. ASU 2011–08 introduced a qualitative assessment of a potential impairment of goodwill, which allowed for management's subjective judgement to be used.

This research study was performed with a fixed design approach using quantitative methods; specifically, a correlational design was used. SPSS was utilized to conduct statistical

analysis to verify the ordinal and dichotomous data measurement of the variables and to determine the appropriate statistical test to run. Cramer's V was generated to determine the statistically significant existence and strength of a relationship between the independent variables and the dependent variables. If the variables had been deemed to be normally distributed instead of ordinal/dichotomous, then the multiple regression test in SPSS would have been generated to determine the existence and strength of relationships.

Since the passage of ASU 2011–08 was effective for acquiring companies with fiscal years beginning after December 15, 2011, the population used for research was acquiring companies that had completed acquisitions between January 1, 2012 and December 31, 2018. The acquiring companies must be traded on a public exchange and incorporated in the United States. The target companies could be either publicly traded or private. The acquisition must qualify as a business combination under ASC 805 and must have recognized goodwill as part of the acquisition accounting as of the acquisition date.

The Marketline database was used to generate the initial population in the deals listing report. The deals listing report showed the following categories: announcement date, completion date, type of transaction, acquirer, target, and value of the transaction, if disclosed. The researcher started with a population of 1,549 and compared information on the deals listing report to each acquiring companies' SEC filings to confirm the research parameters. The researcher excluded 942 acquiring companies that did not meet the specific parameters. Of the remaining 607 acquiring companies, 384 acquiring companies were selected as the sample size using the systematic random sample method.

In addition to the data obtained from the deals listing report and verified via SEC filings, the researcher collected the following data from the acquiring companies' independently audited

Form 10-K and independently reviewed Form 10–Q: the reportable segment where the target company will be included, if applicable; the purchase price including the consideration used; the financial debt assumed; the goodwill recognized upon acquisition; the impairment expense recognized subsequent to acquisition and the year of recognition; and the disclosure of the adoption of ASU 2011–08. Using these categories, the researcher calculated the PAIDINSTOCK2, GOODWILL RECOG3, and IMPAIRMENT EXP variables to be used in the analysis.

Before and after data entry to the data editor of SPSS for statistical analysis, the data were reviewed for completeness, accuracy, and reasonableness. Incorrect data could have resulted in an incorrect research study conclusion. Manual verification was performed for data scrubbing prior to entry to the data editor, while the Descriptive Statistics report was produced subsequent to entry to the data editor. The Descriptive Statistics report was also used to confirm that the variables were ordinal or dichotomous.

## Section 3: Application to Professional Practice and Implications for Change

In the accounting profession, the initial and subsequent accounting for goodwill can have a significant impact on the financial statements of an acquiring company. The initial recognition of goodwill is a long-lived asset on an acquiring company's balance sheet (Burger & Wen, 2021). The subsequent accounting for goodwill includes evaluating this long-lived asset and determining, based on events and circumstances, if the asset should be partially or fully written down. This partial or full write-down is called impairment of goodwill with the asset reduction on the balance sheet and an offsetting increase to impairment expense on the acquiring company's income statement (Killins et al., 2021).

Goodwill is intended to represent core goodwill, which is the synergy created by the acquiring company purchasing the target company and the going concern of the target company (Linsmeier & Wheeler, 2021). However, the amount of goodwill recognized on companies' balance sheets has increased significantly since the passage and implementation of SFAS 142, which concerns the accounting profession and financial statements users due to its increase as a percentage of an acquiring company's total assets and its potential impairment in subsequent periods (Black et al., 2021). The accounting guidance for the subsequent accounting for goodwill has gone through various changes over the past two decades with two main concerns: the need for goodwill to have faithful representation and to reduce the cost burden to acquiring companies in testing for potential impairment (Linsmeier & Wheeler, 2021).

Passed in 2001, SFAS 142 was a significant change in the subsequent accounting for goodwill from previous accounting guidance (Guler, 2018). To alleviate the accounting professions concerns with the cost and complexity of the annual two-step quantitative test, FASB issued the following amendments to SFAS 142: ASU 2011–08, ASU 2014-02, ASU 2017–04

(Johnson et al., 2021). This research study is focused on the implementation of ASU 2011 – 08 by publicly traded companies incorporated in the United States and its effects on the faithful representation of goodwill. ASU 2014–02 is for private company only (FASB, n.d.). ASU 2017–04 was effective for publicly traded companies with fiscal years beginning after December 15, 2019 (Allen & Baez, 2020).

**Overview of the Study**

The purpose of this fixed design research study is to determine if ASU 2011–08 improves the faithful representation of goodwill through testing if impairment expense was recorded in the financial statements of United States incorporated, publicly traded companies with completed acquisitions between 2012 and 2018. ASU 2011–08 was passed in 2011 and effective for companies to adopt with fiscal years beginning after December 15, 2011 (Black et al., 2021; Guler, 2018). ASU 2011–08 introduced a qualitative step, or Step 0, which allowed companies to assess whether impairment of expense was likely or not. If management determined it was not likely, then the company could elect not to perform the two-step quantitative test and goodwill remained at its existing value on the balance sheet. Since ASU 2011–08 provided a subjective determination of the goodwill value by executive management of the company, the potential impact would be that goodwill would remain overvalued on a company's balance sheet, therefore, inflating the overall value of a company.

FASB's stated intention with the passage of ASU 2011–08 was to reduce the cost and complexity of the two-step quantitative test for companies (Slavin & Fang, 2018). This research study advances a previous research study by Olante (2013), which studied the faithful representation of goodwill by testing the reason for the recognition of impairment expense based on eight impairment indicators. Olante's (2013) research covered a nine-year research study

period to determine if the enactment of SFAS 142 improved the faithful representation of goodwill or not. SFAS 142 was passed in 2001 and initiated the two-step quantitative approach performed, at least annually, for the evaluation of goodwill.

This study scales back the Olante (2013) study by focusing on only two of the eight impairment indicators. However, the two impairment indicators in this research study, percentage of consideration paid in the acquiring company's common stock and the percentage of the purchase price allocated to goodwill, were found by Olante (2013) to have the strongest relationship with the subsequent recognition of impairment expense. This research study covers the time period between 2012 and 2018, which was during the adoption period of ASU 2011–08.

This research study attempts to determine if the faithful representation, or core goodwill, improved with the passage and implementation of ASU 2011–08 by testing the relationship between the two impairment indicators and the subsequent recognition of impairment expense. The sample includes publicly traded companies incorporated in the United States who completed the acquisition of a target company between January 1, 2012 and December 31, 2018. The researcher collected the data for the percentage of consideration paid with the acquiring company's common stock and the percentage of the purchase price allocated to goodwill. The researcher then followed the acquiring company through reviewing their Form 10-Ks through December 31, 2021 for recognition of full or partial impairment expense.

**Presentation of the Findings**

The researcher began by preparing the results of the descriptive statistics for the two independent, ordinal variables and the two dependent variables, one of which is dichotomous and the other one is ordinal. The results of the descriptive statistics led the researcher to run the statistical test, Cramer's V, to determine the existence and strength of the relationship between

the independent and dependent variables. The interpretation and relationship of findings are discussed with a conclusion on the rejection or failure to reject the four null hypotheses (See Appendix A).

***Descriptive Statistics***

A Descriptive Statistics report was produced (Table 1) using SPSS with a twofold purpose. The first purpose is to check data for errors and correct prior to running statistical tests (Morgan et al., 2013). The second purpose is to determine variable type in order to select the appropriate statistical tests based on the assumptions and conditions. According to Morgan et al. (2013), this important process is referred to as exploratory data analysis and should be performed prior to running inferential statistics. This study will use associational inferential statistics, which are defined by Morgan et al. (2013) as inferences that can be made regarding the relationship between variables and can be extrapolated to a larger population based on the results from the sample size. If there are mistakes in data entry or if the assumptions are significantly different from expectations, incorrect conclusions can be made if inferential statistics are run before this vital step of checking data. The Descriptive Statistics report (Table 1) confirms that the data for 384 acquiring companies was uploaded via Excel correctly with no missing data based on the N Statistic. Missing data would have occurred if the researcher had mistakenly not entered a numeric value for the two independent variables and two dependents variable being tested. The fifth variable, the adoption of ASU 2011–08, was entered to gain additional knowledge on acquiring companies adopting the optional qualitative threshold and will not be included in any statistical tests.

**Table 1**

*Descriptive Statistics*

**Descriptive Statistics**

| | N | Range | Minimum | Maximum | Mean | Std. Deviation | Variance | Skewness | |
|---|---|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error |
| PAIDINSTOCK2 | 384 | 3 | 1 | 4 | 1.48 | 0.983 | 0.966 | 1.843 | 0.125 |
| PAID IN STOCK | 384 | 100% | 0% | 100% | 16.35% | 31.315% | 980.622 | 1.810 | 0.125 |
| GOODRECOG3 | 384 | 2 | 1 | 3 | 1.66 | 0.764 | 0.584 | 0.653 | 0.125 |
| IMPAIREXP2 | 384 | 1 | 0 | 1 | 0.33 | 0.470 | 0.221 | 0.735 | 0.125 |
| IMPAIRMENT EXP | 384 | 5 | 0 | 5 | 0.92 | 1.567 | 2.456 | 1.550 | 0.125 |
| ADOPT ASU201108 | 384 | 1 | 0 | 1 | 0.78 | 0.417 | 0.174 | -1.329 | 0.125 |
| GOODWILL RECOG | 384 | 99.91% | 0.09% | 100.00% | 46.06% | 21.21% | 449.779 | 0.180 | 0.125 |
| Valid N (listwise) | 384 | | | | | | | | |

There were 384 acquiring companies that recognized goodwill from an acquisition that was completed during the time period from January 1, 2012 through December 31, 2018. Based on the original population, the sample size for a generalization of a 95% confidence level with a 5% margin was calculated to be 236 (Krejcie & Morgan, 1970). A 95% confidence level means that if the research study was replicated, the same results would be found with a 95% confidence level (Morgan et al., 2013) with a 5% margin of error. However, the researcher selected 384 acquiring companies in the sample size to ensure the requirements to generalize the study results were met.

The independent variable, PAID IN STOCK2, represents amount paid in the acquiring companies' own common stock as full or partial consideration for the purchase price of the target company. The range is as follows: 0% - 25% of consideration paid with common stock is in group "1;" 25.01% - 50% of consideration paid with common stock is in group "2;" 50.01% - 75% of consideration paid with common stock is in group "3," and 75.01% - 100% of consideration paid with common stock is in group "4." Grouping is performed for better analysis

due to each company having individual percentages that can be grouped together in a meaningful manner and it makes the testing results, in terms of statistical significance, more robust. Therefore, the minimum statistic of "1," the maximum statistic of "4," and the mean statistic of "1.48" are reasonable based on the data obtained from the acquiring companies' Form 10–K (Table 1).

PAID IN STOCK includes a range of 0% to 100% for each of the 384 acquiring companies. This represents the actual percentage paid in the acquiring company's stock without grouping into four levels. The mean statistic was 16.35%, which indicates that the 384 acquiring companies paid an average of 16.35% of their purchase price consideration with their own common stock.

The independent variable, GOODWILL RECOG3, had a minimum statistic of "1," a maximum statistic of "3," and a mean statistic of 1.66 (Table 1). These results indicate that the data collected was uploaded from Excel to SPSS correctly. All 384 acquiring companies in the sample must have recognized goodwill upon the initial purchase and subsequent transaction accounting for the target company. The range is as follows: 0% - 46% of the purchase price allocated to goodwill is in in group "1;" 46.01% - 66% of the purchase price allocated to goodwill is in group "2;" and 66.01% - 100% of the purchase price allocated to goodwill is in group "3." As noted in the variable, GOODWILL RECOG, in Table 1, the 384 acquiring companies had an average of 46.06% of the purchase price allocated to goodwill. The groups were leveraged from this mean statistic.

The dependent variable, IMPAIREXP2, is a dichotomous variable with "0" for no impairment expense recognized and "1" for recognition of impairment expense over the research

study time period of 10 years. The mean statistic shows that 33% of the acquiring companies recognized impairment expense. This is reasonable based on the data collection.

The dependent variable, IMPAIRMENT EXP, had a range of "0" to "5" based on the years between the initial recognition of goodwill and the subsequent accounting for goodwill resulting in a recognition of impairment expense. The group ranges are as follows: "0" for no impairment expense recognized; "1" for impairment expense recognized within the first year; "2" for impairment expense recognized in the second year; "3" for impairment expense recognized in the third year; "4" for impairment expense recognized in the fourth year; and "5" for impairment expense recognized in five or more years. The minimum of statistic of "0" represented those acquiring companies that did not recognized impairment expense over the 10-year study period. The maximum statistic of "5" represented those acquiring companies that did recognize goodwill in year 5 or more. The mean statistic was .92, which indicates that the average amount of time that companies recognize impairment expense in their income statement is close to one year.

Finally, the researcher reviewed each acquiring company's Form 10–K for disclosure of the adoption of ASU 2011–08, which allowed the company to implement a qualitative assessment of goodwill impairment. If management subjectively determined that no goodwill impairment existed, then the annual quantitative two step testing procedures did not need to be performed. The ADOPT ASU201108 variable had a minimum statistic of 0, which indicated that ASU 2011–08 was not adopted. In some instances, the acquiring company became a publicly traded company in 2017 or thereafter, and did adopt ASU 2017–04, which implements a qualitative assessment prior to the introduction of a one-step quantitative process. Other acquiring companies may not have adopted ASU 2011–08 because they had not completed an

acquisition and, therefore, had not recognized goodwill until after the passage and implementation of ASU 2017–04. In these circumstances, the researcher entered 0 to indicate that ASU 2011–08 was not adopted. The maximum statistic was 1, which indicated that either ASU 2011–08 was adopted, a qualitative or Step 0 assessment was specifically disclosed by the acquiring company's 2015 fiscal year, or ASU 2012–02 was adopted. ASU 2012–02 Intangibles – goodwill and other (Topic 350) implements Step 0 for indefinite-lived intangible assets (PWC, 2012). The mean statistic for this dichotomous variable was .78, therefore, 78% of the 384 acquiring companies did adopt ASU 2011–08 during the 2012 through 2015 fiscal year time period.

The skewness statistic column of the Descriptive Statics report (Table 1) was used to confirm or change assumptions made by the researcher in the planning stages of the research study. These assumptions are imperative in selecting the statistical tests to be used. The main assumption was that four variables would be normally distributed. For a variable to be deemed scale, the skewness statistic must have an absolute value of less than 1 according to Morgan et al. (2013). One of the independent variables, GOODWILL RECOG3, along with one of the dependent variables, IMPAIREXP2, met this criterion with skewness statistics of .653 and .735, respectively. Due to the three ordered levels or more of GOODWILL RECOG3, this independent variable is deemed ordinal and, of course, IMPAIREXP2, is a dichotomous, dependent variable. Ordinal variables have a specific order and must contain three or more levels or categories. The category order is from low to high and ranks are assigned (Morgan et al., 2013).

The independent variable, PAIDINSTOCK2, had a skewness statistics of 1.843 and, therefore, did not exhibit normal distribution, but deemed ordinal due to the ordered level of percentages. The variable was based on the percentage of the total purchase price paid with

common stock of the acquiring company and, therefore, would have three or more ordered levels. In addition, Morgan et al. (2013) stated that ordinal variables do not exhibit equal differences in the magnitude of sequential categories.

The dependent variable, IMPAIRMENT EXP, also had a skewness statistic that was outside of an absolute value of 1. The skewness statistics was 1.550, which indicates that the dependent variable is ordinal. The 0 to 5 range is based on the year in which impairment expense was recognized from the original date of acquisition. This variable contains six ordered levels that do not demonstrate an equal distribution between each of the categories.

The other variables in the Descriptive Statistics Report (Table 1), PAID IN STOCK, GOODWILL RECOG, and ADOPT ASU201108, were included to show the averages of data collected. No inferential statistics will be run on these variables; therefore, the skewness statistic is irrelevant for the purposes of this study.

***Hypotheses Testing***

Inferential statistical tests were produced using SPSS to determine whether to reject or fail to reject the null hypotheses. The null hypotheses are associational questions seeking to find the existence and strength of a relationship between each of the two independent variables and the dependent variables. The statistical tests that were run included the calculation of statistical significance. As Morgan et al. (2013) explained, statistical significance is the probability of a Type I error, which is the probability that a researcher rejects the null hypothesis when it should be accepted. In SPSS, the significance or probability is represented by *p*. The preset alpha level is $p = .05$, which means that a probability of .05 or less means that results are statistically significant. If the statistical tests show that the independent variable and dependent variable are

statistically significant, then a null hypothesis of no relationship can be rejected (Morgan et al., 2013).

***Frequency Table***

The first inferential statistic generated was a frequency table for the dependent variables, IMPAIREXP2 (Table 2) and IMPAIRMENT EXP (Table 3), which confirmed the number of acquiring companies in the sample size of 384. In addition, this table shows the percentage of acquiring companies in the sample that recognized subsequent impairment expense versus the acquiring companies that did not. The frequency table in Table 2 shows that of the 384 acquiring companies, 258 acquiring companies, or 67.2%, did not recognize impairment expense while 126 acquiring companies, or 32.8%, did recognize impairment expense.

**Table 2**

*Frequency Table for IMPAIREXP2*

| IMPAIREXP2 | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | NO IMPAIRMENT | 258 | 67.2 | 67.2 | 67.2 |
| | IMPAIRMENT RECOGNIZED | 126 | 32.8 | 32.8 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

**Table 3**

*Frequency Table for IMPAIRMENT EXP*

| IMPAIRMENT EXP | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | NO IMPAIRMENT | 258 | 67.2 | 67.2 | 67.2 |
| | IMPAIRMENT IN YEAR ONE | 35 | 9.1 | 9.1 | 76.3 |
| | IMPAIRMENT IN YEAR TWO | 24 | 6.3 | 6.3 | 82.6 |
| | IMPAIRMENT IN YEAR THREE | 22 | 5.7 | 5.7 | 88.3 |
| | IMPAIRMENT IN YEAR FOUR | 21 | 5.5 | 5.5 | 93.8 |
| | IMPAIRMENT IN YEAR FIVE OR | 24 | 6.3 | 6.3 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

IMPAIRMENT EXP (Table 3) broke this down further by the year in which impairment expense was recognized. As noted in Table 2, there were 258 acquiring companies, or 67.2%, did not recognize impairment expense. However, 126 acquiring companies, or 32.8%, did recognize impairment expense over the time period studied (Table 2). Of those 126 acquiring companies, 35 acquiring companies, or 9.1%, recognized impairment expense one year after the acquisition date; 24 acquiring companies, or 6.3%, recognized impairment expense in the second year after the acquisition date; 22 acquiring companies, or 5.7%, recognized impairment expense in the third year after the acquisition date; 21 acquiring companies, or 5.5%, recognized impairment expense in the fourth year after the acquisition date; and 24 acquiring companies, or 6.3%, recognized impairment expense in the fifth or subsequent year after the acquisition date.

Of the 126 acquiring companies that did recognize impairment expense, 48 of those acquiring companies, or 38.09%, recognized impairment expense in fiscal year 2020 (Table 4). Most of those companies cited the COVID-19 pandemic as the reason for the decline in economic performance and the recognition of impairment expense.

**Table 4**

*Impairment Year*

**Impairment Year**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 | 258 | 67.2 | 67.2 | 67.2 |
| | 2013 | 3 | 0.8 | 0.8 | 68.0 |
| | 2014 | 3 | 0.8 | 0.8 | 68.8 |
| | 2015 | 7 | 1.8 | 1.8 | 70.6 |
| | 2016 | 14 | 3.6 | 3.6 | 74.2 |
| | 2017 | 14 | 3.6 | 3.6 | 77.9 |
| | 2018 | 11 | 2.9 | 2.9 | 80.7 |
| | 2019 | 19 | 4.9 | 4.9 | 85.7 |
| | 2020 | 48 | 12.5 | 12.5 | 98.2 |
| | 2021 | 6 | 1.6 | 1.6 | 99.7 |
| | 2022 | 1 | 0.3 | 0.3 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

***Cramer's V Statistical Tests***

Since all variables are either ordinal or dichotomous and the hypotheses questions are associational, the nonparametric statistical measure, Cramer's V will be run to determine statistical significance and strength of the relationship between the variables (Morgan et al., 2013). Nonparametric measures are used to measure variables that do not have normal distribution, which is the case for one of the independent and one of the dependent variables. All independent and dependent variables are either ordinal or dichotomous. Statistical significance

means the relationship being unlikely due to chance. Strength of the relationship is referred to as effect size when communicating results of the test.

Cramer's V was determined to be the correct statistical test based on the two independent and two dependent variables meeting the criteria for the assumptions and conditions. The first assumption and condition, according to Morgan et al. (2013), is the underlying data for the variables is independent, meaning separate statistical test are run and the data are not evaluated more than once. Although the data are ordinal for two of the independent variables and one of the dependent variables, the data can be and is considered nominal for the test, which is the second assumption and condition. The other dependent variable is dichotomous, which would be nominal. The third assumption and condition for Cramer's V concerns the number of levels or categories within variables. To measure the effect size, Cramer's V would be utilized for larger cross-tabs or variables with more than five levels or categories such as PAIDINSTOCK2 and IMPAIRMENT EXP. Phi is equivalent to Cramer's V if one variable has two levels and the other variable has three or more levels, which would be the case for GOODWILL RECOG and IMPAIREXP2. In addition, for larger cross-tabulations, 80% or more of the expected frequencies should be at least five. This is to ensure that the statistically significant test is not too liberal.

***Interpretation of Findings for H1o***

H1o. There is no statistically significant relationship between the percentage of common stock used as consideration used to pay for an acquisition (IV) and the subsequent recognition of impairment expense (DV).

The Case Processing Summary (Table 5) confirms that all 384 acquiring companies had valid data and no missing data. The Crosstabulation table (Table 6) provides the following data on the recognition of impairment expense (IMPAIREXP2) and acquiring companies who used

common stock (PAIDINSTOCK2) as consideration as their primary form of consideration. The count row is the actual count; the expected count row is the expectation of chance based on totals (Morgan et al., 2013). Of the 384 acquiring companies, there were 258 that did not recognize impairment expense and 126 that did recognize impairment expense over the study period.

**Table 5**

*Case Processing Summary for PAIDINSTOCK2 & IMPAIR EXP2*

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIREXP2 | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table 6**

*Crosstabulation for PAIDINSTOCK2 & IMPAIR EXP2*

**PAIDINSTOCK2 * IMPAIREXP2 Crosstabulation**

| | | | IMPAIREXP2 | | |
|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT RECOGNIZED | Total |
| PAIDINSTOCK2 | 1 | Count | 215 | 83 | 298 |
| | | Expected Count | 200.2 | 97.8 | 298.0 |
| | | % within IMPAIREXP2 | 83.3% | 65.9% | 77.6% |
| | 2 | Count | 13 | 14 | 27 |
| | | Expected Count | 18.1 | 8.9 | 27.0 |
| | | % within IMPAIREXP2 | 5.0% | 11.1% | 7.0% |
| | 3 | Count | 14 | 6 | 20 |
| | | Expected Count | 13.4 | 6.6 | 20.0 |
| | | % within IMPAIREXP2 | 5.4% | 4.8% | 5.2% |
| | 4 | Count | 16 | 23 | 39 |
| | | Expected Count | 26.2 | 12.8 | 39.0 |
| | | % within IMPAIREXP2 | 6.2% | 18.3% | 10.2% |
| Total | | Count | 258 | 126 | 384 |
| | | Expected Count | 258.0 | 126.0 | 384.0 |
| | | % within IMPAIREXP2 | 100.0% | 100.0% | 100.0% |

Of the 258 acquiring companies that did not recognize impairment expense, the following percentages of the company's own common stock were used as consideration: 215 acquiring companies, or 83.3%, paid for the acquisition using 25% or less of their common stock; 13 acquiring companies, or 5.0%, paid for the acquisition using between 25.01% and 50% of their common stock; 14 acquiring companies, or 5.4%, paid for the acquisition using between 50.01% and 75% of their common stock; and 16 acquiring companies, or 6.2% paid for the acquisition using between 75.01% and 100% of their common stock.

Of the 126 acquiring companies that did recognize impairment expense, the following percentages of the company's own common stock were used as consideration: 83 acquiring companies, or 65.9%, paid for the acquisition using 25% or less of their common stock; 14 acquiring companies, or 11.1%, paid for the acquisition using between 25.01% and 50% of their common stock; six acquiring companies, or 4.8%, paid for the acquisition using between 50.01% and 75% of their common stock; and 23 acquiring companies, or 18.3% paid for the acquisition using between 75.01% and 100% of their common stock.

The Symmetric Measures table (Table 7) shows the Cramer's V results of statistical significance and relationship strength/effect size. The statistical significance was $p = <.001$, which indicates the results are statistically significant. Based on the Cramer's V value of .228, there appears to be small to medium effect between the acquiring companies that pay for all or a portion of consideration with common stock and recognition of impairment expense (Cohen, 1988 as cited by Morgan et al., 2013). According to Morgan et al. (2013), a value closer to zero means the relationship is weak.

**Table 7**

*Cramer's V for PAIDINSTOCK2 & IMPAIR EXP2*

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.228 | 0.000 |
| | Cramer's V | 0.228 | 0.000 |
| N of Valid Cases | | 384 | |

To investigate whether recognition of impairment expense correlates to the percentage of the acquiring company's common stock used as consideration, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 7 shows the Cramer's V results and indicates a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition if impairment expense ($r$ = .228, N = 384, $p$ = <.001). The null hypothesis is rejected; therefore, the results conclude that there is a small to medium positive relationship between companies using their own common stock as partial or full consideration and the likelihood of impairment expense.

***Interpretation of Findings for H2o***

H2o. There is no statistically significant relationship between the percentage of common stock used as consideration to pay for an acquisition (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

The Case Processing Summary (Table 8) confirms that all 384 acquiring companies had valid data and no missing data. The Crosstabulation table (Table 9) provides the following data on the time period in subsequent year of recognition of impairment expense (IMPAIRMENTEXP) and acquiring companies who used common stock as consideration as

their primary form of consideration (PAIDINSTOCK2). The data for the 258 acquiring companies that did not recognize impairment expense have been discussed in H1o (Table 6) above. The data for the 126 acquiring companies that did recognize impairment expense within a certain time period following their completed acquisition has been discussed in the frequency table (Table 3).

**Table 8**

*Case Processing Summary for PAIDINSTOCK2 & IMPAIRMENT EXP*

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIRMENT EXP | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table 9**

*Crosstabulation for PAIDINSTOCK2 & IMPAIRMENT EXP*

**PAIDINSTOCK2 * IMPAIRMENT EXP Crosstabulation**

| | | | IMPAIRMENT EXP | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT IN YEAR ONE | IMPAIRMENT IN YEAR TWO | IMPAIRMENT IN YEAR THREE | IMPAIRMENT IN YEAR FOUR | IMPAIRMENT IN YEAR FIVE OR MORE | Total |
| PAIDINSTOCK2 | 1 | Count | 215 | 18 | 14 | 9 | 21 | 21 | 298 |
| | | Expected | 200.2 | 27.2 | 18.6 | 17.1 | 16.3 | 18.6 | 298.0 |
| | | % within | 83.3% | 51.4% | 58.3% | 40.9% | 100.0% | 87.5% | 77.6% |
| | 2 | Count | 13 | 4 | 3 | 5 | 0 | 2 | 27 |
| | | Expected | 18.1 | 2.5 | 1.7 | 1.5 | 1.5 | 1.7 | 27.0 |
| | | % within | 5.0% | 11.4% | 12.5% | 22.7% | 0.0% | 8.3% | 7.0% |
| | 3 | Count | 14 | 3 | 1 | 2 | 0 | 0 | 20 |
| | | Expected | 13.4 | 1.8 | 1.3 | 1.1 | 1.1 | 1.3 | 20.0 |
| | | % within | 5.4% | 8.6% | 4.2% | 9.1% | 0.0% | 0.0% | 5.2% |
| | 4 | Count | 16 | 10 | 6 | 6 | 0 | 1 | 39 |
| | | Expected | 26.2 | 3.6 | 2.4 | 2.2 | 2.1 | 2.4 | 39.0 |
| | | % within | 6.2% | 28.6% | 25.0% | 27.3% | 0.0% | 4.2% | 10.2% |
| Total | | Count | 258 | 35 | 24 | 22 | 21 | 24 | 384 |
| | | Expected | 258.0 | 35.0 | 24.0 | 22.0 | 21.0 | 24.0 | 384.0 |
| | | % within | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

It is important to note that the largest number of acquiring companies to recognize impairment expense do so within the first year after the completed acquisition and the number steadily declines each year thereafter. Of the 126 acquiring companies to recognize impairment

expense, 35 acquiring companies, or 27.78%, recognized impairment expense within the first year after the completed acquisition; 24 acquiring companies, or 19.05%, recognized impairment expense within one to two years after the completed acquisition; 22 acquiring companies, or 17.46%, recognized impairment expense within two to three years after the completed acquisition; 21 acquiring companies, or 16.67%, recognized impairment expense within three to four years after the completed acquisition; and 24 acquiring companies, or 19.05%, recognized impairment expense within 4 to 5 years or more of the completed acquisition. Based on data collection, 13 acquiring companies recognized impairment expense in year five, three acquiring companies recognized impairment expense in year six, two acquiring companies recognized impairment expense in year seven, four acquiring companies recognized impairment expense in year eight, and two acquiring companies recognized impairment expense in year nine.

Of the 35 acquiring companies that recognized impairment expense within 1 year of the completed acquisition date, the following percentages of the company's own common stock were used as consideration: 18 acquiring companies, or 51.4%, paid for the acquisition using 25% or less of their common stock; four acquiring companies, or 11.4%, paid for the acquisition using between 25.01% and 50% of their common stock; 3 acquiring companies, or 8.6%, paid for the acquisition using between 50.01% and 75% of their common stock; and 10 acquiring companies, or 28.6% paid for the acquisition using between 75.01% and 100% of their common stock.

Of the 24 acquiring companies that recognized impairment expense within one to two years of the completed acquisition date, the following percentages of the company's own common stock were used as consideration: 14 acquiring companies, or 58.3%, paid for the acquisition using 25% or less of their common stock; 3 acquiring companies, or 12.5%, paid for

the acquisition using between 25.01% and 50% of their common stock; one acquiring company, or 4.2%, paid for the acquisition using between 50.01% and 75% of their common stock; and six acquiring companies, or 25.0% paid for the acquisition using between 75.01% and 100% of their common stock.

Of the 22 acquiring companies that recognized impairment expense within two to three years of the completed acquisition date, the following percentages of the company's own common stock were used as consideration: nine acquiring companies, or 40.9%, paid for the acquisition using 25% or less of their common stock; five acquiring companies, or 22.7%, paid for the acquisition using between 25.01% and 50% of their common stock; two acquiring company, or 9.1%, paid for the acquisition using between 50.01% and 75% of their common stock; and six acquiring companies, or 27.3% paid for the acquisition using between 75.01% and 100% of their common stock.

Of the 21 acquiring companies that recognized impairment expense within three to four years of the completed acquisition date, all 21 acquiring companies, or 100.0%, paid for the acquisition using 25% or less of their common stock. Of the 24 acquiring companies that recognized impairment expense within 4 to 5 years or more of the completed acquisition date, the following percentages of the company's own common stock were used as consideration: 21 acquiring companies, or 87.5%, paid for the acquisition using 25% or less of their common stock; two acquiring companies, or 8.3%, paid for the acquisition using between 25.01% and 50% of their common stock; no acquiring companies paid for the acquisition using between 50.01% and 75% of their common stock; and one acquiring company, or 4.2% paid for the acquisition using between 75.01% and 100% of their common stock.

The Symmetric Measures table (Table 10) shows the Cramer's V results of statistical significance and relationship strength/effect size. The statistical significance was $p = .001$, which indicates the results are statistically significant. Based on the Cramer's V value of .223, the effect between acquiring companies that pay for all or a portion of consideration with common stock and the recognition of impairment expense within a specific year after the acquisition completion date appears to be small to medium.

**Table 10**

*Cramer's V for PAIDINSTOCK2 & IMPAIRMENT EXP*

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.387 | 0.000 |
| | Cramer's V | 0.223 | 0.000 |
| N of Valid Cases | | 384 | |

To ensure the correct results, the researcher modified the dependent variable, IMPAIRMENT EXP, by creating IMPAIREXPRECOG to isolate the 126 acquiring companies that did recognize impairment expense. The Case Processing Summary (Table 11) shows that the test includes 126 of valid data representing those companies that recognized impairment expense. There were 258 missing data, which represents those acquiring companies that did not recognize impairment expense. The Symmetric Measures table (Table 12) confirms that the relationship between the percentage of common stock used as full or partial consideration (PAIDINSTOCK2) and the time period in years of the subsequent impairment expense recognition (IMPAIREXPRECOG) is closer to medium based on the Cramer's V of .273 (Cohen, 1988 as cited by Morgan et al., 2013). The results are statistically significant with $p = .005$.

**Table 11**

*Case Processing Summary for PAIDINSTOCK2 & IMPAIREXPRECOG*

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIREXPRECOG | 126 | 32.8% | 258 | 67.2% | 384 | 100.0% |

**Table 12**

*Cramer's V for PAIDINSTOCK2 & IMPAIREXPRECOG*

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.473 | 0.005 |
| | Cramer's V | 0.273 | 0.005 |
| N of Valid Cases | | 126 | |

To investigate whether recognition of impairment expense within a certain time period correlates to the percentage of the acquiring company's common stock used as consideration, a Cramer's V statistic was conducted. Table 10 shows the Cramer's V results and indicates a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition if impairment expense in the subsequent time periods ($r$ = .223, N = 384, $p$ = <.001). Table 12 shows the Cramer's V results, which includes only those 126 acquiring companies that recognized impairment expense in the years following the acquisition and confirms a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition of impairment expense in the subsequent time periods ($r$ = .273, N = 126, $p$ = .005). The null

hypothesis of no relationship is rejected; therefore, the results conclude that there is a small to medium positive relationship between companies using their own stock as partial or full consideration for an acquisition and the likelihood impairment expense within three years of the completed acquisition.

***Interpretation of Findings for H3o***

H3o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense (DV).

The Case Processing Summary (Table 13) confirms that all 384 acquiring companies had valid data and no missing data. The Crosstabulation table (Table 14) provides the following data on the recognition of impairment expense (IMPAIREXP2) and the percentage of the purchase price allocated to goodwill by the acquiring companies (GOODRECOG3). Of the 384 acquiring companies, there were 258 that did not recognize impairment expense and 126 that did recognize impairment expense over the study period.

**Table 13**

*Case Processing Summary for GOODRECOG3 & IMPAIREXP2*

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| GOODRECOG3 * IMPAIREXP2 | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table 14**

*Crosstabulation for GOODRECOG3 & IMPAIREXP2*

**GOODRECOG3 * IMPAIREXP2 Crosstabulation**

| | | | IMPAIREXP2 | | |
|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT RECOGNIZED | Total |
| GOODRECOG3 | 1 | Count | 125 | 73 | 198 |
| | | Expected Count | 133.0 | 65.0 | 198.0 |
| | | % within | 48.4% | 57.9% | 51.6% |
| | 2 | Count | 91 | 26 | 117 |
| | | Expected Count | 78.6 | 38.4 | 117.0 |
| | | % within | 35.3% | 20.6% | 30.5% |
| | 3 | Count | 42 | 27 | 69 |
| | | Expected Count | 46.4 | 22.6 | 69.0 |
| | | % within | 16.3% | 21.4% | 18.0% |
| Total | | Count | 258 | 126 | 384 |
| | | Expected Count | 258.0 | 126.0 | 384.0 |
| | | % within | 100.0% | 100.0% | 100.0% |

Of the 258 acquiring companies that did not recognize impairment expense, the following percentages of the purchase price were recognized as goodwill on the acquiring companies' balance sheets: 125 acquiring companies, or 48.4%, allocated between 0% to 46% of the purchase price to goodwill; 91 acquiring companies, or 35.3%, allocated between 46.01% and 66% of the purchase price to goodwill; and 42 acquiring companies, or 16.3%, allocated between 66.01% and 100% of the purchase price to goodwill.

Of the 126 acquiring companies that did recognize impairment expense, the following percentages of the purchase price were recognized as goodwill on the acquiring companies' balance sheets: 73 acquiring companies, or 57.9%, allocated between 0% to 46% of the purchase price to goodwill; 26 acquiring companies, or 20.6%, allocated between 46.01% and 66% of the purchase price to goodwill; and 27 acquiring companies, or 21.4%, allocated between 66.01% and 100% of the purchase price to goodwill.

The Symmetric Measures table (Table 15) shows the Cramer's V results of statistical significance and relationship strength/effect size. The statistical significance was $p = .013$, which indicates the results are statistically significant. Based on the Cramer's V value of .150, there is a smaller than typical relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense. According to Morgan et al. (2013), a value closer to zero means the relationship is weak.

**Table 15**

*Cramer's V for GOODRECOG3 & IMPAIREXP2*

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.150 | 0.013 |
| | Cramer's V | 0.150 | 0.013 |
| N of Valid Cases | | 384 | |

To investigate whether recognition of impairment expense correlates to the percentage of the purchase price allocated to goodwill, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 15 shows the Cramer's V results ($r = .150$, N = 384, $p = .013$). The null hypothesis of no relationship is rejected; therefore, concludes that there is a smaller than typical positive relationship between the percentage of the purchase price recognized as goodwill and the recognition if impairment expense in the subsequent time periods

***Interpretation of Findings for H4o***

H4o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense within a certain time period (DV).

The Case Processing Summary (Table 16) confirms that all 384 acquiring companies had valid data and no missing data. The Crosstabulation table (Table 17) provides the following data on the recognition of impairment expense in subsequent years (IMPAIRMENT EXP) and the percentage of the purchase price allocated to goodwill by the acquiring companies (GOODRECOG3). Of the 384 acquiring companies, there were 258 that did not recognize impairment expense and 126 that did recognize impairment expense over the study period.

**Table 16**

*Case Processing Summary for GOODRECOG3 & IMPAIRMENT EXP*

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| GOODRECOG3 * IMPAIRMENT EXP | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table 17**

*Crosstabulation for GOODRECOG3 & IMPAIRMENT EXP*

**GOODRECOG3 * IMPAIRMENT EXP Crosstabulation**

| | | | IMPAIRMENT EXP | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT IN YEAR ONE | IMPAIRMENT IN YEAR TWO | IMPAIRMENT IN YEAR THREE | IMPAIRMENT IN YEAR FOUR | IMPAIRMENT IN YEAR FIVE OR MORE | Total |
| GOODRECOG3 | 1 | Count | 125 | 22 | 14 | 14 | 9 | 14 | 198 |
| | | Expected Count | 133.0 | 18.0 | 12.4 | 11.3 | 10.8 | 12.4 | 198.0 |
| | | % within IMPAIRMENT | 48.4% | 62.9% | 58.3% | 63.6% | 42.9% | 58.3% | 51.6% |
| | 2 | Count | 91 | 7 | 3 | 5 | 5 | 6 | 117 |
| | | Expected Count | 78.6 | 10.7 | 7.3 | 6.7 | 6.4 | 7.3 | 117.0 |
| | | % within IMPAIRMENT | 35.3% | 20.0% | 12.5% | 22.7% | 23.8% | 25.0% | 30.5% |
| | 3 | Count | 42 | 6 | 7 | 3 | 7 | 4 | 69 |
| | | Expected Count | 46.4 | 6.3 | 4.3 | 4.0 | 3.8 | 4.3 | 69.0 |
| | | % within IMPAIRMENT | 16.3% | 17.1% | 29.2% | 13.6% | 33.3% | 16.7% | 18.0% |
| Total | | Count | 258 | 35 | 24 | 22 | 21 | 24 | 384 |
| | | Expected Count | 258.0 | 35.0 | 24.0 | 22.0 | 21.0 | 24.0 | 384.0 |
| | | % within IMPAIRMENT | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

It is important to note that the largest number of acquiring companies to recognize impairment expense do so within the first year after the completed acquisition and the number steadily declines each year thereafter. See the Interpretations of Findings for H2o for further detail.

Of the 35 acquiring companies that recognized impairment expense within one year of the completed acquisition date, the following percentages of the purchase price was allocated to goodwill: 22 acquiring companies, or 62.9%, recognized 46% or less of their purchase price as goodwill; seven acquiring companies, or 20.0%, recognized between 46.01% and 66% of the purchase price as goodwill; and six acquiring companies, or 17.1%, recognized between 66.01% and 100.0% of the purchase price as goodwill.

Of the 24 acquiring companies that recognized impairment expense within one to two years of the completed acquisition date, the following percentages of the purchase price was allocated to goodwill: 14 acquiring companies, or 58.3%, recognized 46% or less of their purchase price as goodwill; three acquiring companies, or 12.5%, recognized between 46.01% and 66% of the purchase price as goodwill; and seven acquiring companies, or 29.2%, recognized between 66.01% and 100.0% of the purchase price as goodwill.

Of the 22 acquiring companies that recognized impairment expense within two to three years of the completed acquisition date, the following percentages of the purchase price was allocated to goodwill: 14 acquiring companies, or 63.6%, recognized 46% or less of their purchase price as goodwill; five acquiring companies, or 22.7%, recognized between 46.01% and 66% of the purchase price as goodwill; and three acquiring companies, or 13.6%, recognized between 66.01% and 100.0% of the purchase price as goodwill.

Of the 21 acquiring companies that recognized impairment expense within three to four years of the completed acquisition date, the following percentages of the purchase price was allocated to goodwill: nine acquiring companies, or 42.9%, recognized 46% or less of their purchase price as goodwill; five acquiring companies, or 23.8%, recognized between 46.01% and

66% of the purchase price as goodwill; and seven acquiring companies, or 33.3%, recognized between 66.01% and 100.0% of the purchase price as goodwill.

Of the 24 acquiring companies that recognized impairment expense within four to five years or more of the completed acquisition date, the following percentages of the purchase price was allocated to goodwill: 14 acquiring companies, or 58.3%, recognized 46% or less of their purchase price as goodwill; six acquiring companies, or 25.0%, recognized between 46.01% and 66% of the purchase price as goodwill; and four acquiring companies, or 16.7%, recognized between 66.01% and 100.0% of the purchase price as goodwill.

The Symmetric Measures table (Table 18) shows the Cramer's V results of statistical significance and relationship strength/effect size. The statistical significance was $p = .149$, which indicates the results are not statistically significant. Based on the lack of statistical significance of the test, the effect size of r is not relevant.

**Table 18**

*Cramer's V for GOODRECOG3 & IMPAIRMENT EXP*

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | 0.195 | 0.149 |
| | Cramer's V | 0.138 | 0.149 |
| N of Valid Cases | | 384 | |

To investigate whether recognition of impairment expense in the subsequent time periods correlates to the percentage of the purchase price allocated to goodwill, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 18 shows (N = 384, $p = .149$), which shows that the results are not statistically significant. The null hypothesis of no relationship was not rejected and, therefore, there is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the time period of

the subsequent recognition of impairment expense (DV). The r value produced by Cramer's V is not relevant.

***Summary of Hypotheses Testing***

To investigate whether recognition of impairment expense correlates to the percentage of the acquiring company's common stock used as consideration, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 7 shows the Cramer's V results and indicates a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition if impairment expense ($r$ = .228, N = 384, $p$ = <.001). The null hypothesis is rejected; therefore, the results conclude that there is a small to medium positive relationship between companies using their own common stock as partial or full consideration and the likelihood of impairment expense.

To investigate whether recognition of impairment expense within a certain time period correlates to the percentage of the acquiring company's common stock used as consideration, a Cramer's V statistic was conducted. Table 10 shows the Cramer's V results and indicates a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition if impairment expense in the subsequent time periods ($r$ = .223, N = 384, $p$ = <.001). Table 12 shows the Cramer's V results, which includes only those 126 acquiring companies that recognized impairment expense in the years following the acquisition and confirms a small to medium relationship between the acquiring companies that pay for all or a portion of consideration with common stock and the recognition of impairment expense in the subsequent time periods ($r$ = .273, N = 126, $p$ = .005). The null hypothesis of no relationship is rejected; therefore, the results conclude that there is a small to medium positive relationship between companies using their own stock as partial or full

consideration for an acquisition and the likelihood impairment expense within three years of the completed acquisition.

To investigate whether recognition of impairment expense correlates to the percentage of the purchase price allocated to goodwill, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 15 shows the Cramer's V results ($r$ = .150, N = 384, $p$ = .013). The null hypothesis of no relationship is rejected; therefore, concludes that there is a smaller than typical positive relationship between the percentage of the purchase price recognized as goodwill and the recognition if impairment expense in the subsequent time periods

To investigate whether recognition of impairment expense in the subsequent time periods correlates to the percentage of the purchase price allocated to goodwill, a Cramer's V statistic was conducted. Assumptions were examined and met. Table 18 shows (N = 384, $p$ = .149), which shows that the results are not statistically significant. The null hypothesis of no relationship was not rejected and, therefore, there is no relationship between the percentage of the purchase price allocated to goodwill (IV) and the time period of the subsequent recognition of impairment expense (DV). The r value produced by Cramer's V is not relevant.

***Relationship of Findings***

The results of the research findings will be discussed in relation to the research questions, the theoretical framework, the literature, and the problem statement. The researcher found mixed results regarding the research questions. There were four research questions that examined the faithful representation of goodwill by testing the recognition and timing of an impairment expense based on two impairment indicators. The theoretical framework is the business process that is typically followed in the acquisition of a target company. There were both similarities and differences between the previous literature regarding the subsequent accounting for goodwill and

the results of the findings that will be discussed. Based on the mixed results found from the hypotheses testing, the researcher concluded that the qualitative assessment instituted by ASU 2011–08 has slightly declined in the faithful representation of the value of goodwill for companies in the problem statement discussion.

**Research Questions**

The research questions are intended to examine the faithful representation of goodwill by measuring the relationship between certain conditions that potentially signal an overpayment and the recognition of impairment expense.

RQ1: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage common stock used as consideration in an acquisition and the subsequent recognition of impairment expense?

Based on the research findings, there is a small to medium positive relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense. The results show that an acquiring company that pays for all or a portion of the target company's purchase price with their own common stock is more likely to recognize an impairment to goodwill. In collecting the data from the acquiring company's Form 10–K, consideration paid is typically a mixture of common stock and cash, if common stock is used. Acquiring companies that used debt financing to complete the acquisition disclose this as cash consideration while making a distinction between using cash on hand and debt financing. In addition to common stock, cash on hand, and debt financing, the researcher noted that acquiring companies will also use contingent consideration. Contingent consideration is a promise of future cash or common stock payments upon the recognition of a specific milestone (Ernst & Young, 2021).

RQ2: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period?

Based on the research findings, there is a small to medium positive relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period. Of the 384 acquiring companies in the sample size, there were 126 acquiring companies, or 32.8%, that recognized impairment expense. Of those 126 acquiring companies, 81 acquiring companies, or 64.29% recognized impairment expense within 1 to 3 years of the acquisition date. The other 45 acquiring companies, or 35.71%, recognized impairment expense in four years or more after the acquisition date. The findings suggested that when an acquiring company uses their own common stock as full or partial consideration, it is likely that they will recognize impairment expense within 3 years of the acquisition completion date. In fact, there were 35 acquiring companies that recognized impairment expense within the first year of the completed acquisition, which was higher than each of the subsequent years.

RQ3: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense?

Based on the research findings, there is a smaller than typical positive relationship between the percentage of purchase price allocated to goodwill and the subsequent recognition of impairment expense. This finding suggests that the higher the percentage of goodwill recognized as part of the purchase price does not indicate a highly likely future impairment of goodwill. Goodwill is the difference between the purchase price paid for the target company and the net

fair value of the assets acquired for the target company (Burger & Wen, 2021). The higher the allocation of the purchase price to goodwill would imply the larger the amount of overpayment for the target company. Since the statistically significant results showed a smaller than typical relationship, it suggests that the relationship is not as strong with the passage of ASU 2011–08 as it was with SFAS 142.

RQ4: In public companies who completed acquisitions between 2012 and 2018, is there a relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense within a certain time period?

The applicable test that was run, Cramer's V, showed the results were not statistically significant. This indicated that the strength or effect size of the relationship was not relevant, and a relationship could not be confirmed. This was interesting since the results of Olante's (2013) study showed that the increase in goodwill recognized as a percentage of the purchase price had a positive correlation with impairment expense recognized within two to three years of the completed acquisition. However, as noted below, the amount of goodwill recognized since the passage of ASC 805 and SFAS 142 has increased, the average goodwill recognized in this study was 46.06% of the purchase price (Table 1). Olante (2013) found that acquiring companies that recognized impairment expense averaged around 62.0% of the purchase price recognized as goodwill, while the acquiring companies that did not recognize impairment expense averaged around 55.0% of the purchase price recognized as goodwill. Olante's (2013) study included acquiring companies that followed ASC 805 and SFAS 142, but not ASU 2011–08. In addition, Olante (2013) found that almost 50% of the acquiring companies with goodwill recognized impairment expense. On the other hand, this researcher found that 32.8% of the sample recognized impairment expense.

## Theoretical Framework

An acquisition begins with the negotiation process between the target company and the publicly traded acquiring company. Concurrent with the negotiation process, the acquiring company is making decisions regarding the consideration to be used to pay for the acquisition (Welch et al., 2020).

### *Main Forms of Consideration*

The main forms of consideration based on the researcher's data collection would be the acquiring company's common stock, cash on hand, debt financing, contingent consideration, or a mixture of two to four kinds of consideration. The total purchase price of all 384 acquiring companies for their target companies was $293.2 billion with following consideration used: $68.6 billion, or 23.39%, was paid using the acquiring company's common stock; $184.4 billion, or 62.88%, was paid using cash on hand; $37.5 billion, or 12.77%, was paid using debit financing; and $2.8 billion, or .96%, was paid using contingent consideration. As results of the research study showed, there is a medium to large positive relationship between common stock used as partial or full consideration and the likelihood of a subsequent impairment expense.

### *Agency Theory and Upper Echelon Theory*

The total amount of the purchase price over the acquiring company's fair valuation of the target company is intended to represent core goodwill, which is the projected synergy creation upon consolidation of the two companies (Linsmeier & Wheeler, 2021). Agency theory and upper echelon theory have both been pointed to as drivers behind the increase in the purchase price of an acquisition. Agency theory asserts that in the relationship between the agent and owner of a company, the agent is motivated by their own self-interest and not the interest of the company owners (Schroeder et al., 2014). In the acquisition negotiation and purchase process,

the agent of the acquiring company may target a company to purchase and agree upon the purchase price because it benefits them personally without regards for the long-term effects for the owners. This research study does not focus on the motives behind the acquisition, but there is a realization that an acquiring company potentially overpays for a target company due to benefits obtained by the agents or executive management instead of future synergy creation.

The underlying premise of upper echelon theory is that the characteristics and previous experiences of executive management form their decision-making and, in turn, can potentially lead to overpayment for a target company (Hambrick & Mason, 1984 as cited by Neely et al., 2020). On the other hand, it could result in sound decision-making and a purchase price of a target company that considers the core goodwill only.

In both cases of Agency theory and Upper Echelon theory, there is a potential that executive management may use the current accounting guidance, in this case ASU 2011–08, to their advantage when recognizing and subsequently valuing goodwill. In collecting the percentage of goodwill recognized compared to the purchase price for the 384 acquiring companies, the average amount of goodwill recognized was 46.06% of the purchase price (Table 1 GOODWILLRECOG). This means that close to half of the purchase prices were posted as goodwill. In some cases, this significant goodwill balance may faithfully represent core goodwill. However, in other cases, executive management may knowingly overpay with optimism that synergy creation will exceed expectations and result in improved operating performance. In addition, the decision to use common stock as partial or full consideration could contribute to the increase in purchase price if access to cash is not fully available.

### *Accounting Guidance*

Once an acquisition has been completed, the acquiring company follows ASC 805 in accounting for the business combination (Ernst & Young, 2021). In accordance with ASC 805, the purchase price is allocated to assets based on the fair value of the target company's assets and to liabilities based the fair value of the target company's liabilities. Any excess of the purchase price is allocated to goodwill, which is a long-term asset on the acquiring company's balance sheet. In data collection, all 384 acquiring companies in the sample size included in business combinations with the accounting guidance applied, ASC 805, in their summary of significant accounting policies disclosure note.

Subsequent to the completion of an acquisition, goodwill is evaluated on a periodic basis with the passage and adoption of ASU 2011–08. If acquiring companies did not adopt ASU 2011–08 and continued adhering to SFAS 142, those companies were required to annually evaluate goodwill for impairment using the two-step quantitative test. Both SFAS 142 and its amendment, ASU 2011–08, state that companies need to evaluate goodwill when circumstances arise that increase the likelihood of goodwill impairment, which means it could be on an interim basis versus only annually (FASB, 2011). Although ASU 2011–08 eliminates the annual evaluation using the quantitative two-step process, most companies who adopted this amendment continue to perform the qualitative assessment on an annual basis as evidenced by their Form 10–K disclosures. During the research study as part of data collection, the researcher reviewed Form 10–K disclosure notes for each of the 384 acquiring companies to ascertain if they had adopted ASU 2011–08. The researcher found that 78% of the 384 acquiring companies did adopt ASU 2011–08 during the 2012 through 2015 fiscal year time period (Table 1).

### *Financial Statements*

Publicly traded companies file their financial statements and supporting disclosure notes and management's discussion and analysis with the SEC on an annual basis with the Form 10–K and on a quarterly basis with the Form 10–Q (SEC, n.d.). The SEC has a free website that is available to the public at http://www.sec.gov. In addition to the SEC website, publicly traded companies are also required to download the Form 10–Ks and Form 10–Qs to their own websites within a reasonable amount of time after they file the documents with the SEC (SEC, n.d.). These externally filed financial statements are provided for the purpose of financial statement users to be able to make decisions (Schroeder et al., 2014).

The income statement and balance sheet are part of the financial statements available to financial statement users for free. These two financial statements would show if goodwill has been evaluated and remains the same or if goodwill has been evaluated and deemed impaired. In addition to the financial statements, the disclosure notes and MD&A are a valuable resource for information regarding the details of the original business combination along with the goodwill recognized on the balance sheet, the significant accounting policies of the company, and the changes to the goodwill balance in subsequent years, including the reason for an impairment. In data collection, the researcher mainly reviewed the Form 10–K since this is the annual filing and includes financial information for the entire fiscal year and is required to be independently audited (Reg S-X).

### *Signal Theory*

The financial information disclosed and supporting detail in the disclosure notes and MD&A are vehicles that the company uses to signal its operating status to financial statement users (Qin et al., 2020). Signal theory is a vital piece of the theoretical framework since the

research study is based on the acquiring company signaling the completion of an acquisition, the purchase price for the target company, the consideration paid for the target company, the recognition of goodwill compared to the purchase price, and the subsequent accounting for goodwill, which includes whether goodwill has been impaired or not.

## The Literature

The intention of this research study to determine if the significant findings of the Olante (2013) research study remained the same after the passage and potential adoption of ASU 2011–08, which allowed for a qualitative assessment by management. Olante (2013) developed a model to predict the recognition of impairment expense, which is beyond the scope of this study. However, under the current accounting guidance at the time of the study, Olante's (2013) model found that there was a 37.4% likelihood of recognized impairment expense based on two impairment indicators, the percentage of common stock used as consideration and the percentage of the purchase price allocated to goodwill. This study focused on the existence and strength of the relationship between the two impairment indicators and the subsequent recognition of impairment expense.

### *Common Stock as Consideration*

Olante (2013) found that a positive relationship existed between the percentage of the acquiring company's stock used as consideration and the probability of impairment to goodwill and between the purchase price amount allocated to goodwill and the probability of impairment to goodwill. Olante (2013) found that there was a significant risk of goodwill impairment within two to three years of the completed acquisition when the purchase price allocated to goodwill was more than 67%. Interestingly, the time lag between the completed acquisition and the subsequent recognition of impairment expense decreased from four to five years in the pre-SFAS

142 period to 2 to 3 years in the post-SFAS 142 period. Olante (2013) concluded that this decrease in the time period of recognition supported the FASB's intention of SFAS 142 improving the timeliness of impairments to goodwill.

The results of this research study confirmed that there remains a statistically significant small to medium positive relationship between the percentage of common stock used as consideration used to pay for an acquisition and the subsequent recognition of impairment expense. Bartov et al. (2021) stated that an acquiring company that used a majority of its own common stock as consideration in an acquisition is more likely to impair goodwill in subsequent periods. As Olante (2013) and Bartov et al. (2021) both noted, accounting literature surmised that common stock is used as consideration when the acquiring company perceives their common stock to be overvalued resulting in less of a cash outlay for the purchase price.

However, de Bodt et al. (2018) found that companies using their own common stock as full consideration for an acquisition has significantly declined over the past two decades and cited the passage of ASC 805 as the reason. This accounting guidance eliminated goodwill amortization over a 40-year maximum period under the purchase method and abolished the pooling-of-interest method. de Bodt et al. (2018) found that during the pre-ASC 805 (and SFAS 142) period, around half of all acquisitions were consummated with common stock-only. That percentage has declined to around 10% in recent years. Although the data collection included full and partial consideration paid for with common stock, the results of data collection align with the de Bodt et al. (2018) finding. This research study showed that the 384 acquiring companies averaged 16.35% of consideration was paid for using their own common stock with only 24 acquiring companies, or 6.25%, using 100% of their common stock as consideration. Consideration paid using common stock appears to remain an impairment indicator under ASU

2011–08. Although the use of common stock as consideration has decreased, it still indicates a potential impairment expense will be recognized in the future.

***Purchase Price Allocated to Goodwill***

Although Olante (2013) found that acquiring companies allocating over two-thirds of their purchase price to goodwill recognized goodwill impairment within a 2 to 3-year period after the acquisition, the findings of this study found that the 2 to 3-year period had a medium to large relationship with the percentage of common stock used as consideration and the subsequent recognition of impairment expense. In contrast, the results of this study found no statistically significant relationship could be determined between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense within a certain time period. See H4o results above. However, of the 126 acquiring companies that did recognize impairment expense, only 27 acquiring companies, or 21.4%, recognized 66.01% to 100% of the purchase price as goodwill. Of those 27 acquiring companies, 16 acquiring companies recognized impairment of that goodwill within a 3-year period of the completed acquisition date while the remaining 11 acquiring companies recognized goodwill impairment in 4 years or more (Table 18).

Goodwill can account for a large share of the purchase price (Killins et al., 2021) and its value has been increasing in recent years (Nugent, 2016). In a 2017 purchase price allocation study conducted by Houlihan and Lokey (2018, as cited by Linsmeier & Wheeler, 2021), the average goodwill recognized for that time period averaged around 40% of the purchase price. In their research study covering a time period between 2002 and 2006, Yehuda et al. (2019) found that goodwill recognized average 55% of the purchase price. In 2015, the acquiring companies paid an average of 38% over the market price of the target company (Condon, 2016 as cited by

Nugent et al., 2016). This research study found that the average goodwill recognized as a proportion of the purchase price was 46.06% for the 384 acquiring companies over a period between 2012 and 2018. Nugent (2016), Black et al. (2021), Johnson et al. (2021), and Linsmeier and Wheeler (2021) attributed the increase in goodwill recognition to the passage of ASC 805 and SFAS 142. SFAS 142 provided an incentive for overpayment with the optimistic expectation that the created synergies would increase market value and operating performance and the company would easily pass the two-step quantitative threshold for the impairment test.

### *Faithful Representation of Goodwill*

In comparison to Olante's (2013) findings, there is a smaller than typical positive relationship between the increase of goodwill recognized as a percentage of the purchase price and the subsequent impairment of goodwill. This finding suggests that ASU 2011–08 has not improved the faithful representation of goodwill on a company's balance sheet since impairment expense is not being recognized at a higher rate. Although Yehuda et al.'s (2019) study covered an SFAS 142 time period, they concluded that the increase of goodwill as a percentage of the purchase price is not consistent with the faithful representation of the asset's value. The Li and Sloan (2017) covered a pre- and post-SFAS 142 time period and concurred that while goodwill balances have increased, while the recognition of goodwill impairment is less timely post-SFAS 142. Linsmeier and Wheeler (2021) found that combined impairments of goodwill for S&P 500 companies compared to prior year combined goodwill balances for the period 2006–2012, averaged only 1.21% and suggested the indication is impairments of goodwill are recognized in a less timely manner. Black et al. (2021) concurred that goodwill has grown significantly since the passage of SFAS 142 but stated that the magnitude of the impairment of goodwill has also increased.

**ASU 2011–08**. In terms of research studying the effects of ASU 2011–08 on the subsequent accounting for goodwill, Black et al. (2021) found that acquiring companies that specifically opted for Step 0 did not decrease the frequency or timeliness of goodwill impairments with a conclusion that the qualitative assessment was beneficial to United States. In addition, Adame et al. (2021) determined that ASU 2011–08 was being applied as intended by the FASB with findings that suggested that, on average, executive management did not opportunistically use their discretion in applying the qualitative assessment. The limited research studies on ASU 2011–08 focused on specific adoption of the accounting guidance and the subsequent recognition of impairment expense while this study focused on all acquiring companies during the adoption period. As acknowledged by Adame et al. (2021) and Black et al. (2021), the acquiring companies were not consistently forthcoming in their disclosure of the accounting guidance adoption.

### *The Problem*

The general problem to be addressed was the lack of faithful representation of goodwill under the current accounting standards resulting in the reduced decision usefulness of the financial statements. The accounting guidance surrounding the initial recognition and subsequent accounting for goodwill has changed over the past several decades to address comparability, cost and complexity, and faithful representation concerns. The research study covered the acquisition completion time period from January 1, 2012 through December 31, 2018. The time period studied was during the period when SFAS 142 was amended by ASU 2011–08, which had an effective adoption date for fiscal years beginning after December 15, 2011 (FASB, 2011). The next amendment to SFAS 142 and ASU 2011–08, which was applicable to publicly traded companies, was ASU 2017–04, which had an effective adoption date of December 15, 2020, and

eliminated Step 2 of the quantitative assessment while maintaining the qualitative assessment (Allen & Baez, 2020).

The objective of this study was to ascertain the effectiveness of including a qualitative process, allowed by the adoption of ASU 2011–08, in the evaluation of goodwill on a company's balance sheet by studying two previously determined impairment indicators. The results of findings were mixed. An acquiring company's use of their own common stock as full or partial consideration remained an indicator of impairment expense with a small to medium positive relationship. However, acquiring companies using their own common stock as consideration over the past 2 decades has significantly declined as supported by these research findings.

The increase in the percentage of the purchase price recognized as goodwill had a smaller than typical positive relationship with the subsequent recognition of impairment expense. This finding, along with supporting literature, suggests that this would no longer be a strong goodwill impairment indicator. Although ASU 2011–08 has been found in previous research studies to reduce the cost and complexity of the subsequent accounting for goodwill, the findings suggest that faithful representation has not improved and, in fact, may have declined. Core goodwill only does not appear to be sufficiently capture companies' balance sheets.

ASU 2011–08 did expand the events and circumstances that would trigger a more detailed evaluation of goodwill because they may strongly indicate a deterioration in financial performance (FASB, 2011). Companies should evaluate goodwill for potential impairment when there is an event that may cause the fair value of a reporting unit to be less than the book value. In evaluating the economic value of goodwill for potential impairment, the applicable reporting unit's performance decline is the key since this would have a direct impact on the fair valuation

(Yehuda et al. 2019). Economic downturns oftentimes prompt the impairment of goodwill (Allen & Baez, 2020).

The review period of this research study was through the year ended December 31, 2021, which included the time period of the COVID-19 pandemic and the United States government's response to it. Of the 384 acquiring companies in the sample, 126 acquiring companies recognized impairment expense. Of those 126 acquiring companies, 48, or 38.09%, recognized impairment expense in fiscal year 2020, which was the height of the COVID-19 pandemic. This indicates that a significant event or circumstance that would result in a substantive decline in financial performance would prompt a company to move from Step 0 to Step 1 of quantitative testing.

***Summary of the Findings***

Based on the Descriptive Statistics report, the researcher confirmed the data were entered correctly and determined the appropriate test to conduct for the two independent, ordinal variables and the two dependent variables, one of which is dichotomous and the other one is nominal. The researcher ran the statistical test, Cramer's V, to determine the existence and strength of the relationship between the independent and dependent variables. Based on the results of Cramer's V, the researcher was able to reject or accept the four null hypotheses.

H1o stated that there is no statistically significant relationship between the percentage of common stock used as consideration used to pay for an acquisition (IV) and the subsequent recognition of impairment expense (DV). The researcher found that there is a small to medium positive association between the percentage of consideration paid in the acquiring company's common stock and the subsequent impairment of goodwill. Therefore, the null hypothesis of no relationship is rejected.

H2o stated that there is no statistically significant relationship between the percentage of common stock used as consideration used to pay for an acquisition (IV) and the subsequent recognition of impairment expense within a certain time period (DV). The researcher found that there is a small to medium positive association between the percentage of consideration paid with the acquiring company's common stock and the subsequent recognition of impairment expense within a certain time period. The null hypothesis of no relationship is rejected.

H30 stated that there is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense (DV). The researcher found there is a smaller than typical positive relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense. The null hypothesis of no relationship is rejected.

H4o. There is no statistically significant relationship between the percentage of the purchase price allocated to goodwill (IV) and the subsequent recognition of impairment expense within a certain time period (DV). Due to the lack of statistical significance in the Cramer's V test, the researcher failed to reject the null hypothesis.

The results of Cramer's V provided the support to not only reject or fail to reject the null hypotheses but to respond to the four research questions. In public companies who completed acquisitions between 2012 and 2018, there is relationship between the percentage common stock used as consideration in an acquisition and the subsequent recognition of impairment expense. The results show that an acquiring company that pays for all or a portion of the target company's purchase price with their own common stock is more likely to recognize an impairment to goodwill.

In addition, there is a relationship between the percentage common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period for public companies who completed acquisitions between 2012 and 2018. There is a small to medium relationship between the percentage of common stock used as consideration in an acquisition and the subsequent recognition of impairment expense within a certain time period.

In contrast, there is smaller than typical relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense in public companies who completed acquisitions between 2012 and 2018. This research finding suggests that the higher the percentage of goodwill recognized as part of the purchase price does not indicate a highly likely future impairment of goodwill. There is a positive relationship, but it is small.

The fourth research question could not be answered sufficiently due to the results of the Cramer's V statistical test not being statistically significant. The researcher was unable to determine the strength of the relationship.

The research findings aligned with the theoretical framework in terms of the business practices, supporting theories, actors involved, and variables. The acquisition process begins with the negotiation process and ends with an agreed upon purchase price and contractual agreement between the acquiring and target companies. Consideration for the purchase price can be the acquiring company's common stock, cash on hand, cash obtained through debt financing, contingent consideration, or a mixture of two to four of the types mentioned. The purchase price and goodwill have a linear relationship; therefore, the purchase price is the driver behind

goodwill recognized. The negotiation process and final purchase price are the responsibility of upper management, which can be affected by the Agent theory and Upper Echelon Theory.

Once the acquisition has been completed, the acquiring company follows ASC 805 in posting the transaction, including the recognition of goodwill, to their general ledger. The subsequent accounting for goodwill involves the evaluation of the economic value of the long-term asset in accordance with SFAS 142 and its amendment, ASU 2011–08. The company signals their financial performance and decision-making abilities through the publicly filed Form 10–Ks and Form 10–Qs. This provides the financial statement users with information to make decisions.

The results of the findings were compared and contrasted with the literature concerning the subsequent accounting for goodwill. The majority of the literature confirmed the findings of this research study. Common stock used as consideration for acquisitions has been on the decline for decades but continues to be an impairment indicator. On the other hand, the average percentage of goodwill recognized has increased, but the recognition of impairment expense has not shown a correlating increase. The result of this study support previous research on the effects of SFAS 142. This research study is the first to test two goodwill impairment indicators under the amendment, ASU 2011–08, which introduced the qualitative and subjective assessment of the value of goodwill disclosed on the balance sheet. The limited research studies that involve ASU 2011–08 test the relationship between the overt adoption of the guidance with the subsequent recognition of impairment expense.

Finally, the problem statement that is addressed by this research study is the lack of faithful representation of goodwill under the current accounting standards resulting in the reduced decision usefulness of the financial statements. As noted above, this was tested using

two impairment indicators and their correlation to the subsequent recognition of goodwill impairment. The findings were mixed with the percentage of common stock continuing to have a positive relationship with the subsequent impairment of goodwill. However, the percentage of the purchase price recognized as goodwill exhibited a weak relationship with the subsequent impairment of goodwill. Although previous research studies have found that ASU 2011–08 does reduce the cost and complexity in the subsequent accounting for goodwill, this research finding suggests that the accounting guidance does not improve the faithful representation of goodwill on a company's balance sheet.

## Application to Professional Practice

In professional practice, the research study findings are applicable to the standard setting bodies of accounting in the United States and internationally, as well as to companies negotiating the purchase price and subsequently recognizing goodwill associated with an acquisition. Standard setting bodies, such as the FASB and IASB, are in the process of evaluating alternative methods for the subsequent accounting for goodwill and this research study supports further evaluation. Acquiring companies should be providing the most transparent information to financial statement users. This research study aids in navigating the negotiation process involving the agreed upon purchase price which directly impacts the recognition of core goodwill. The subsequent accounting for goodwill should focus on the faithful representation of core goodwill.

### *Improving General Business Practice*

General business practices by acquiring companies can be improved by implementing and strictly adhering to a stringent due diligence process in evaluating a potential target company. Subsequent to a completed acquisition, an acquiring company must also employ a

thorough process when assessing goodwill recognized and not ignoring signs of impairment. In both the negotiation phase and in the subsequent accounting for goodwill, management should not be able to circumvent the due diligence or regular evaluation of goodwill processes, respectively. The findings of this research study also indicate that acquiring companies should strong consider discontinuing the use of their own common stock as full or partial consideration for the purchase price of a target company.

### *Due Diligence by Acquiring Companies*

Since the amount of goodwill recognized on a company's balance sheet is a direct result of the negotiated and agreed upon purchase price, a strict and thorough due diligence process should be implemented. In this study, goodwill recognized as a percentage of the purchase price averaged 46.06% meaning almost half of the purchase of a target company was considered synergy creation. However, 32.8%, which is close to one-third of these sample companies recognized impairment expense. Although there was a smaller than typical association between the portion of the purchase price recognized as goodwill and the subsequent recognition of impairment expense, it does indicate that companies should strengthen their screening of potential target company acquisitions. This could help avoid pitfalls, such as overpayment, in negotiating a purchase price and being overly optimistic about the potential synergy creation of an acquisition. Management of publicly traded companies have a fiduciary responsibility to the owners of the company to make good business decisions and this begins with the selecting and evaluating a target company (Spiceland et al., 2019).

Not only should a thorough evaluation process occur prior to acquisition but on a regular basis after the completed transaction to ensure projected synergy creation is being accomplished. Since the qualitative assessment remains in place by U.S. GAAP with the passage of ASU 2017–

04, companies should implement more stringent internal evaluation processes to value goodwill on their balance sheets. Yehuda et al. (2019) suggested acquiring companies calculate the estimated economic profit or loss on an interim basis to better reflect the value of goodwill in their balance sheets. Additionally, reviewing the book-to-market value of the company and the operating cash flows from the reporting unit could be performed on an interim basis. Black et al. (2021) found that companies with a book-to-market value of more than one was more likely to recognize impairment expense. A book-to-market more than one indicates the book value exceeds the market value. The events and circumstances to be considered as part of a qualitative assessment include, but are not limited to, a decrease in cash flows or revenue compared to actual and/or forecasted results, testing for changes in reporting units, and a sustained decline in price per share (FASB, 2011). The examples that FASB provides as part of a qualitative assessment include quantitative methods that companies would be performing on a regular basis as part of managing performance. These examples by FASB could become part of an internal company policy as part of evaluating goodwill.

Since goodwill is based on future economic value, monitoring the actual operating cash flows from the applicable reporting unit would also provide an indication if economic value is being realized. As Johnston et al. (2018) noted, impairment of goodwill is based, in part, on cash flow projections and projections can be subjective. If cash flow projections are part of the analysis, then examining actual operating cash flow results should also be included. Operating cash flow represents the cash provided by the business activities of a company versus cash provided by investing or financing activities (Wild & Shaw, 2018). All three evaluation methods could be used as part of the qualitative evaluation of goodwill.

### *Focus on the Financial Statement Users*

As noted above, the average percentage of the purchase price recognized as goodwill for acquiring companies in this research study was close to 50.0%. In performing analysis on a company, financial statement users employ a variety of solvency and profitability ratios that include long-term assets (Wild & Shaw, 2018). Solvency ratios include the debt ratio of total liabilities as a percentage of total assets and the equity ratio of total equity as a percentage of total assets. Both ratios are used to decipher if creditors or owners have the majority ownership of a company's total assets (Wild & Shaw, 2018). Return on assets is a profitability ratio that shows if a company's total assets have economic value by producing profit. These results would be skewed if goodwill is not disclosed at an accurately estimated value and result in misjudgments by final statement users.

Financial statement users need to be able to assess whether this asset will produce a significant increase in the financial performance of the company. Armed with the knowledge that impairment indicators exist and that a qualitative assessment may delay the timing in the recognition of goodwill impairment, financial statement users are better informed to make decisions. If financial statement users begin to exclude goodwill from a meaningful performance analysis of a company's balance sheet, then it can be assumed that faithful representation is not being accomplished. In income statement analysis, financial statement users typically consider impairment expense part of temporary earnings, meaning it would not be included in earnings projections (Spiceland et al., 2019). However, impairment expense recognition that does not correspond to performance deterioration and/or an economic downturn potentially signals that management is not making sound financial decisions for the company.

### *Common Stock Used as Consideration by Acquiring Companies*

In conjunction with a stringent due diligent process and based on the findings of this research study, acquiring companies should strongly consider discontinuing the use of their own common stock as consideration. Previous research studies have concluded that companies tend to use their own common stock as consideration when it is overvalued (Li et al., 2011; Olante, 2013; Welch et al., 2020). Overvalued common stock used as consideration toward the purchase price results in less cash-on-hand and debt financing being used. Companies can conserve their cash-on-hand and/or avoid a debt financing agreement with contractual interest to be paid. However, overvalued stock equates to an overvalued company. Once the market corrects, the value of the company decreases which could lead to a deterioration in performance and a subsequent recognition of impairment expense. A company's confidence about their financial performance increasing upon the acquisition of the target company should be substantiated and not, as noted above, be based on optimism.

### *Potential Application Strategies*

The potential application strategies are aimed toward the accounting standard setting bodies, specifically the FASB and IASB. Both the FASB and IASB have been in the process of evaluating alternative methods for the subsequent accounting for goodwill. While the FASB's efforts are focused on revisiting amortization of goodwill, the IASB's concentration is on improving impairment-only evaluation process (Linsmeier & Wheeler, 2021; Wheeler, 2020). This research study supports the further review of alternative methods as well as offering additional insight into the impact of a qualitative assessment.

Since ASC 805 and SFAS 142 were passed and implemented, financial statement users and the accounting profession have expressed concerns with the initial and subsequent

accounting for goodwill (Burger & Wen, 2021). As explained, the two main concerns have consisted of the cost and complexity of the two-step quantitative goodwill evaluation test and the faithful representation of goodwill. This prompted the FASB to amend SFAS 142, which tests for the subsequent impairment of goodwill, with ASU 2011–08, ASU 2014–02, and ASU 2017–04. The amendments focus primarily on reducing the cost and complexity of the two-step quantitative test and, to a lesser extent, the faithful representation of goodwill. The passage of ASU 2011–08 relies on management's discretion in determining the faithful representation of goodwill and not an objective verification, and ASU 2017–04 removed the second step of the quantitative assessment. The faithful representation issue is, admittedly, more difficult to address due to the lack of objectivity in the determination of the purchase price, the future projection of earnings, and synergy creation that impacts the fair valuation of goodwill.

**Alternative Methods – Amortize and Impair**. Due to these continuing issues, both the FASB and IASB have been working on alternative methods for the subsequent accounting for goodwill, which the results of this study support. To advance the goal of financial statement transparency, faithful representation of goodwill should be the emphasis of both the FASB and the IASB. However, as succinctly stated by the IASB's Accounting Standards for Advisory Forum members while cautioning changes to existing accounting, "there is no ideal approach" (Linsmeier & Wheeler, 2021, p. 111). In terms of reexploring the amortization and impairment approach, suggestions have included changing the amortization period. Proposals for revised amortization periods have included, but are not limited to, expected period of increased income/operating cash flow, an industry-specific period, and expected period of synergy creation (Linsmeier & Wheeler, 2021).

Amortization would potentially discourage overpayment by acquiring companies if the result would be a larger periodic amortization expense reducing their net income (Nugent, 2016; Wheeler, 2020). Li and Sloan (2017) recommended that the faithful representation of goodwill would be enhanced with periodic amortization in conjunction with interim impairment testing. The removal of amortization with the passage of ASC 805 resulted in a significant growth in goodwill recognized as a percentage of the purchase price (Black et al., 2021; Linsmeier & Wheeler, 2021). The research study results show an average of 46.06% of the purchase price recognized as goodwill with close to one-third subsequently recognized as impairment expense and a smaller than typical positive relationship between the two. The amortization expense would match the revenues that they help produce (Spiceland et al., 2019). In addition, a set amortization period would help reduce some of the financial statement users' reliance on management's estimates and integrity in properly assessing and identifying goodwill impairments.

**Alternative Methods – Impairment Only**. Enhancing the impairment-only approach has been the main focus of the IASB, while continuing to reduce the cost and complexity of the evaluation process and ensuring faithful representation of goodwill. The IASB introduced the PAH approach, which focuses on the cash generating unit's pre-acquisition recoverable value compared to its book value (Linsmeier & Wheeler, 2021). This difference is then added to the cash generating unit's book value during Step 1 of the impairment test and compared to the unit's recoverable value. Goodwill would be impaired if the recoverable value was less than the sum of the PAH and book value. The PAH approach was found by Wheeler (2020) to offer better explanatory power of equity prices compared to the other methods. In addition, the PAH approach shows the recognition of impairment expense in a timelier manner.

### *Summary of Application to Professional Practice*

The previous efforts by FASB to improve the subsequent accounting for goodwill have focused on the reduction of the cost and complexity of performing the two-step quantitative process. Based on prior research and comments from the accounting profession, it appears this effort has been successful. However, the issue of improving faithful representation of goodwill continues to plague the standard setters and financial statement users. The results of this research study provide relevant information for business practices such as implementing a stringent due diligence process and a subsequent process to evaluate goodwill. The reduction of common stock used as partial or full consideration should continue.

Furthermore, the findings from this research study support those alternative methods should be considered to ensure that goodwill is stated correctly in the financial statements and that internal evaluation processes within companies should be strengthened. The consideration of all new approaches to the subsequent accounting for goodwill should aim to reduce overpayments in the acquisition or, at least, adjust overpayments immediately as part of acquisition accounting

## Recommendations for Further Study

This study could be further advanced by testing the faithful representation of goodwill during the time period affected by ASU 2017–04. With the passage of ASU 2017–04, which further amended SFAS 142, the qualitative assessment remained but Step 2 of the quantitative evaluation was eliminated. ASU 2017–04 further converged U.S. GAAP and IFRS with a one-step quantitative test (Black et al., 2021). As noted above, the effective date for publicly traded companies is periods beginning after December 15, 2019. Step 1 of the quantitative test is the comparison of the book value and estimated fair value of the reporting unit (Guler, 2018;

Linsmeier & Wheeler, 2021). If the book value exceeds the estimated fair value, then the company performs Step 2 of the quantitative test (FASB, n.d.). Step 2 determines the amount of impairment expense to recognize and involves a comparison of the book value and implied fair value of the reporting unit. The implied fair value is basically the difference between the estimated fair value of the reporting unit with and without goodwill. The without goodwill value includes unrecognized intangible assets. Step 2 increases the complexity of the quantitative process which is why FASB decided to alleviate companies with this burden.

However, removal of Step 2 has the potential to increase impairment expense since the company is only comparing the book value versus an estimated fair value. The recognized impairment expense would be the difference if the book value was less than the estimated fair value. There would not be an additional step calculating the amount to impair. A company could fail Step 1, but still not recognize impairment expense based on the results of Step 2. In contrast, reporting units with a zero or negative book value are no longer required to perform a qualitative assessment prior to performing Step 2 (Lucas & Winters, 2017). A company does have to disclose goodwill that is still recognized on the balance sheet but associated with a reporting unit that has a zero or negative book value.

A second recommendation for further study would be to distinguish between serial and non-serial acquirers. During the data collection phase of the research study, the researcher noted that it would have been beneficial to focus on a sample of non-serial acquirers. Non-serial acquirers, as defined by Wheeler (2020), are companies that only acquire one target company at a time and, therefore, goodwill relates to only that company. Serial acquirers tend to be larger companies who are typically required to use segment reporting. Individual segments within a company are eligible for financial statement disclosure if they produce both revenues and

expenses and if management makes operating decisions and allocates resources based on this segment (FASB, n.d.). Financial statement disclosure is determined based on meeting at least one of three quantitative thresholds, which include a revenue test, a profit or loss test, and an asset test. Goodwill is originally assigned and subsequently evaluated at the reporting unit level (Hoyle et al., 2020). The reporting unit level can be at the reportable segment level or one level below. Impairment testing is then performed at the reporting level, which may or may not need to be disclosed in the company's financial statements if the reporting level is one level below the reportable segment.

It is difficult as time passes to determine if part of impairment expense relates to a specific segment because companies tend to restructure over a period of time and even consolidate to one reportable segment. There were some serial acquirers who acquired target companies in either 2012 or 2013 and they renamed and restructured segments at least once or twice from the acquisition completion date through December 31, 2021. In addition, serial acquirers would also spread the goodwill among multiple segments. In these cases, the researcher had to track the specific goodwill related to one acquisition through the multiple restructurings and, if an impairment expense was recognized, it could be cumbersome to decipher if the impairment expense related to the target company in the sample selection.

**Reflections**

The research study afforded the researcher an opportunity to delve into an accounting topic that was not only interesting, but one that continues to be debated among standard setters, the accounting profession, and financial statement users. Interest in the topic was inspired by the researcher's previous experience with acquisitions and the recognition of goodwill in a post-

SFAS 142 time period. As a Christian, the researcher was able to further God's providence by contributing to a relevant topic in the accounting field.

**Personal & Professional Growth**

Most of the the researcher's prior experience was in various accounting positions within companies that were incorporated and publicly traded in the United States. The researcher currently teaches accounting in a higher education institution. The topic of the faithful representation of goodwill was interesting to the researcher, and the research study enabled the researcher to further study the previous and current debates that have surrounded the accounting guidance applicable to goodwill. Interest in the topic was due to the researcher's previous experience with acquisitions and the recognition of goodwill in a post-SFAS 142 time period. Due to the intricacies of financing and ownership associated with the business combinations that the researcher was involved as an accountant in industry, the risk assessment was fairly high so the adoption of ASU 2011–08 was not an option.

Reading Olante's (2013) heavily influenced the researcher's selection of a research topic. As noted previously, the study found that the risk of impairment expense is significantly higher when the recognition of goodwill is 67% or more of the target company's purchase price and the impairment expense is usually taken within two to three years of the acquisition (Olante, 2013). These results were applicable and relatable with two target company acquisitions by a previous company where the researcher was employed as an accountant. In at least one of the situations, the goodwill recognized was exactly 67% and a full impairment of both goodwill and other intangible assets was taken within 3 years.

The negotiation and evaluation process by the acquiring company along with the current accounting guidance is extremely important in the faithful representation of goodwill.

Understanding and observing each phase of the process and then conducting a thorough research study on the topic provided the researcher with more insight into best practices and the behavioral theories underlying the acquisition decisions made by management. The researcher, supported by the results of this study, does recommend that alternative accounting for goodwill be used to make sure goodwill is faithfully represented in a company's balance sheet.

### *Biblical Perspective*

Accounting for goodwill exhibits the accounting profession's commitment to transparency and absence of complacency. The main objective of financial statements is to provide the best information to financial statement users for those users to make decisions (Schroeder et al., 2014). Therefore, the goal of subsequent accounting for goodwill is to make sure its value is accurately reflected in the balance sheet of acquiring companies. Due to the subjectiveness of the negotiation process, the purchase price can potentially be significantly higher than the fair value of net assets, which in turn, increases the goodwill that is recognized in the balance sheet. Although the intention is for goodwill recognized to be core goodwill, there may be extraneous amounts or overpayments included in the goodwill which would overstate the balance.

It is important that only core goodwill be stated on the balance sheet and overpayments recognized as impairment expense at the earliest opportunity. In some cases, the company's management may truly believe that core goodwill has been recognized because synergy will be created (Caplan et al., 2018). The issue is the substantiation of this assessment because the projection of the company's future performance is another subjective process. Although the accounting profession and standard setters wrestle with this subjective process and the effects on

the faithful representation of goodwill, it is important to note that they are still wrestling with it due to their commitment to improvement.

As the accounting profession continually strives for improvement, Joseph continually strived to perform at his best in every job he was given including as a prisoner. After being sold by his brothers into slavery, Joseph excelled in Potiphar's house by advancing to a management position (New International Version, 1981/1996, Genesis 37:28, 39:4-5). Genesis 39:2 says, "the Lord was with Joseph, so he succeeded in everything he did as he served in the home of his Egyptian master" (New International Version, 1981/1996). After being falsely accused by Potiphar's wife, Joseph was sent to prison where he continued to serve the Lord faithfully and excelled in his work as a prisoner. Joseph is eventually made ruler of Egypt due his accurate interpretation of Pharoah's dreams and his suggestions for protecting Egypt from famine. Throughout his personal and professional life, Joseph served God first and other second.

As a Christian and an accounting professional, the researcher realizes that following Joseph's example of serving the Lord first and others second is the fulfillment of God's providence. In I Thessalonians 5:14-15, Christians are given the following edict that applies to both the personal and professional:

> Brothers and sisters, we urge you to warn those who are lazy. Encourage those who are timid. Take tender care of those who are weak. Be patient with everyone. See that no one pays back evil for evil, but always try to do good to each other and to all people. (New International Version, 1981/1996)

As an accountant using the skillset given by the Lord, researching the effects of accounting guidance, such as ASU 2011–08, is important in advancing the goal of the accounting profession of transparency to users of financial statements. The research supplements previous research

surrounding the subsequent accounting for goodwill and adds to the limited research covering the qualitative assessment enacted by ASU 2011–08.

The findings suggest that the qualitative assessment potentially results in the recognition of impairment expense not being timely and supports the serious consideration of alternative methods. Joseph was tempted in multiple points of his life to follow man or his own desires and not to follow the Lord. This would have been detrimental to Joseph and others. In the same way, management has the same temptation to follow the desires of their own heart and self-interest in the acquisition of a target company and the subsequent accounting for goodwill. It is difficult to be objective when management may be enriched personally. Man is prone to self-desire but must give up self to follow the Lord (New International Version, 1981/1996, Matthew 16:24). In addition, as I Thessalonians 5:14-15 notes, our command it to serve others.

***Summary of Reflections***

As a Christian, the researcher has an edict to serve God and others by using the gifts and skillsets that God has bestowed. As an accountant, the researcher added to the previous research on the subsequent accounting for goodwill by testing the effects of passage and adoption of ASU 2011–08, which introduced a qualitative assessment to the evaluation of goodwill. The researcher's interest in the subject was due to professional experience in acquiring a target company, recognizing goodwill, and fully impairing that goodwill within three years. This intimate knowledge of the process combined with conducting the research study convinces the researcher that revisions should be made to the goodwill accounting process. This would provide financial statement users with better and more useful information.

**Summary of Section 3**

This research study attempted to determine if the faithful representation of goodwill, or core goodwill, improved with the passage and implementation of ASU 2011–08 by testing the relationship between the two impairment indicators and the subsequent recognition of impairment expense. After conducting the research study, the researcher presented and interpreted the findings. The researcher confirmed the data were correctly entered and determined the appropriate statistical test to run based on the Descriptive Statistics report results. The appropriate statistical test to verify the existence and strength of relationship between the independent and dependent variables was the Cramer's V.

After running the Cramer's V statistical test, the researcher was able to reject or fail to reject the four null hypotheses. For H1o, the researcher found that there was a small to medium positive association between the percentage of consideration paid in the acquiring company's common stock and the subsequent impairment of goodwill. Therefore, the null hypothesis of no relationship was rejected. For H2o, the researcher found that there was a small to medium positive association between the percentage of consideration paid with the acquiring company's common stock and the subsequent recognition of impairment expense within a certain time period. The null hypothesis of no relationship was rejected. For H3o, the researcher found there is a smaller than typical positive relationship between the percentage of the purchase price allocated to goodwill and the subsequent recognition of impairment expense. The null hypothesis of no relationship was rejected. Finally, for H4o, there was a lack of statistical significance in the Cramer's V test. Therefore, the researcher failed to reject the null hypothesis of no statistically significant relationship between the percentage of the purchase price allocated to goodwill and the time period of the subsequent recognition of impairment expense.

The Cramer's V statistical test also provided responses to the four research questions that corresponded to the four hypotheses on existence and strength of relationships between dependent and independent variables. The research findings were discussed in relation to the theoretical framework, which included business practices, supporting theories, actors involved, and variables. In addition, the research findings were compared with literature surrounding the subsequent accounting for goodwill. Finally, the researcher addressed the problem statement and concluded based on the research study findings that ASU 2011–08 does not improve the faithful representation of goodwill on a company's balance sheet. As the findings suggest, the recognition of impairment expense has decreased without a corresponding decrease in recognition of goodwill on an acquiring company's balance sheet.

The research findings were then applied to professional practice including improving general business practice and potential application strategies. For the improvement of general business practice, the researcher focused on the acquiring companies and financial statement users. Acquiring companies should implement and strictly adhere to a rigorous due diligence process when considering the purchase of a target company. Once the company completes the acquisition, they must employ a thorough evaluation process in the subsequent accounting for goodwill. The FASB (2011) provides examples of events and circumstances to consider when performing a qualitative assessment. Certain events and circumstances such as book value compared to market value and the decline in actual operating cash flows or income compared to projections can be standardized as part of a company's interim valuations to better perform and substantiate the qualitative assessment.

As part of improving business practices, the researcher explained the significance of the faithful representation of goodwill to financial statement users. In making decisions about a

company, financial statement users typically calculate solvency and profitability ratios. Goodwill is included within total assets on a company's balance sheet and would directly impact these ratios. The results of this study can provide better information to financial statement users on core goodwill and the effects of certain impairment indicators on the subsequent accounting for goodwill to make a determination of inclusion in performance analysis. The findings of this study also support the continuing decline of common stock used as full or partial consideration.

The potential application strategies informed by this research study support the alternative methods currently being evaluated by standard setters to either maintain or further reduce cost and complexity while ensuring that goodwill is stated correctly in the financial statements. Alternative methods being contemplated include amortize and impairment with the amortization period based on relevant measures to the acquiring company versus a general rule for all companies. The IASB has offered the PAH method which focuses on a calculation aimed to value core goodwill. The consideration of all new approaches to the subsequent accounting for goodwill should aim to reduce overpayments in the acquisition or, at least, adjust overpayments immediately as part of acquisition accounting.

There are two recommendations for further study of the decision usefulness of goodwill. The first would be advance this research study using the current accounting guidance, ASU 2017–04. This guidance was effective for publicly traded companies with fiscal periods beginning after December 15, 2019. It eliminates Step 2 of the quantitative test, while retaining the qualitative assessment. The second recommendation would be to distinguish between serial and non-serial acquirers. Serial acquirers tend to be larger companies who are typically required to use segment reporting. Goodwill is posted and evaluated at the reporting unit level, which may

be the segment or may be within the segment. As time passes, companies will restructure, and it is difficult to track the goodwill and its potential subsequent impairment expense.

The final part of Section 3 is reflecting on the study as a Christian and as a professional within the discipline of accounting. God's purpose for Christians is to serve Him and to serve others as part of His providence. This research study serves God and others, such as standard setters, financial statement users, and those in the academic community, by using the gifts and skillsets as an accountant to further previous research performed on subsequent accounting for goodwill. This research study is unique from other studies by testing the effects of ASU 2011–08 on two impairment indicators to see if a positive relationship continues to exist compared to the pre-qualitative assessment period of SFAS 142. It expanded the researcher's knowledge of the initial and subsequent accounting for goodwill and reinforced the accountant's viewpoint that financial statement users should always be provided with better and more useful information.

**Summary and Study Conclusions**

Faithful representation of a company's financial statements are important for financial statement users to make decisions. The initial recognition and subsequent accounting of goodwill affects the balance sheet and potentially the income statement if impairment of goodwill is recognized. The accounting guidance surrounding the subsequent accounting for goodwill has been revised over the past two decades with standard setters continuing to evaluate better methods to reduce cost and complexity and improve comparability and faithful representation.

This research study attempted to show the effectiveness of ASU 2011–08 with regards to the faithful representation of goodwill. ASU 2011–08 established a qualitative, subjective assessment that companies could use to evaluate goodwill prior to performing the two-step quantitative impairment test implemented by SFAS 142. Due to the subjective nature,

management could be tempted to delay an impairment to goodwill since the result is a negative impact to the income statement. This research study tested the relationship between two overpayment or impairment indicators, common stock used as consideration in a purchase and the percentage of the purchase price recognized as goodwill, and the subsequent recognition of impairment expense with a certain time period to determine if ASU 2011–08 improved the faithful representation of goodwill.

The findings of the study had mixed results on the decision usefulness of goodwill in financial statement reporting. Common stock used as consideration for the purchase of a target company had a small to medium positive relationship with both the recognition of impairment expense and the time period in which impairment expense was recognized. These findings suggested that ASU 2011–08 improved the faithful representation of goodwill. However, the percentage of the purchase price recognized as goodwill had a smaller than typical relationship with the recognition of impairment expense. This finding suggests that ASU 2011–08 has not improved the faithful representation of goodwill. In addition, the percentage of the purchase price recognized as goodwill and the time period in which impairment expense was recognized exhibited no statistically significant relationship further suggesting that ASU 2011–08 has not improved the faithful representation of goodwill.

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# Appendix A: Tables of Statistical Tests

**Descriptive Statistics**

| | N Statistic | Range Statistic | Minimum Statistic | Maximum Statistic | Mean Statistic | Std. Deviation Statistic | Variance Statistic | Skewness Statistic | Skewness Std. Error |
|---|---|---|---|---|---|---|---|---|---|
| PAIDINSTOCK2 | 384 | 3 | 1 | 4 | 1.48 | .983 | .966 | 1.843 | .125 |
| PAID IN STOCK | 384 | 100% | 0% | 100% | 16.35% | 31.315% | 980.622 | 1.810 | .125 |
| GOODRECOG3 | 384 | 2 | 1 | 3 | 1.66 | .764 | .584 | .653 | .125 |
| IMPAIREXP2 | 384 | 1 | 0 | 1 | .33 | .470 | .221 | .735 | .125 |
| IMPAIRMENT EXP | 384 | 5 | 0 | 5 | .92 | 1.567 | 2.456 | 1.550 | .125 |
| ADOPT ASU201108 | 384 | 1 | 0 | 1 | .78 | .417 | .174 | -1.329 | .125 |
| GOODWILL RECOG | 384 | 99.91% | 0.09% | 100.00% | 46.0556% | 21.20798% | 449.779 | .180 | .125 |
| Valid N (listwise) | 384 | | | | | | | | |

**Table A.1**

**IMPAIREXP2**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | NO IMPAIRMENT | 258 | 67.2 | 67.2 | 67.2 |
| | IMPAIRMENT RECOGNIZED | 126 | 32.8 | 32.8 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

**Table A.2**

**IMPAIRMENT EXP**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | NO IMPAIRMENT | 258 | 67.2 | 67.2 | 67.2 |
| | IMPAIRMENT IN YEAR ONE | 35 | 9.1 | 9.1 | 76.3 |
| | IMPAIRMENT IN YEAR TWO | 24 | 6.3 | 6.3 | 82.6 |
| | IMPAIRMENT IN YEAR THREE | 22 | 5.7 | 5.7 | 88.3 |
| | IMPAIRMENT IN YEAR FOUR | 21 | 5.5 | 5.5 | 93.8 |
| | IMPAIRMENT IN YEAR FIVE OR MORE | 24 | 6.3 | 6.3 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

**Table A.3**

**Impairment Year**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 0 | 258 | 67.2 | 67.2 | 67.2 |
| | 2013 | 3 | .8 | .8 | 68.0 |
| | 2014 | 3 | .8 | .8 | 68.8 |
| | 2015 | 7 | 1.8 | 1.8 | 70.6 |
| | 2016 | 14 | 3.6 | 3.6 | 74.2 |
| | 2017 | 14 | 3.6 | 3.6 | 77.9 |
| | 2018 | 11 | 2.9 | 2.9 | 80.7 |
| | 2019 | 19 | 4.9 | 4.9 | 85.7 |
| | 2020 | 48 | 12.5 | 12.5 | 98.2 |
| | 2021 | 6 | 1.6 | 1.6 | 99.7 |
| | 2022 | 1 | .3 | .3 | 100.0 |
| | Total | 384 | 100.0 | 100.0 | |

**Table A.4**

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIREXP2 | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table A.5**

**PAIDINSTOCK2 * IMPAIREXP2 Crosstabulation**

| | | | IMPAIREXP2 | | |
|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT RECOGNIZED | Total |
| PAIDINSTOCK2 | 1 | Count | 215 | 83 | 298 |
| | | Expected Count | 200.2 | 97.8 | 298.0 |
| | | % within IMPAIREXP2 | 83.3% | 65.9% | 77.6% |
| | 2 | Count | 13 | 14 | 27 |
| | | Expected Count | 18.1 | 8.9 | 27.0 |
| | | % within IMPAIREXP2 | 5.0% | 11.1% | 7.0% |
| | 3 | Count | 14 | 6 | 20 |
| | | Expected Count | 13.4 | 6.6 | 20.0 |
| | | % within IMPAIREXP2 | 5.4% | 4.8% | 5.2% |
| | 4 | Count | 16 | 23 | 39 |
| | | Expected Count | 26.2 | 12.8 | 39.0 |
| | | % within IMPAIREXP2 | 6.2% | 18.3% | 10.2% |
| Total | | Count | 258 | 126 | 384 |
| | | Expected Count | 258.0 | 126.0 | 384.0 |
| | | % within IMPAIREXP2 | 100.0% | 100.0% | 100.0% |

**Table A.6**

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | .228 | <.001 |
| | Cramer's V | .228 | <.001 |
| N of Valid Cases | | 384 | |

**Table A.7**

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIRMENT EXP | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table A.8**

**PAIDINSTOCK2 * IMPAIRMENT EXP Crosstabulation**

| | | | IMPAIRMENT EXP | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT IN YEAR ONE | IMPAIRMENT IN YEAR TWO | IMPAIRMENT IN YEAR THREE | IMPAIRMENT IN YEAR FOUR | IMPAIRMENT IN YEAR FIVE OR MORE | Total |
| PAIDINSTOCK2 | 1 | Count | 215 | 18 | 14 | 9 | 21 | 21 | 298 |
| | | Expected Count | 200.2 | 27.2 | 18.6 | 17.1 | 16.3 | 18.6 | 298.0 |
| | | % within IMPAIRMENT EXP | 83.3% | 51.4% | 58.3% | 40.9% | 100.0% | 87.5% | 77.6% |
| | 2 | Count | 13 | 4 | 3 | 5 | 0 | 2 | 27 |
| | | Expected Count | 18.1 | 2.5 | 1.7 | 1.5 | 1.5 | 1.7 | 27.0 |
| | | % within IMPAIRMENT EXP | 5.0% | 11.4% | 12.5% | 22.7% | 0.0% | 8.3% | 7.0% |
| | 3 | Count | 14 | 3 | 1 | 2 | 0 | 0 | 20 |
| | | Expected Count | 13.4 | 1.8 | 1.3 | 1.1 | 1.1 | 1.3 | 20.0 |
| | | % within IMPAIRMENT EXP | 5.4% | 8.6% | 4.2% | 9.1% | 0.0% | 0.0% | 5.2% |
| | 4 | Count | 16 | 10 | 6 | 6 | 0 | 1 | 39 |
| | | Expected Count | 26.2 | 3.6 | 2.4 | 2.2 | 2.1 | 2.4 | 39.0 |
| | | % within IMPAIRMENT EXP | 6.2% | 28.6% | 25.0% | 27.3% | 0.0% | 4.2% | 10.2% |
| Total | | Count | 258 | 35 | 24 | 22 | 21 | 24 | 384 |
| | | Expected Count | 258.0 | 35.0 | 24.0 | 22.0 | 21.0 | 24.0 | 384.0 |
| | | % within IMPAIRMENT EXP | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

**Table A.9**

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | .387 | <.001 |
| | Cramer's V | .223 | <.001 |
| N of Valid Cases | | 384 | |

**Table A.10**

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| PAIDINSTOCK2 * IMPAIREXPRECOG | 126 | 32.8% | 258 | 67.2% | 384 | 100.0% |

**Table A.11**

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | .473 | .005 |
| | Cramer's V | .273 | .005 |
| N of Valid Cases | | 126 | |

**Table A.12**

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| GOODRECOG3 * IMPAIREXP2 | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table A.13**

**GOODRECOG3 * IMPAIREXP2 Crosstabulation**

| | | | IMPAIREXP2 | | |
|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT RECOGNIZED | Total |
| GOODRECOG3 | 1 | Count | 125 | 73 | 198 |
| | | Expected Count | 133.0 | 65.0 | 198.0 |
| | | % within IMPAIREXP2 | 48.4% | 57.9% | 51.6% |
| | 2 | Count | 91 | 26 | 117 |
| | | Expected Count | 78.6 | 38.4 | 117.0 |
| | | % within IMPAIREXP2 | 35.3% | 20.6% | 30.5% |
| | 3 | Count | 42 | 27 | 69 |
| | | Expected Count | 46.4 | 22.6 | 69.0 |
| | | % within IMPAIREXP2 | 16.3% | 21.4% | 18.0% |
| Total | | Count | 258 | 126 | 384 |
| | | Expected Count | 258.0 | 126.0 | 384.0 |
| | | % within IMPAIREXP2 | 100.0% | 100.0% | 100.0% |

**Table A.14**

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | .150 | .013 |
| | Cramer's V | .150 | .013 |
| N of Valid Cases | | 384 | |

**Table A.15**

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| GOODRECOG3 * IMPAIRMENT EXP | 384 | 100.0% | 0 | 0.0% | 384 | 100.0% |

**Table A.16**

**GOODRECOG3 * IMPAIRMENT EXP Crosstabulation**

| | | | IMPAIRMENT EXP | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | NO IMPAIRMENT | IMPAIRMENT IN YEAR ONE | IMPAIRMENT IN YEAR TWO | IMPAIRMENT IN YEAR THREE | IMPAIRMENT IN YEAR FOUR | IMPAIRMENT IN YEAR FIVE OR MORE | Total |
| GOODRECOG3 | 1 | Count | 125 | 22 | 14 | 14 | 9 | 14 | 198 |
| | | Expected Count | 133.0 | 18.0 | 12.4 | 11.3 | 10.8 | 12.4 | 198.0 |
| | | % within IMPAIRMENT EXP | 48.4% | 62.9% | 58.3% | 63.6% | 42.9% | 58.3% | 51.6% |
| | 2 | Count | 91 | 7 | 3 | 5 | 5 | 6 | 117 |
| | | Expected Count | 78.6 | 10.7 | 7.3 | 6.7 | 6.4 | 7.3 | 117.0 |
| | | % within IMPAIRMENT EXP | 35.3% | 20.0% | 12.5% | 22.7% | 23.8% | 25.0% | 30.5% |
| | 3 | Count | 42 | 6 | 7 | 3 | 7 | 4 | 69 |
| | | Expected Count | 46.4 | 6.3 | 4.3 | 4.0 | 3.8 | 4.3 | 69.0 |
| | | % within IMPAIRMENT EXP | 16.3% | 17.1% | 29.2% | 13.6% | 33.3% | 16.7% | 18.0% |
| Total | | Count | 258 | 35 | 24 | 22 | 21 | 24 | 384 |
| | | Expected Count | 258.0 | 35.0 | 24.0 | 22.0 | 21.0 | 24.0 | 384.0 |
| | | % within IMPAIRMENT EXP | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

**Table A.17**

**Symmetric Measures**

| | | Value | Approximate Significance |
|---|---|---|---|
| Nominal by Nominal | Phi | .195 | .149 |
| | Cramer's V | .138 | .149 |
| N of Valid Cases | | 384 | |

**Table A.18**

**Appendix B: Institutional Review Board Approval**

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

August 12, 2022

Betty Lafon
Jamie Stowe

Re: IRB Application - IRB-FY22-23-168 Decision Usefulness of Goodwill

Dear Betty Lafon and Jamie Stowe,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research for the following reason: It will not involve the collection of identifiable, private information from or about living individuals (45 CFR 46.102).

Please note that this decision only applies to your current application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

**G. Michele Baker, MA, CIP**
*Administrative Chair of Institutional Research*
**Research Ethics Office**