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The Impact of Financial Statements For SEC Spin Off Entities On The Market's Ability To Anticipate Future Earnings

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The Impact of Financial Statements for Spin-Off Entities on the Market's Ability to

Anticipate Future Earnings

By

Nancy Stempin

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

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ACCEPTANCE

This dissertation was prepared under the direction of the Nancy Stempin Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Executive Doctorate in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ix

LIST OF ABBREVIATIONS

Accounting standards changes

EBIT – Earnings Before Interest and Taxes

FASB – Financial Accounting Standards Board

FERC – Forward Earnings Response Coefficient

GAAP – Generally Accepted Accounting Principles

IFRS – International Financial Reporting Standards

IPO – Initial Public Offering

NASDAQ – National Association of Security Dealers Automated Quotations

NYSE – New York Stock Exchange

Predictability of financial statements

ROA – Return on Assets

ROE – Return on Earnings

SEC – Securities and Exchange Commission

SFAC – Statement of Financial Accounting Concept

Spin-off

DEFINITION OF SPECIFIC TERMS

Accounting standards changes: The accounting standards are the accounting rules of the country in which a business operates. Each country may choose the accounting standard approach and any adjustments. The two typical accounting standards are GAAP and IFRS. Additionally, if the shares of the company are publically held there may be additional rules provided by the regulator of securities in that country and rules of the exchange. A change to any of the rules by any of those standard setting bodies is a change.

Predictability of financial statements: "Predictive Value, as used in the Conceptual Framework, is not the same as predictability and persistence as used in statistics. Information has predictive value if it can be used in making predictions about the eventual outcomes of past or current events. In contrast, statisticians use predictability to refer to the accuracy with which it is possible to foretell the next number in a series and persistence to refer to the tendency of a series of numbers to continue to change as it has changed in the past." (SFAC8)

Spin-off: Spin-off from an existing company occurs when a public company converts a part of its business into a separate public entity listed on an exchange. Typically, that part can function as a separate stand-alone business, with characteristics distinct from those of the parent company. In such a transaction, each existing investor in the parent company receives shares in the spin-off entity pro rata to its ownership in the parent (Cutler, 2013).

ABSTRACT

The Impact Of Financial Statements For Sec Spin-Off Entities On The Market's Ability
To Anticipate Future Earnings

By

Nancy Stempin

May 2016

Committee Chair: Conrad Ciccotello
Major Academic Unit: J. Mack Robinson College of Business

This study investigates the usefulness of spin-off historical and pro forma financial statements on the market's ability to predict the firm's future earnings. This study evaluates the spin-off historical and pro forma financial statements required for a Securities and Exchange Commission (SEC) regulation (Form 10-12(b). The study evaluates the question *Are spin-off financial statements that reflect the firm's adoption of the accounting required for the regulation (SEC form 10-12(b)) predictive of future earnings and thus useful?* According to Statement of Financial Accounting Concepts No. 8 (SFAC8), the objective of general purpose financial reporting is that financial statements are useful to investors in making decisions about providing resources to the firm. Financial information is capable of making a difference in decisions if they have predictive value, confirmatory value or both. This is a quantitative, positivist**,** empirical archival study of final SEC Forms 10-12(b) for spin-off firms filed for listing on a public exchange of either NYSE or NASDAQ from the period of 2000 to 2014. The study evaluates if spin-off financial statements (historical and pro forma) are predictive, confirmatory or both. This study compares the performance of these companies to their peer group to assess if the results of this population are significantly different from the performance of the peer group in predicting future earnings. There were large variances

between the historical, pro forma and Year 1 key financial statement elements. Variances ranged between 4% to over 500%. The difference in means in the population were significant between historical and pro forma net income as well as the change in shareholders equity and between historical and Year 1 shareholders' equity. There was a significant difference in the leverage metric between historical leverage ratio and Year 1's leverage ratio of the firms. The study found that the peer financial metrics were predictive of future earnings but the historical spin statements are not as predictive as their peer group. There was a significant difference in the predictability between the peer group and the historical spin metrics. The research supports the usefulness of the pro forma information. The research does not appear to support the usefulness of the historical information. Thus, the study provides the first empirical evidence that spin-off financial statements provide less information to the market. This is a new approach to study the application of accounting standards.

I   INTRODUCTION

I.1   Research Domain

In this paper, I examine whether firms' application of the SEC spin-off financial statements requirements which include the historical, pro forma or both contained in SEC Form 10-12(b) have influence on the predictability of the firms' future financial statements. I do so by investigating the comparability between the financial statement performance of the historical financial statements, pro forma financial statements and future firm performance. This research assessed the impact of financial statements for spin-off entities on the markets' ability to anticipate future earnings based on the objectives of financial reporting outlined in Financial Accounting Standards Board (FASB) Concept Statement number 8 that states financial information is capable of making a difference in decisions if it has predictive value, confirmatory value, or both. If it is not as predictive as hoped then the markets are not as efficient as expected.

A spin-off is the creation of an independent firm through the distribution of new shares of an existing business, division, segment etc. The shareholders are the same shareholders as the parent on the first day of trading but may change subsequently. The Form 10-12(b) filing is particularly interesting accounting to review as it presents information in a different way than if it were historically captured, allowing for direct comparison. This study is from 2000 to 2014, but to understand the current relevance I looked at just the last 5 years of the period from 2009-2014 and noted the firms spun in that period had $196 billion in market cap. Of $196 billion, four firms were over 10 billion in market cap. The year 2014 was a record year in the number in spin offs.

Thus, it is still a very relevant and impactful accounting to review. This study presents the first empirically based evidence to evaluate the use of pro forma statements

as used in a spin-off to present a prospective view of the changes required to operate going forward. This is a new approach to study the application of accounting standards. The proxy used to assess future firms' earnings was the firms' actual net income in the full year subsequent the spin.

The reporting requirements behind SEC Form 10 – 12(b) are designed to help users understand the financial performance and assess the future earning potential of the firm. The common shares of a subsidiary that are distributed to the parent firm's shareholders ("spin-off") are often registered under the Exchange Act using Form 10-12(b). SEC Regulation S-X governs the certification, form and content. The filing includes financial and non-financial information including information on the business, risk factors, relationships, legal proceedings, etc. The regulation indicates how many years of each financial statement are required to be included in the filing. The regulation requires from two to three years of historical Balance Sheet and Income Statements ("Financial Statements") and one period of pro forma Balance Sheet and Income statements.

The adjustments to the historical statements are done in the spin-off statements to capture the effect of significant acquisitions, dispositions, reorganizations, unusual asset exchanges, debt restructuring and other transactions contemplated in the prospective on a standalone basis and reflected in pro forma financial statements. The pro forma adjustments for future cost synergies or other similar adjustments not supported by the acquisition documents cannot be included. Because of the relevance of the historical information and guidance on what can and cannot be included in the pro forma, spin-off financial statements were used in the study to assess if the financial statements provided

are predictive of future results. The study also assessed if a firm's peer group's results are significantly different from its own in assessing future performance.

The paper is organized as follows. Section II and III present background information on SEC form 10-12(b), spin-off financial statements, pro forma financial statements and predictability of financial statements as well as prior academic research. Section IV provides an understanding of how the sample was determined and collected. Section V and VI will discuss the results. Section VII will provide the conclusion and additional information on the contribution.

This study is a positivist quantitative analysis on archival final Form 10-12(b) for initial listings filed for listing on a public exchange of either NYSE or NASDAQ from the period of 2000 to 2014 to assess the impact of the historical and pro forma financial statements on the stock market's ability to predict the firm's earnings.

I.1   Research Perspective

As indicated previously, SEC Form 10 is designed to help users understand the financial performance and assess the future earning potential of the firm. While there is non-financial information included in the filing, the study focused on the financial information that is guided by the key concepts of the Financial Accounting Standards Board. As stated in the Financial Accounting Standards Board Concept Statements, the concepts are a coherent system of interrelated objectives and fundamental concepts that prescribe the nature, function, and limits of financial accounting and reporting that is intended to lead to consistent guidance. It is intended to serve the public interest by providing structure and direction to financial accounting and reporting to facilitate the preparation of unbiased financial and related information. That information helps capital

and other markets to function in allocating scarce resources in the economy and society. While the Concept Statements were not intended to be used to evaluate existing Generally Accepted Accounting Principles (GAAP), they do provide guidance in analyzing financial accounting and reporting and a basis for considering alternatives.

I.2   Research Approach

In this study, a positivist quantitative analysis was performed on archival final Form 10-12(b) for initial Form 10- 12(b) listings filed for listing on a public exchange of either NYSE or NASDAQ from the period of 2000 to 2014 to assess the impact of the historical and pro forma financial statements on the stock market's ability to predict the firm's earnings. This study evaluated the variance of the firm's results pre and post the spin based on key elements. Additionally, the study looked at the change in financial metrics pre and post the spin. It also compared results of the population to that of the peer group in the same period. The peer group was identified by industry and revenue and was matched with firms that did not spin. Finally, this study evaluated if the variance on key metrics is a significant predictor of future earnings and if it is significantly different from that of the peer group.

To date, there has been no evaluation of predictability of spin-off and pro forma financials as required by the Form 10-12(b) filing. This evaluation provided the disclosed cost over the past five years to evaluate the cost benefit of the information. The study was intended to assess if the spin-off financial statements and pro forma financial statements of spin-offs achieve the objectives of Statement of Financial Accounting Concepts No. 8 Conceptual Framework for Financial Reporting. The study answers the question, *Are spin-off financial statements that reflect the firm's application of the*

accounting requirements for the regulation (SEC form 10-12(b)) predictive of future

earnings and thus useful?

II   THEORETICAL BACKGROUND ON REPORTING FRAMEWORK

II.1   FASB Concept Statements

The objective of general purpose financial reporting is defined by the FASB in the Concept Statements. The FASB Concept Statements, as stated by the FASB, are intended to serve the public interest by setting the objectives, qualitative characteristics, and other concepts that guide selection of economic phenomena to be recognized and measured for financial reporting. SFAC are intended to serve the board by serving as a guide to develop sound principles and provide an understanding of the appropriate content of financial reporting. SFAC8 that focuses on the objective of general purpose financial reporting and the qualitative characteristics of useful financial information has superseded FASB's earlier Concept Statements. SFAC6 is focused on defining the elements of financial statements whereas SFAC5 is focused on when to recognize items and how to measure them. Those are the key Concept Statements that support the objectives of the subsequent FASB accounting pronouncements.

As stated in the SFAC8, the concepts are a coherent system of interrelated objectives and fundamental concepts that prescribe the nature, function, and limits of financial accounting and reporting that are intended to lead to consistent guidance. Concept Statements are intended to serve the public interest by providing structure and direction to financial accounting and reporting to facilitate the preparation of unbiased financial and related information. That information helps capital and other markets to function in allocating scarce resources in the economy and society. While the Concept Statements were not intended to be used to evaluate existing Generally Accepted Accounting Principles (GAAP), they do provide guidance in analyzing financial accounting and reporting and a basis for considering alternatives.

SFAC8 defines the purpose of the financial statement as to provide the users with financial information that is useful to existing and future investors in making decisions about providing resources to the entity. When SFAC8 came out, there was a little surprise that the user was not intended to be management or regulators. In objective three of the standard, it focused on the needs of the users of the financial information that would support the decision by existing and potential investors about the buying, selling or holding of equity and debt instruments. Specifically, objective three suggested that the users depend on the returns that they expect from an investment, including net cash inflows, dividends, principle and interest or market price increases. A key element of the assessment around future cash inflows are existing claims to those inflows captured in accruals, other liabilities, and the speed with which management discharges its obligations. As noted in objective twenty, this area of cash inflows is further expended to note the need to see a history of how management has generated cash inflows and outflow. The information about cash flows helps the users understand a reporting entity's operations and evaluate financing and investor activities, as well as interpret financial performance.

II.1.1   *Qualitative Characteristics of Useful Financial Information*

Per SFAC 8, the key qualitative characteristic of financial reporting is that the financial information included is useful. As noted above, the qualitative characteristics are based on the user of the financial statements, defined as the existing and potential investors, lenders, and other creditors, for making their decision to invest in the firm. Financial reports are intended to provide information about the entities' economic resources and claims against the entity. Cost is intended to be a pervasive constraint on

the reporting entities' ability to provide useful financial information. SFAC 8 identifies

two qualitative characteristics of useful information: financial information must be

relevant and faithfully represent the information. SFAC 8 states that financial information

is capable of making a difference in decisions if it has predictive value, confirmatory

value, or both. Financial information is outlined in the Concept Statement as having

predictive value if it can be used as an input to a process employed by users to predict

future outcomes. To be indicative of faithful representation, information must be

complete, neutral and free from error.

The Concept Statements also bring up the concept of materiality by stating the

information is material if by omitting it or misstating it this could influence decisions that

users make based on the financial information. Materiality is an entity-specific aspect of

relevance. Many of the accounting standards state that the standard applies to only

material items in an effort to capture this concept. In contrast, the SEC (1999) Staff

Accounting Bulletin (SAB) No. 99 provides insight on how they determine if information

is material to the users of financial information. While the rule of thumb of 5% of net

income may be a basis for a preliminary determination that information is immaterial, the

preparer needs also to assess if it would be relevant to the user of the financial statement.

The SAB No. 99 references back to the predecessor Concept Statement number 2, which

is similar in this area to Concept Statement number 8. SAB 99 also provides examples of

when the threshold might fall below 5% but still be important, in instances where it

would swing a company from a gain to a loss, provide an impact on trending, etc.

SFAC8 identifies four additional qualitative characteristics of comparability,

verifiability, timeliness and understandability. The Statement provides some examples

for comparability as being important to investors if it helps the investor pick between one reporting entity and another, alternatively selling or holding of one entity.

The cost constraint identified in SFAC 8 outlines that while there are costs required to prepare financial information it is important that those costs be justified by the benefits of reporting that information. SFAC 8 views these costs from both sides: that of the preparer to pull the information and that of the users to estimate loss. Users also incur cost in the analysis and additional costs if the user needs to find alternative ways to obtain the information. Overall, reporting information that is relevant and faithfully represents the activity of the period helps users make decisions that are more confident. This results in more efficient functioning of capital markets and a lower cost of capital.

II.2   Security and Exchange Commission Filing Requirements

SEC Form 10 – 12(b) is designed to help users understand the financial performance and assess the future earning potential of the firm. The common shares of a subsidiary that are distributed to the parent firm's shareholders ("spin-off") are often registered under the Exchange Act using Form 10- 12(b). Regulation S-X governs the certification, form and content. The form includes financial and non-financial information including information on the business, risk factors, relationships, legal proceedings, etc. The numbers of years of financial statements presented are included in the regulation and they range from two to three years of historical Balance Sheet and Income Statements ("Financial Statements") and one period of pro forma Balance Sheet and Income statements (S-X Article 11).

The objective of pro forma statements as defined by the SEC (2016) S-X Article 11 is that "pro forma financial information is intended to provide users with information

about the continuing impact of a transaction by showing how a specific transaction or group or transactions might have affected historical financial statements, illustrating the scope of the change in the registrant's financial position and result of operations."

Per SEC (2016), the pro forma financial information is intended to only illustrate isolated and objectively measureable (historically determined) effects of a particular transaction. It is intended to exclude highly judgmental estimates of how costs may or may not have changed. The preparer cannot adjust numbers as if management had done something but rather he or she must be objective and thus only include information if the action was completed. The pro forma statements should only include events that are directly attributable to the transaction and factually supported. Additionally, they should include items that are nonrecurring and have a continuing impact. Pro forma presentation should be based on the latest Balance Sheet and Income Statement. The interim period income statement should also be presented unless it would have been included in the last full year presentation.

The adjustments to the historical statements are done in the spin-off statements to capture the effect of significant acquisitions, dispositions, reorganizations, unusual asset exchanges, debt restructuring and other transactions contemplated in the prospective on a standalone basis and reflected in pro forma financial statements. The pro forma adjustments for future cost synergies or other similar adjustments not supported by the acquisition documents cannot be included. As a result, of the relevance of the historical information and guidance on what can and cannot be included in the pro forma this study assessed if the financial statements provided were predictive of future results.

Management is limited in what it can include in the pro forma statements to only readily determinable information. Forward-looking information cannot be included in the pro forma statements. Pro forma statements may not include operation costs needed to operate on a go-forward basis so the statements must disclose that they may not be indicative of future operations. Certain adjustments may demonstrate the effective change in operation as if it had occurred at the beginning of the period but each item must be factually supportable.

As noted above, the objective of financial reporting is that the information be useful and further supported by the characteristics of relevant and faithful representations. However, it is recognized that the organization is likely to change significantly and those changes are not included unless based on historical costs thus potentially resulting in overstatement of earnings. This study determined if that information is still predictive and the value of that predictability in relationship to that of its peer group.

This study answered the question *Are spin-off financial statements that reflect the firm's adoption of the accounting required for the regulation (SEC form 10-12(b)) predictive of future earnings and thus useful?*

III LITERATURE REVIEW

The previous research demonstrated the effect of spin-off financial statements on firm market performance but this study examined future firm earnings. Other studies evaluated the use of pro forma financial statements that are used as part of annual filings, often referred to as working capital disclosures, that have different requirements than those included as part of this review. Finally, other literature evaluated predictability for different accounting changes. There appeared to be a gap in the literature on the predictability of spin-off financial statements. The following provides a focused review of the literature that provides a new methodology for assessing future accounting changes.

III.1 Spin-off Financial Statements

Schipper (1986) investigated the share price reaction of parent firms to announcements of public offerings of stock of wholly owned subsidiaries. The view was that the uncoupling of the sub from the parent would release value by encouraging an entrepreneurial spirit unburdened by the parent. The average abnormal gains associated with 'equity spin-off' announcements contrast with the average abnormal losses documented upon announcements of public offerings of parent equity. The equity offering of the spin-off is the only financing arrangement undertaken by publically traded firms for which an average increase in shareholder wealth could be documented. In contrast, Ghosh (2012) examined the efficiency of initial public offering (IPO) pricing using a sample of over 300 equity spin-offs from 1985 to 2009. Their analysis confirmed that both the price update and initial return of carve-out IPOs can be predicted based on the parent firm's returns during the pre-pricing and pre-issuing periods. The study looked

at equity spin-offs where the parent firm continues to hold a controlling interest in the subsidiary after the IPO. They looked at the price of the parent's stock. They also noted a difference in return based on size of the entity. Schipper (1986) found the spin could demonstrate strong performance even if the parent demonstrated poor performance, but Ghosh (2012) found success of the parent and the spin were linked. While on the face these studies appear to compare similar activities there is a significant difference between the two, which is the tax effect of the equity spin. To perform an informed comparison of these two methods, I would need to determine the tax effect of the spin and debt structures, which is beyond the scope of the current study. In this study, the return used as a basis of measure was future firm earnings and not stock return.

III.2 Pro Forma Financial Statements

Bradshaw (2003) evaluated the term 'pro-forma' earnings that has become the general term describing non-GAAP (or 'incomplete GAAP') reporting. The study evaluated the informativeness and permanence of this form of reporting. This 'non-GAAP' is in contrast to the pro forma analysis completed in this study, which is applied based on Article 11 of the Regulation S- X definition for carve out businesses.

Fredrickson (2004) conducted an experiment on pro forma disclosures on sophisticated and less sophisticated investors (focus GAAP/ non GAAP). It appeared that less sophisticated investors were more influenced than sophisticated investors were by the pro forma numbers. Pro forma here again was based on non-GAAP pro forma vs the pro forma in this study, which are more akin to a GAAP pro forma. The pro forma in this study typically have the historical financial information adjusted for only known actual items and include less focus on non-cash and non-recurring items. Consistent with

Fredrickson (2004), Dill (2014) examined the effect of reconciliations and financial

reporting knowledge on nonprofessional investors' judgments. This analysis

demonstrated that an investor's ability to effectively apply the knowledge presented in a

pro forma financial statement and reconciliation for non-GAAP measures is contingent

on the investor's financial reporting knowledge. It appears that investors do understand

these statements and apply them in determining the value they place on the firm. Doyle

(2003) looked at pro forma earnings' (non-GAAP) disclosure impact on earnings.

Specifically it looked at the predictive value of expenses excluded from GAAP earnings

for future cash flows, for market-adjusted returns at the earnings date and future market-

adjusted returns from pro forma earnings. Literature supports that the exclusions in the

non-GAAP presentation provided greater explanatory power.

     The current literature demonstrates that the users of financial information can

understand and apply the information provided in pro forma financial statements to assess

firm value. In the current literature, the pro forma financial statements reviewed focused

on annual filing requirements not spin-off filing requirements. In annual filings, the pro

forma statements' exclusion from the GAAP statements are the choice of management

and may not be consistently applied (Doyle, 2003). The pro forma statements included in

a spin-off contain significant items that will change from the final historical statements to

what will occur prior to offering. Current literature does not evaluate the predictability of

the pro forma financial statements in spin-offs.

     "Non- GAAP," as noted above is in contrast to the pro forma analysis completed

in this study, as the use of pro forma is different. SEC explains pro forma in this way:

"Pro forma Financial Information should provide investors with information about the

continuing impact of a particular transaction by showing how it might have affected

historical financial statements in the transaction had it been consummated at an earlier

time."

III.3 Predictability of Financial Reporting

Lev (1989) used metrics to evaluate financial statements based on SFAC 2 and

focused on usefulness of accounting information. (This Concept Statement has been

superseded by SFAC8.)   The author looked at the need for better metrics to assess

usefulness of accounting in financial statements. The research was focused on the returns

and earning research. The returns evaluated in the study were stock returns. He found

that there was low information content from earnings on returns. He also found that the

use of metrics to assess usefulness was very difficult to assess.

Studies by Ettredge (2005) and Beaver (1966, 2015) evaluated the respective

accounting to determine if it has predictive, confirmatory value or both (SFAC8) and thus

contributes to efficient markets. Ettredge (2005) examined one accounting change,

specifically SFAS 131(ASC 280), on the effect the firm's adoption would have on stock

market's ability to predict corporation's earnings as captured by the forward earnings

response coefficient (FERC). The study completed by Ettredge (2005) provided the first

empirical evidence that the accounting change provided in the financial statements and

for the users resulted in an increase in FERC for those who had segment data. Ettredge

(2005) focused on adoption of SFAS 131, which is information that had not been

available to users in the past. Ettredge (2005) was interested in the impact on the

financial statements but also on the predictability of their earnings because of the change

in accounting standards. Allee (2008) assessed unintended consequences because of an

accounting change. Based on their review there were unintended consequences, however they felt that top analysts have factored the impacts into their forecasts and the focus should be more on educating consumers. Allee (2008) noted that changes that moved items disclosed in the footnotes on to the face of the financial statements items did not increase the usefulness of this information. Items moved from disclosure to the face of the statements were stock options, leases and pensions. These did not increase usefulness and there was limited impact, in contrast to the conclusions reached by Ettredge (2005). Ettredge (2005) found that SFAS 131 provided new additional data and had more of an impact on performance.

Beaver (1966, 2015) used financial metrics to predict bankruptcy. Beaver identified three metrics to assess firm performance; the first metric was Cash Flow (EBITDA) divided by Total Debt as an indicator of liquidity. The second metric was Net Income divided by Total Assets as a measure of performance and finally the third metric was Total Debt divided by Total Assets as a measure of leverage. The author evaluated a series of failed and non-failed firms over a 5-year period and noted that non-failed firms that performed better on the above metrics stayed in business and that the failed firms did not perform as well on the metrics. He also noted a steady decline amongst the failed firms on the above metrics. Thus, these metrics were predictive of future performance. He calculated each metric every year and noted those with steeper erosion curves predicted their future bankruptcy. Negative earnings typically precipitate bankruptcy, thus I have used net income as the predictive element in lieu of bankruptcy.

In this study, I built upon this as the framework with which to evaluate the predictability of future earnings. As I looked at the change in performance between

historical, pro forma and Year 1 predictability of earnings, I evaluated the change in these elements to indicate the change in net income.

As mentioned earlier, the SFAC8 focused on the needs of the users of the financial information to support the decision by existing and potential investors about the buying, selling or holding of equity and debt instruments. SFAC8 reflects the belief that users depend on the returns that they expect from an investment, including net cash inflows, dividends, principle and interest or market price increases. A key element of the assessment around future cash inflows are existing claims to those inflows captured in accruals, other liabilities, and the speed with which management discharges its obligations. It would appear that the metrics of profitability (returns), leverage (claims) and liquidity (management efficiency) assess all of the concerns above.

IV   METHODOLOGY

IV.1 Research Design

This study drew on the research constructs presented within the literature. As noted earlier, this study evaluated the financial statements for spin-off entities to determine the market's ability to anticipate future earnings. The adjustments to the historical statements were done in the spin-off statements to capture the effect of significant acquisitions, dispositions, reorganizations, unusual asset exchanges, debt restructuring and other transactions contemplated in the prospective on a standalone basis and reflected in pro forma financial statements. The pro forma adjustments for future cost synergies or other similar adjustments not supported by the acquisition documents were not included. This design highlighted the changes at each point in the process to assess the predictability of future earnings.

The three balance sheet segments including assets, liabilities, and shareholders' equity give investors an idea as to what the company owns and owes, as well as what shareholders have invested at a point in time. The income statement measures a company's performance over the period that the output of the statement represents net income. Thus total assets, total liabilities, shareholders' equity, and net income are identified as the key elements I evaluated. These elements along with earnings before interest, taxes, depreciation and amortization (EBITDA) are the basis behind the metrics defined by Beaver in his 1966 study. Beaver (1966) identified liquidity as a measure of a company's ability to pay off debt obligations, which is a reasonable element to use to evaluate future earnings, as it can be a clear signal of the company's ability to pay its debts that are coming due and to fund operations. Beaver (1966) identified profitability as a measure of how efficient management is at using its assets to generate future earnings.

It is also referred to as return on investment. Beaver (1966) identified leverage as another measure of a company's ability to pay off debt obligations. Leverage can be a clear signal of the company's ability to pay its debts that are coming due and fund operations and future operations. These metrics appeared to be a reasonable basis for evaluation of future earnings.

IV.1.1 Variance Analysis of Key Elements

The study looked at the variance of the key elements of the financial statements identified above as Total Assets, Total Liabilities, Net Income and Cash Flows as identified by Beaver (1966). The key metrics are Liquidity, defined as Cash Flows divided by Total Liabilities; Profitability, defined as Net Income divided by Total Assets; and Leverage, defined as Total Debt divided by Total Assets. This study compared between historical, pro forma and Year 1 information. The study then compared these outcomes to that of the peer group.

IV.1.2 Mean Variance of Key Elements

The study looked at the mean variance of the key elements of the financial statements identified above as Total Assets, Total Debt, Net Income and Cash Flows as identified by Beaver (1966). This study compared between historical, pro forma, and Year 1. If the financial statements are predictive then there should not be a significant difference between the periods. Beaver (1966) noted a progressive decline in the metrics composed of these elements as predictive of bankruptcy. This portion of the study just looked at the elements as well as the metrics to provide greater understanding of the metrics to generate the following null hypotheses.

*Hypothesis 1: There is no statistically significant change in firms' **Net Income** from **Historical to Pro forma**.*

*Hypothesis 2: There is no statistically significant change in firms' **Total Assets** from **Historical to Pro forma**.*

*Hypothesis 3: There is no statistically significant change in firms' **Total Liabilities** from **Historical to Pro forma**.*

*Hypothesis 4: There is no statistically significant change in firms' **Total Equity** from **Historical to Pro forma**.*

*Hypothesis 5: There is no statistically significant change in firms' **Net Income** from **Historical to Year 1***

*Hypothesis 6: There is no statistically significant change in firms' **Net Income** from **Pro forma and Year 1***

*Hypothesis 7: There is no statistically significant change in firms' **Net Income** from **Peer Historical and Year 1***

*Hypothesis 8: There is no statistically significant change in firms' **Total Assets** from **Historical to Year 1***

*Hypothesis 9: There is no statistically significant change in firms' **Total Assets** from **Pro forma and Year 1***

*Hypothesis 10: There is no statistically significant change in firms' **Total Assets** from **Peer Historical and Year 1***

*Hypothesis 11: There is no statistically significant change in firms' **Total Liabilities Historical to Year 1***

*Hypothesis 12: There is no statistically significant change in firms' **Total Liabilities Pro forma and Year 1***

*Hypothesis 13: There is no statistically significant change in firms' **Total Liabilities Peer Historical and Year 1***

*Hypothesis 14: There is no statistically significant change in firms' **Total Equity Historical to Year 1***

*Hypothesis 15: There is no statistically significant change in firms' **Total Equity Pro forma and Year 1***

*Hypothesis 16: There is not a statistically significant change in firms' **Total Equity Peer Historical and Year 1***

IV.1.3 Variance of Key Metrics

The study looked at the variance of the key metrics of financial statements as defined by Beaver (1966), including as before Liquidity, defined as Cash Flows divided by Total Debt; Profitability, defined as Net Income divided by Total Assets; and Leverage, defined as Total Debt divided by Total Assets. This study compared data between historical, pro forma, and Year 1. The study then looked as before at the variance of that of the peer group. If the financial statements are predictive then there should not be a significant difference between the periods. Beaver (1966) noted a progressive decline in the metrics composed of these elements to predict bankruptcy. The following null hypotheses were generated.

*Hypothesis 17: There is no statistically significant change in firms' **Liquidity** from **Historical to Pro forma**.*

*Hypothesis 18: There is no statistically significant change in firms' **Profitability** from **Historical to Pro forma**.*

*Hypothesis 19: There is no statistically significant change in firms' **Leverage** from **Historical to Pro forma**.*

*Hypothesis 20: There is no statistically significant change in firms' **Liquidity** from **Historical to Year 1***

*Hypothesis 21: There is no statistically significant change in firms' **Liquidity** from **Pro forma and Year 1***

*Hypothesis 22: There is no statistically significant change in firms' **Liquidity** from **Peer Historical and Year 1***

*Hypothesis 23: There is no statistically significant change in firms' **Profitability** from **Historical to Year 1***

*Hypothesis 24: There is no statistically significant change in firms' **Profitability** from **Pro forma and Year 1***

*Hypothesis 25: There is no statistically significant change in firms' **Profitability** from **Peer Historical and Year 1***

*Hypothesis 26: There is no statistically significant change in firms' **Leverage Historical to Year 1***

*Hypothesis 27: There is no statistically significant change in firms' **Leverage Pro forma and Year 1***

*Hypothesis 28: There is not a statistically significant change in firms' **Leverage Peer Historical and Year 1***

IV.1.4 Mean Variance in the Change of Key Metrics

In this study using the same parameters as before, three additional null hypotheses were generated. Here we evaluated was there a significant change in metrics Liquidity, Profitability. Leverage and Net Income in the periods between historical and pro forma as well as the Population and Peer group. First, I looked at the change in the three elements as well as the change in the element Net income between Historical and Pro forma.

*Hypothesis 29: There is no statistically significant change in firms' **Liquidity** between the **Historical and Pro forma**.*

*Hypothesis 30: There is no statistically significant change in firms' **Profitability** between the **Historical and Pro forma**.*

*Hypothesis 31: There is no statistically significant change in firms' **Leverage** between the **Historical and Pro forma**.*

*Hypothesis 32: There is no statistically significant change in firms' **Net Income** between **Historical and Pro forma***

Secondly, I looked at the change in the three elements as well as the change in the element Net income between Population and the Peer group.

*Hypothesis 32: There is no statistically significant change in firms' **Liquidity** between the **Population and Peer group**.*

*Hypothesis 33: There is no statistically significant change in firms' **Profitability** between the **Population and Peer group**.*

*Hypothesis 34: There is no statistically significant change in firms' **Leverage** between the **Population and Peer group**.*

*Hypothesis 35: There is no statistically significant change in firms' **Net Income** between **Population and Peer group***

IV.1.5 *Assess the Change in the Financial Metrics' Ability to Predict Change in Earnings*

To assess the ability of the change in financial metrics to predict a change in earnings a regression was used; this method was adapted from Beaver (1966). Beaver (1966) used the metrics to predict bankruptcy, as they were critical to assessing the performance of a company. The liquidity ratio demonstrates if a firm can meet its financial obligation with the liquid assets available. The profitability ratio demonstrates a firm's ability to generate earnings as compared with expenses. The advantage ratio demonstrates a firm's ability to gain access to capital should it need to fund operations. It also may inform the user of the burden of interest on the income statement. See Figure 1. This study compared firms' results with that of a peer group. A chow test (Chow, 1960) was performed to assess the equality between the sets.

IV.2 Data Collection

This study drew from archived SEC filings of corporations. I reviewed all final Form 10-12(b) filings that were filed for listing on a public exchange of either NYSE or NASDAQ from the period of 2000 to 2014. Additionally, I identified peer companies for all samples selected based on industry and revenue. The population was across firm size and industry.

Table 1 Analysis of Population Summary

Population	Number of Firms
Firms who filed a form 10-12(b)	434
Delete Firms who never listed on an exchange	(93)
Sample listed on an exchange	341
Delete if Firm withdrew the filing	(92)
Sample who completed an Initial Offering	249
Delete Firms whose filing did not qualify as a spin	(109)
Final Sample who qualify as a Spin-off (2000-2014)	140

Subsequently I identified a peer firm based on firm revenue and industry for further analysis. The study evaluated the population vs the peer group on all defined measures outlined previously.

IV.3 Data Analysis

The analysis of the population, documented in Table 1, began with 434 firms. A query was run on the SEC website for all Form 10-12(b) filed between 2000 and 2014 identifying 434 firms. Of the firms identified, I reviewed each filing to determine which firms listed had obtained a ticker and began trading. Firms were removed that did not obtain a ticker, removing 93 firms. The study reviewed subsequent filings to identify if each firm received an effective letter from the SEC. The study removed firms that did not receive an effective letter for the Form 10-12(b) submission bringing the total down to 249. These firms withdrew their submission or never amended their submission upon receiving comments, creating an effective withdrawal; thus, these firms were removed. I

reviewed the remaining submissions and noted that 113 firms' submission were not for a spin. Many of these were filings of late submission for the quarterly/annual 10Q/K that were filed incorrectly, bringing the number down to 136.

To evaluate if the results of the pro forma and historical financial statements included in the filing were different, I performed a variance analysis between the two comparative data sets. I also evaluated the variance analysis between the historical and pro forma results and the subsequent year's earnings. I compared the results to those of the peer group. I identified peer companies for all samples selected based on industry and revenue. The population was across firm size and industry.

Table 2 Contrast Population to Peer Group for Total Assets
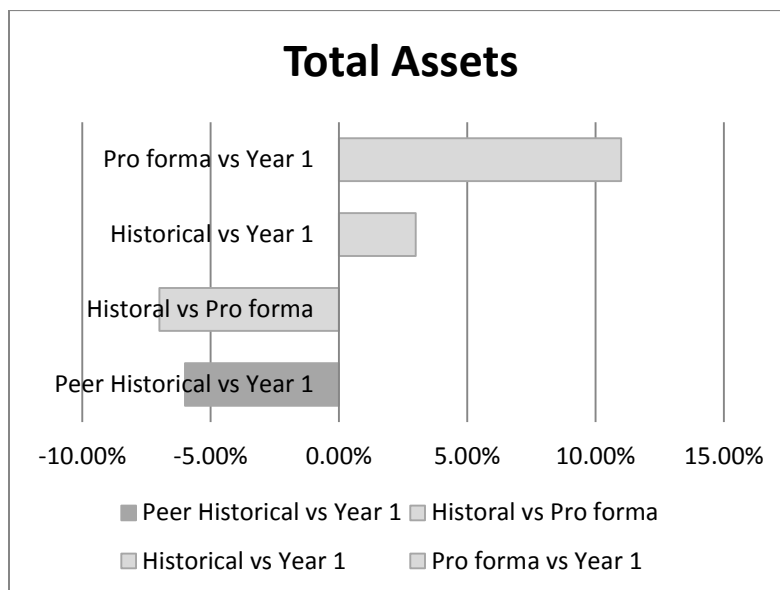
The mean variance between historical total assets and Year 1 is a decline of 6% in the peer group, whereas the pro forma vs Year 1 showed a mean difference of 11% and historical results were closer with a 3% change.

Table 3 Contrast Population to Peer Group for Total Liabilities

Total Liabilities

Pro forma vs Year 1	
Historical vs Year 1	
Historal vs Pr oforma	
Peer Historical vs Year 1	

-15%   -10%   -5%   0%   5%   10%   15%   20%

■ Peer Historical vs Year 1   ■ Historal vs Pr oforma
■ Historical vs Year 1   ■ Pro forma vs Year 1
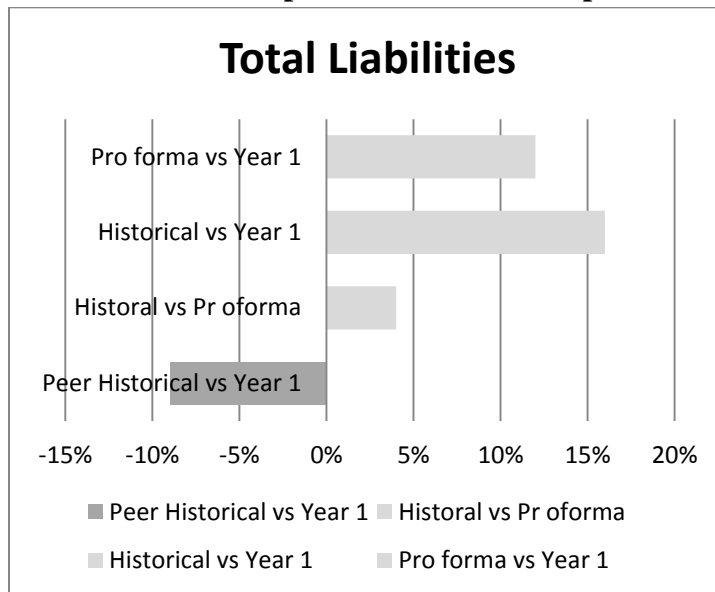
The mean variance between historical total liabilities and Year 1 is a decline of 9% in the peer group. Thus it would appear that the peer group is reducing liabilities, whereas the pro forma vs Year 1 showed an increase in the mean difference of 12% and historical results showed an even greater difference with a 16% increase. Thus the population increased its debt. The historical results have limited value as the parent's investment in the sub is converted to third party debt, increasing the debt and decreasing shareholders' equity. This is often reflected in the pro forma statements and thus the liability and shareholders equity sections of the balance sheet have limited relevance as the variances are so large from the comparable peer population.

Table 4 Contrast Population to Peer Group for Total Equity

Shareholders Equity

Pro forma vs Year 1	
Historical vs Year 1	
Historal vs Pr oforma	
Peer Historical vs Year 1	

-40%   -30%   -20%   -10%   0%   10%

■ Peer Historical vs Year 1 ■ Historal vs Pr oforma
■ Historical vs Year 1   ■ Pro forma vs Year 1

The mean variance between historical shareholders equity and Year 1 was an increase of 7% in the peer group, whereas the pro forma vs Year 1 showed a mean difference of 8% and historical results showed an even greater difference with a decline of 24%. As before, the historical results have limited value as the parent's investment in the sub is converted to third party debt; thus the liability and shareholders' equity sections of the balance sheet have limited value. Increasing debt and decreasing shareholders' equity is often reflected in the pro forma statements and thus the liability and shareholders' equity sections of the historical balance sheet have limited relevance for future period and as the variances are so large from the comparability to future periods and the peer population.
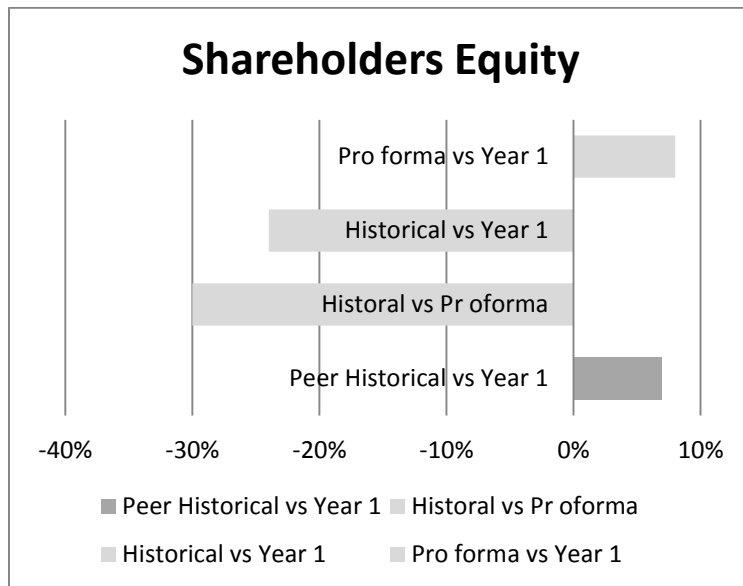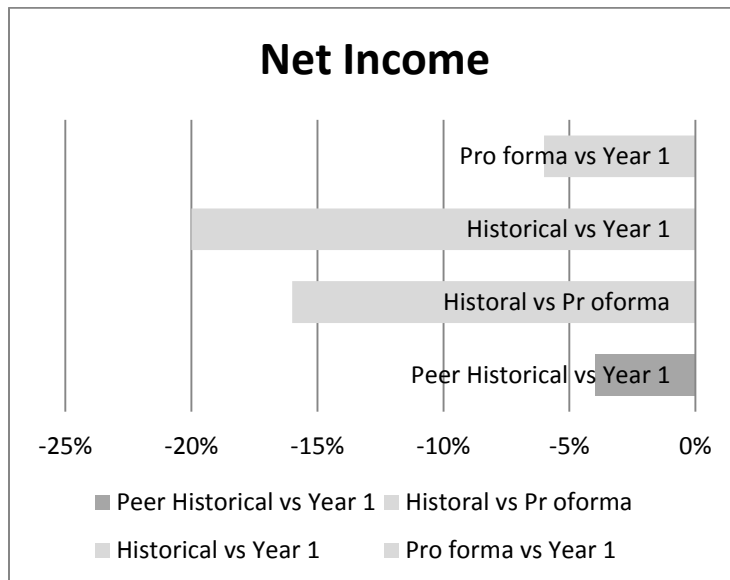
Table 5 Contrast Population to Peer Group for Net Income

The mean variance between historical Net Income and Year 1 was a decline of 4% in the peer group. Pro forma vs Year 1 also showed a mean decline of 6%, whereas historical vs Year 1 showed a decline of 20%. The historical results have limited value as the parent's investment in the sub is converted to third party debt thus increasing debt and decreasing shareholders' equity. This change is often reflected in the pro forma. This creates a big change on the income statement as the company pays third party interest on the new debt. Additionally, operational and corporate allocation that may historically have not been assigned to the segment will now appear as real costs to the operation. To the extent that those costs could be allocated, they would have been adjusted in the pro forma statements but not reflected in the historical statements. Thus the historical income statement and earnings have limited relevance for future periods as the variances are so large from the comparability to future periods and to the peer population.

As noted above, the three balance sheet segments assets, liabilities and shareholders equity give investors an idea as to what the company owns and owes as well as what shareholders have invested at a point in time. The income statement measures a company's performance over the period that the output of the statement is net income. Thus total assets, total liabilities, shareholders' equity and net income are identified as the key elements to evaluate. These elements along with earnings before interest, taxes, depreciation and amortization (EBITDA) are the basis behind the metrics defined by Beaver in his 1966 study. Beaver (1966) identified liquidity, profitability and leverages as financial metrics to predict future earnings (solvency). In this study, I used them to assess the predictability of future earnings.

Table 6 Contrast Population to Peer Group for Liquidity
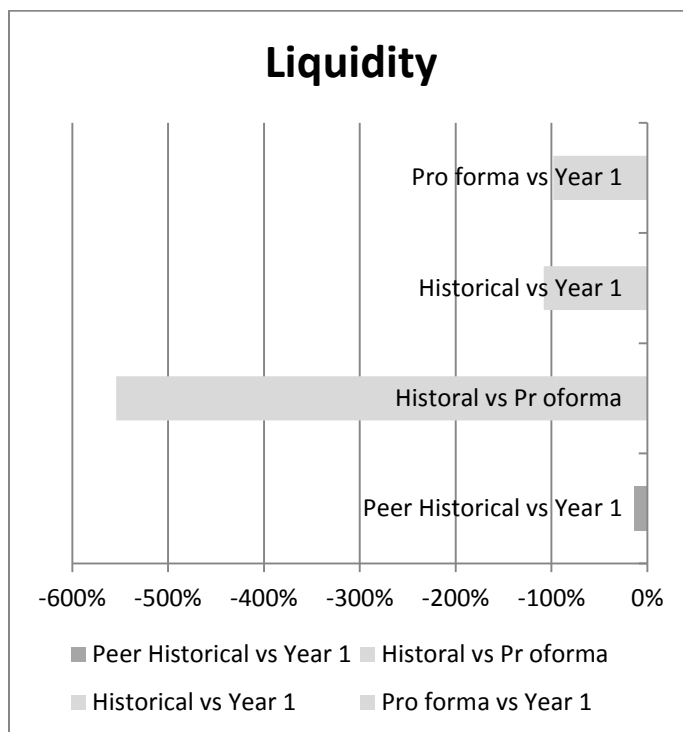
The mean variance between historical liquidity and Year 1 was a decline of 14% in the peer group, whereas the pro forma vs Year 1 showed a mean decline of 98% and historical showed a decline of 108%. Liquidity is directly impacted by the increase in debt that the spin entities take on as their parents flip equity investments in the subsidiaries to that of third party debt.

Table 7 Contrast Population to Peer Group for Profitability
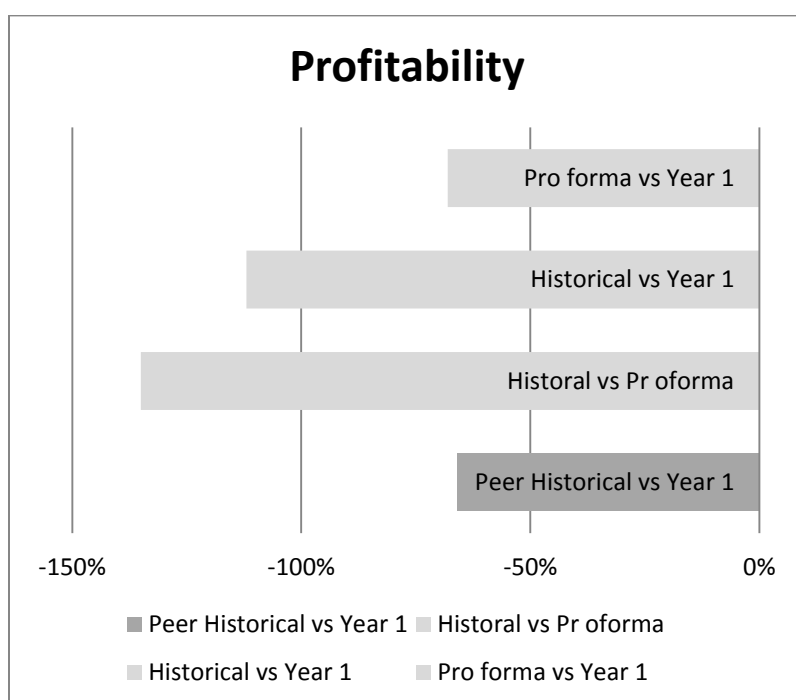
The mean variance between historical profitability and Year 1 was a decline of 65% in the peer group. Consistent with the decline in the peer group, the pro forma vs Year 1 showed a mean decline of 68%; historical showed a decline of 112%. Profitablity is directly impacted by the increase in interest expense that decreases the net income for the spin entities.

Table 8 Contrast Population to Peer Group for Leverage

The mean variance between historical profitablity and Year 1 was an increase of 9% in the peer group. Pro forma vs Year 1 showed a mean decline of 3%; historical vs. Year 1 showed an increase of 17%. Thus the population increased its debt. The historical results have limited value as the parent's investment in the sub is converted to third party debt, increasing the debt and decreasing shareholders' equity. This is often reflected in the pro forma statements and thus the liability and shareholders' equity sections of the balance sheet have limited relevance as the variances are so large from the comparable peer population.

V   RESULTS

V.1   Data Description

This study drew on the research constructs presented within the literature. As
noted earlier I evaluated the financial statements for spin-off entities with regard to the
market's ability to anticipate future earnings. The adjustments to the historical
statements are done in the spin-off statements to capture the effect of significant
acquisitions, dispositions, reorganizations, unusual asset exchanges, debt restructuring
and other transactions contemplated in the prospective on a stand-alone basis and
reflected in pro forma financial statements. The pro forma adjustments for future cost
synergies or other similar adjustments not supported by the acquisition documents were
not included. This design highlighted the changes at each point in the process to assess
the predictability of future earnings. The variance analysis of key elements was
completed in the previous section. Below will include a review of the mean variance in
key elements, mean variance in key metrics, mean variance in change in key metrics, and
an assessment of the predictability of the change in net income based on the change in the
financial metrics.

V.2   Relationship between Key Elements

V.2.1   *Mean Variance of Key Elements*

The study looked at the mean variance of the key elements of the financial
statements identified above as Total Assets, Total Debt, Net Income and Cash Flows as
identified by Beaver (1966). This study compared information between historical, pro
forma and Year 1. If the financial statements are predictive then there should not have
been a significant difference between the periods. Beaver (1966) noted a progressive

decline in the metrics composed of these elements to predict bankruptcy. This study looked at the elements as well as the metrics to provide greater understanding of the metrics.

Historical vs Pro Forma

*Hypothesis 1: There **was** a statistically significant change in firms' **Net Income** from **Historical to Pro forma**.*

*Hypothesis 2: There was no statistically significant change in firms' **Total Assets** from **Historical to Pro forma**.*

*Hypothesis 3: There was no statistically significant change in firms' **Total Liabilities** from **Historical to Pro forma**.*

*Hypothesis 4: There **was** a statistically significant change in firms' **Total Equity** from **Historical to Pro forma**.*

Results vs. Year 1

*Hypothesis 5: There was no statistically significant change in firms' **Net Income** from **Historical to Year 1***

*Hypothesis 6: There was no statistically significant change in firms' **Net Income** from **Pro forma and Year 1***

*Hypothesis 7: There was no statistically significant change in firms' **Net Income** from **Peer Historical and Year 1***

*Hypothesis 8: There was no statistically significant change in firms' **Total Assets** from **Historical to Year 1***

*Hypothesis 9: There was no statistically significant change in firms' **Total Assets** from **Pro forma and Year 1***

*Hypothesis 10: There was no statistically significant change in firms' **Total Assets** from **Peer Historical and Year 1***

*Hypothesis 11: There was no statistically significant change in firms' **Total Liabilities Historical to Year 1***

*Hypothesis 12: There was no statistically significant change in firms' **Total Liabilities Pro forma and Year 1***

*Hypothesis 13: There was no statistically significant change in firms' **Total Liabilities Peer Historical and Year 1***

*Hypothesis 14: There was a statistically significant change in firms' **Total Equity Historical to Year 1***

*Hypothesis 15: There was no statistically significant change in firms' **Total Equity Pro forma and Year 1***

*Hypothesis 16: There was no statistically significant change in firms' **Total Equity Peer Historical and Year 1***

Table 9 Comparisons of Means for Key financial elements

	Population		Peer	
Key elements	**t**	**Sig**	**t**	**Sig**
NI Historical and pro forma	3.171	0.002		
TA Historical and pro forma	1.129	0.261		
TL Historical and pro forma	(0.383)	0.703		
TE Historical and pro forma	3.93	0.0		
NI Historical and Year 1	1.42	0.159	0.254	0.8
NI Pro forma and Year 1	0.361	0.719		
TA Historical and Year 1	(0.57)	0.569	0.619	0.537
TA Pro forma and Year 1	(1.24)	0.216		
TL Historical and Year 1	(1.78)	0.077	0.691	0.491
TL Pro forma and Year 1	(1.085)	0.28		
TE Historical and Year 1	3.315	0.001	(1.076)	0.284
TE Pro forma and Year 1	(1.143)	0.255		
EBITDA Historical and Year 1	0.712	0.478	1.641	0.104
EBITDA Pro forma and Year 1	1.157	0.249		

There was a signficant difference in net income between the historical and the pro forma financial statements. The difference was the increase in the interest cost as a result of the new debt related to the spin-off. There was also a signifcant difference in shareholders' equity between the historical and pro forma statements as a result of the reduction in shareholders equity and the increase in debt as a result of the parent receiving payment

for its investment and the subsidiary obtaining third party debt. The same significant difference was present when comparing historical shareholders' equity and Year 1, thus making the historical financial statements of the subsidiary less relevant. As noted below, the study evaluated if the differences were statistically signifcantly different on all the key financial metrics.

V.3   Relationship between Key Financial Metrics

V.3.1   Variance of Key Metrics

The study looked at the variance of the key metrics of financial statements as defined by Beaver (1966), including Liquidity, Profitability, and Leverage between the historical, pro forma and Year 1 financial statements compared results to the peer group.

Hypothesis 17: There was no statistically significant change in firms' **Liquidity** *from* **Historical to Pro forma***.*

Hypothesis 18: There was no statistically significant change in firms' **Profitability** *from* **Historical to Pro forma***.*

Hypothesis 19: There was no statistically significant change in firms' **Leverage** *from* **Historical to Pro forma***.*

Hypothesis 20: There was no statistically significant change in firms' **Liquidity** *from* **Historical to Year 1**

Hypothesis 21: There was no statistically significant change in firms' **Liquidity** *from* **Pro forma and Year 1**

Hypothesis 22: There was no statistically significant change in firms' **Liquidity** *from* **Peer Historical and Year 1**

Hypothesis 23: There was no statistically significant change in firms' **Profitability** *from* **Historical to Year 1**

Hypothesis 24: There was no statistically significant change in firms' **Profitability** *from* **Pro forma and Year 1**

*Hypothesis 25: There was no statistically significant change in firms' **Profitability** from Peer Historical and Year 1*

*Hypothesis 26: There **was** a statistically significant change in firms' **Leverage Historical to Year 1***

*Hypothesis 27: There was no statistically significant change in firms' **Leverage Pro forma and Year 1***

*Hypothesis 28: There was no statistically significant change in firms' **Leverage Peer Historical and Year 1***

Table 10 Comparisons of Means for Key Metrics

	Population		Peer	
Key Metrics	**t**	**Sig**	**t**	**Sig**
Liquidity Historical and pro forma	(0.991)	0.323		
Profitability Historical and pro forma	(1.254)	0.212		
Leverage Historical and pro forma	(1.657)	0.1		
Liquidity Historical and Year 1	(0.974)	0.332	0.73	0.462
Liquidity Pro forma and Year 1	0.995	0.321		
Profitability Historical and Year 1	(0.541)	0.589	1.876	0.063
Profitability Pro forma and Year 1	1.793	0.075		
Leverage Historical and Year 1	(1.876)	0.06	(1.635)	0.10
Leverage Pro forma and Year 1	0.598	0.551		

There was a significant difference identified in leverage between the historical and Year 1 financial statements because of the new debt created on the spin-off entity. Leverage is a measure of company's ability to pay off debt obligations, which is a reasonable element to evaluate future earnings. Leverage can be a clear signal of the company's ability to pay its debts that are coming due and fund operations and future operations. One company's spin results were very different from the others. That company was Theravance; their historical results showed very little investment from its parent and during the pro forma they received 400 million from the parent as an asset without a

corresponding liability to pay back to the parent. It is an early stage company and the

money was to fund future milestones. Virtually all other companies took money from the

sub and replaced it with third party debt. Without this one company, the results are even

more significant at .03%. While the key financial elements and metrics are informative,

the study sought to understand predictability, which is focused on the change of the

metrics on the predictability of the change in earnings.

As noted above there was a difference in the key elements of the financial

statements and the key metrics between the historical results, pro forma results and Year

1 results. Additionally, there was a difference in the key elements and the key metrics

between the population and the peer group. This difference appears to be largely driven

by the parent's conversion of its investment into debt on the books and records of the

subsidiary that will become the spun off entity, thus making the historical financial

statements of the subsidiary less relevant. Noted below I evaluated if the differences

were statistically signifcantly different on all the key financial elements and metrics.

V.4 Relationship between Change in the Financial Metrics Historical and Pro Forma

V.4.1 Mean Variance in the Change of Key Metrics between the Population Historical and Pro Forma

*Hypothesis 29: There was no statistically significant change in firms' **Liquidity** between the **Historical and Pro Forma**.*

*Hypothesis 30: There was no statistically significant change in firms' **Profitability** between the **Historical and Pro Forma**.*

*Hypothesis 31: There **was** a statistically significant change in firms' **Leverage** between the **Historical and Pro Forma**.*

*Hypothesis 32: There was no statistically significant change in firms' **Net Income** between **Historical and Pro Forma.***

Compared below is the change in Liquidity, Profitability and Leverage between the historical and pro forma results. Consistent with previous findings, Leverage is significantly different.

Table 11 Comparisons of Means for the Change between Historical and Pro Forma in Financial Metrics

Key Metrics	M	STD	t	Sig
Liquidity			-1.23	0.22
Historical	0.89	10.93		
Pro forma	-1.67	18.17		
Profitability			0.33	0.75
Historical	-0.71	4.42		
Pro forma	-0.83	4.94		
Leverage			3.48	0.0
Historical	0.41	1.1		
Pro forma	0.08	0.47		
Net Income			-0.1	0.92
Historical	-0.66	7.89		
Pro forma	-.60	5.15		

V.5   Relationship between Change in the Financial Metrics Historical and Peer Group

V.5.1   Mean Variance in the Change of Key Metrics between the Population and the Peer Group

*Hypothesis 29: There was no statistically significant change in firms' **Liquidity** between the **Population and Peer group**.*

*Hypothesis 30: There was no statistically significant change in firms' **Profitability** between the **Population and Peer group**.*

*Hypothesis 31: There **was** a statistically significant change in firms' **Leverage** between the **Population and Peer group**.*

*Hypothesis 32: There was no statistically significant change in firms' **Net Income** between Population **and Peer group***

Compared below is the change in Liquidity, Profitability and Leverage between the population and the peer group. The historical population results were significantly different when calculating the change in Liquidity.

Table 12 Comparisons of Means for the Change between Popualtion and Peer group Financial Metrics

Key Metrics	M	STD	t	Sig
Liquidity			2.412	0.02
Population	0.89	10.93		
Peer	-1.39	2.57		
Profitability			0.96	0.33
Population	-0.71	4.42		
Peer	-1.74	12.01		
Leverage			1.18	0.24
Population	0.41	1.1		
Peer	0.07	3.48		
Net Income			-0.1	0.92
Population	-0.66	7.89		
Peer	-.71	4.42		

V.6   Assess the Predictability of Future Earnings

Spin off financial statements include in the Management Discussion and Analysis the pro forma financial statements as well as the historical financial statements. As part of the study, I analyzed the predictability of future net income based on both sets for financial information. The study measured the historical results separate from the pro

forma results and compared the results. Additionally the study compared the historical

results to that of the peer group.   The following model was used to assess the ability of

the three measures to predict future earnings.

Beaver's 1966 model used the metrics of Liquidity, Predictability and Leverage to

predict earnings. In this study I used Beaver's model to accommodate the additional

filing requirement of the pro forma financial statements.

Figure 1 *The Conceptual Predictability* **Framework**

(Adapted from Beaver, 1966)

Assess the Change in the Financial Metrics' Ability to Predict Change in Earnings using the Historical Financial Statements

The following model was used to assess the ability of the three measures to predict future earnings. The following model used the change in Liquidity, Profitability and Leverage to predict the change in net income based on the framework outlined by (Beaver, 1966).
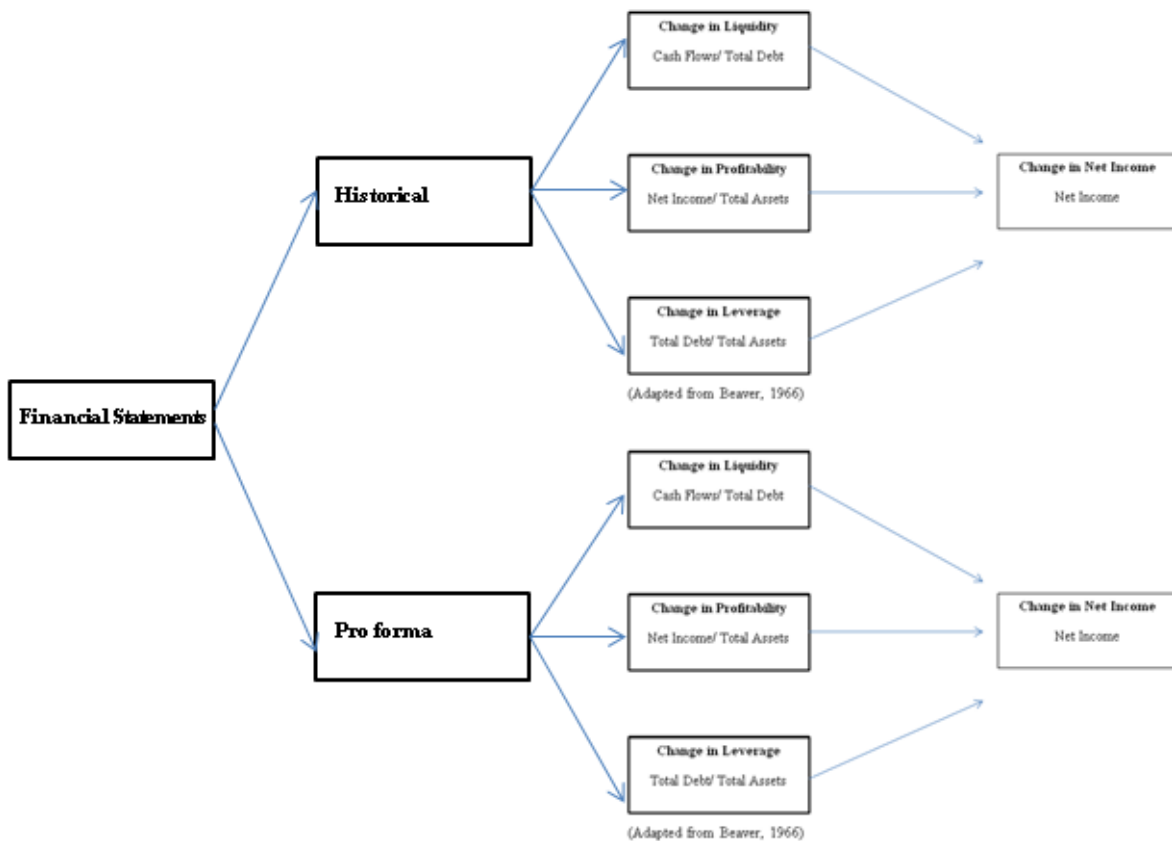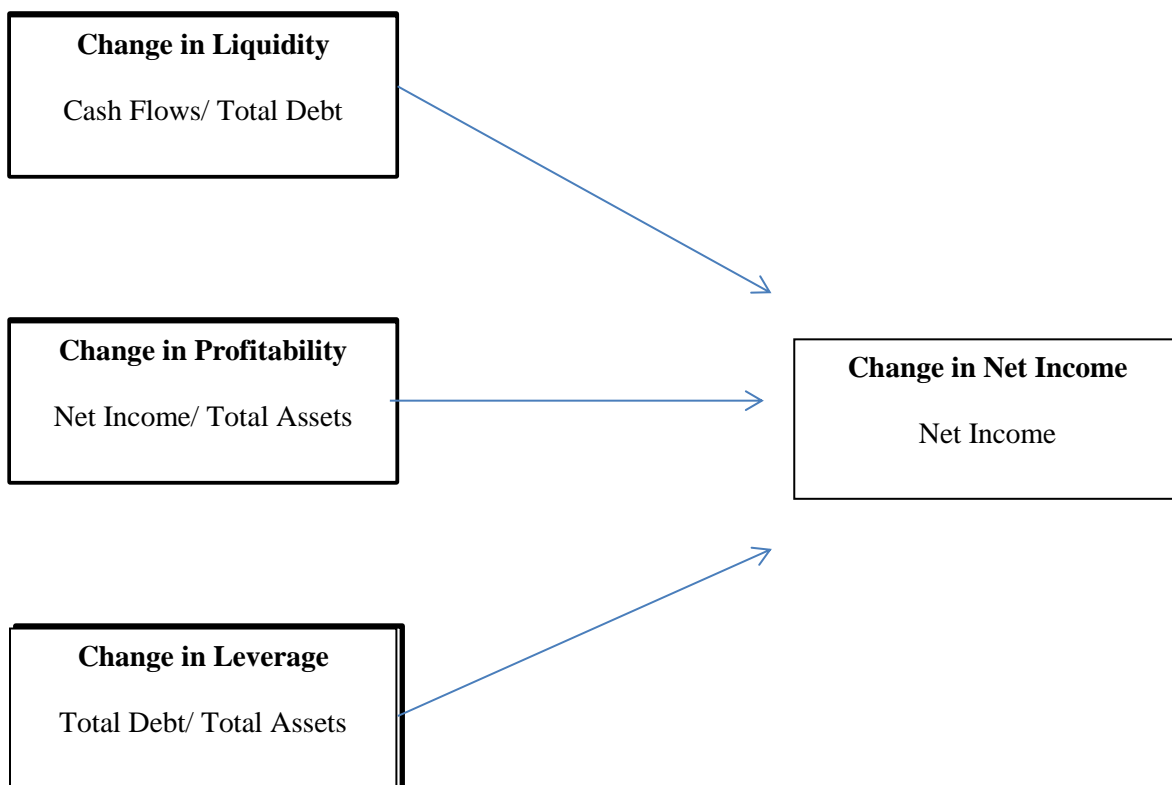
Historical vs Year 1

Figure 2 *The Conceptual Predictability* **Framework**

(Adapted from Beaver, 1966)

V.6.1   Assess the Change in the Financial Metrics' Ability to Predict Change in Earnings for the Historical Results

The approach to evaluate the effects of the accounting used in the filing was analogous to that used by Beaver (1966), who also used the liquidity, profitability and leverage metrics to predict future results. The study evaluated if the historical financial statements are predictive of future earnings as implied by the metrics outlined by Beaver (1966) framework.

Table 13 Definition of the Study Variables to Predict Change Earnings for the Historical Results

$R_1 = a + \beta_0 (L_{t+1} - L_{t-1})/(L_{t-1}) + \beta_1 (P_{t+1} - P_{t-1})/(P_{t-1}) + \beta_2 (V_{t+1} - V_{t-1})/(V_{t-1}) + u_1$

Returns and Earnings Variables

R_1	Change in Net Income between the historical period and Year 1
L_{t+1}	Is Liquidity in year t plus1 full year
L_{t-1}	Is Liquidity in the yearend prior to t
P_{t+1}	Is Profitability in year t plus 1 full year
P_{t-1}	Is Profitability in yearend prior to t
V_{t+1}	Is Leverage in year t plus 1 full year
V_{t-1}	Is Leverage in the yearend prior to t

Multiple regression was used to assess the ability of three measures (change in Liquidity, change in Profitability and change in Leverage) to predict Change in Earnings (Net Income) on the population. Change in Liquidity, Change in Profitability and Change in Leverage explained 57.6% of the change in Net Income.

V.6.2   Assess the Change in the Financial Metrics' Ability to Predict Change in

Earnings for the Pro Forma Results

The following model was used to assess the ability of the three measures to predict future earnings. The following model used the change in Liquidity, Profitability and Leverage to predict the change in net income based on the framework outlined by (Beaver, 1966).
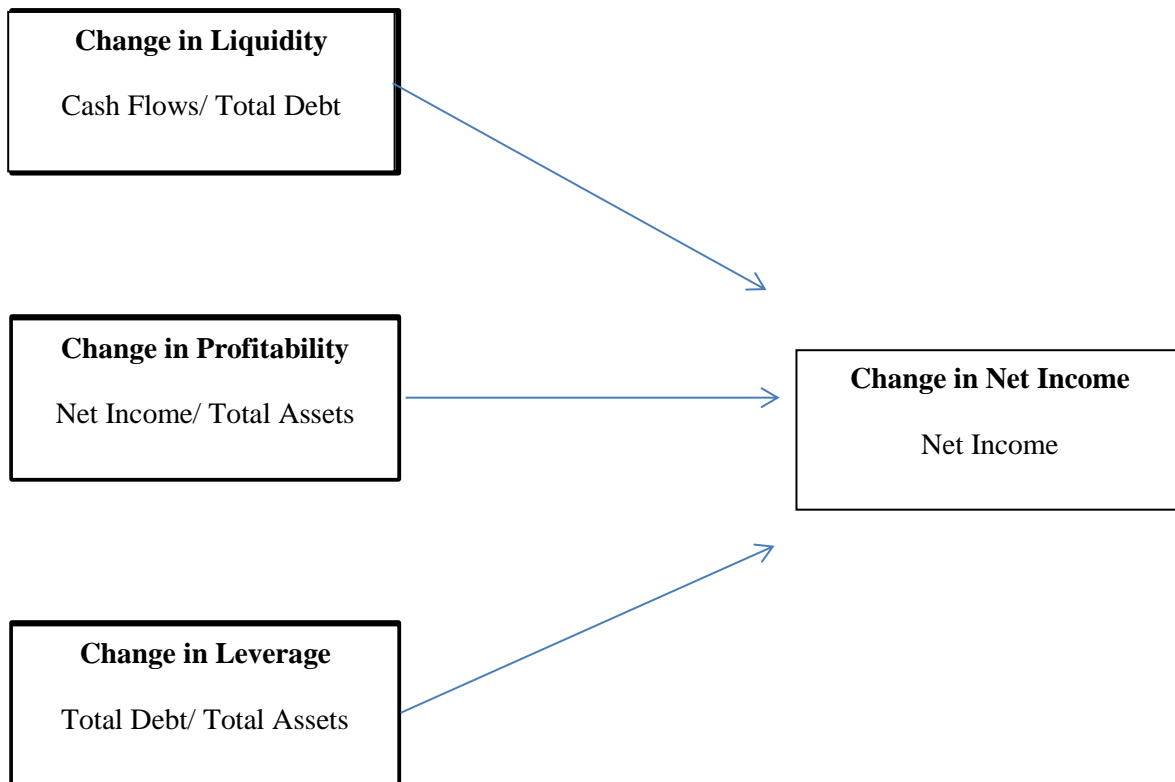
Pro forma vs Year 1

Figure 3 *The Conceptual Predictability* **Framework**
(Adapted from Beaver, 1966)

The approach to evaluate the effects of the accounting used in the filing was analogous to that used by Beaver (1966), who also used the liquidity, profitability and leverage metrics to predict future results. The study evaluates if the pro forma financial

statements are predictive of future earnings as implied by the metrics outlined by Beaver

(1966) framework and compared the results to the predictability of results of the

historical financial statements.

Table 14 Definition of the Study Variables to Predict change Earnings for the Pro Forma Results

$R_1 = a + \beta_0 (L_{t+1} - L_{t-1})/(L_{t-1}) + \beta_1 (P_{t+1} - P_{t-1})/(P_{t-1}) + \beta_2 (V_{t+1} - V_{t-1})/(V_{t-1}) + u_1$

Returns and Earnings Variables

R_1	Change in Net Income between the historical period and Year 1
L_{t+1}	Is Liquidity in year t plus1 full year
L_{t-1}	Is Liquidity in the year end prior to t
P_{t+1}	Is Profitability in year t plus 1 full year
P_{t-1}	Is Profitability in yearend prior to t
V_{t+1}	Is Leverage in year t plus 1 full year
V_{t-1}	Is Leverage in the year end prior to t

Multiple regression was used to assess the ability of three measures (change in

Liquidity, change in Profitability and change in Leverage) to predict Change in Earnings

(Net Income) on the population. Change in Pro forma Liquidity, Change in Pro forma

Profitability and Change in Pro forma Leverage explained 90% of the change in Net

Income. The same analysis was conducted on the historical group. For the historical

group, the change in liquidity, change in profitability, and the change in leverage

explained 57.6% of the change in earnings (Net Income).

It would appear that the predictability of the population at 57.6% is very different to the predictability of the population using the pro forma information at 90%. While this difference may not be significant, it may be meaningful to the users of the financial statements.

V.6.3   *Assess the Change in the Financial Metrics' Ability to Predict Change in Earnings in the Peer Group*

The approach to evaluate the effects of the accounting used in the filing was analogous to that used by Beaver (1966), who also used the liquidity, profitability and leverage metrics to predict future results. The goal of this paper was to evaluate if the predictability of future earnings as implied by the metrics outlined by the change in the metrics outlined by Beaver (1966) are as predictive as the peer group in predicting earnings.

Table 15 Definition of the Study Variables

$R_1 = a + \beta_0 (L_{t+1} - L_{t-1})/(L_{t-1}) + \beta_1 (P_{t+1} - P_{t-1})/(P_{t-1}) + \beta_2 (V_{t+1} - V_{t-1})/(V_{t-1}) + u_1$

Returns and Earnings Variables

R_1	Change in Net Income between the historical period and Year 1
L_{t+1}	Is Liquidity in year t plus1 full year
L_{t-1}	Is Liquidity in the yearend prior to t
P_{t+1}	Is Profitability in year t plus 1 full year
P_{t-1}	Is Profitability in yearend prior to t
V_{t+1}	Is Leverage in year t plus 1 full year
V_{t-1}	Is Leverage in the year end prior to t

Multiple regression was used to assess the ability of three measures (change in Liquidity, change in Profitability and change in Leverage) to predict Change in Earnings (Net Income) on the population. Change in Liquidity, Change in Profitability and Change in Leverage explained 93% of the change in Net Income. The same analysis was conducted on the pro forma group, which explained 90% and the historical group, which explained just 57.6%.

V.7 Compare the Predictability between the Population and the Peer Group

One hypothesized effect was that the financial statements included in the filing are not significantly different from their peer group in the predictability of Year 1 results. I performed a chow test (Chow, 1960) to determine if the independent variables have different impacts on different subgroups. As a result, this study empirically tested the

usefulness of the financial statements on their ability to predict future earnings between

the peer groups to that of the population.

Table 16 Definition of the Chow Test Study Variables
(Sc-(S1+S2)/K)/ (S1+S2)/ (N1+N2-2K)

S_c	Sum of Squared residuals from the combined data
S_1	Sum of squared residuals from population
S_2	Sum of squared residuals from peer group
k	Number of parameters
N_1	Number of observations in population
N_2	Number of observations in peer group

Based on the Chow test results the performance of the population was statistically

significantly different from the peer group. It would appear that the predictability of the

population at 57.6% is very different to the predictability of the peer group at 93%. While

statistical predictability is not what was intended by the standard it does provide a basis

for which the user can assess if the difference is meaningful to the user. Based on what is

noted above it would appear the peer financial statements are predictive as well as the pro

forma financial statement however the variances in elements, metrics and statistical

predictability would appear to be less meaningful to the users of the financial statements.

VI DISCUSSION

This study examined the value of spin-off financial statements to predict future earnings. A number of themes emerged. There were large variances between the historical, pro forma and Year 1 key financial statement elements. Those variances were much greater than those of the peer group. There were large variances between the historical, pro forma and Year 1 key financial statement metrics. Those variances were also much more than the peer group. The biggest variances were between historical and pro forma results. Variances ranged between 4% to over 500%. Materiality is an entity-specific aspect of relevance. SEC (1999) Staff Accounting Bulletin (SAB) No. 99 provides insight on how they determine if information is material to the users of financial information. While the rule of thumb of 5% of net income may be a basis for a preliminary determination that information is immaterial, the preparer needs also to assess if it would be relevant to the user of the financial statement. SAB 99 also provides examples of when the threshold might fall below 5% but still be important in instances where it would swing a company from a gain to a loss; provide an impact on trending etc. With the level of variance, ranging between 4% to over 500% it would not appear that the historical information is particularly useful to the reader about predicting future earnings.

The second area of analysis looked at the significance of difference in means between the historical, pro forma and Year 1 key financial statement elements. The difference in means was much greater than those of the peer group. The difference in means in the population were significant between historical and pro forma net income as well as the change in shareholders equity and between historical and Year 1 shareholders' equity.   This was because of the parent obtaining a buy out of its equity in the sub in advance of the spin, thus increasing the debt of the sub and decreasing shareholders'

equity. This also resulted in an increase in the interest expense on the sub's pro forma statements prior to spin-off.

The third area of analysis looked at the significance of difference in means between the historical, pro forma and Year 1 key financial statement metrics. There was a significant difference in the leverage metric between historical leverage ratio and Year 1's leverage ratio of the firms. Across all of the metrics, there were big differences in means on the financial metrics and that of the peer group, denoting greater volatility. Consistent with above, the increase in debt by the spin-off entity significantly changed the financial position of the spin-off entity. With this level of significant difference for the key elements of the financial statements and metrics, these financial statements did not appear particularly useful.

SFAC8 defines the purpose of the financial statement as to provide the users with financial information that is useful to existing and future investors in making decisions about providing resources to the entity. Objective three of the standard focuses on the needs of the users of the financial information that would support the decision by existing and potential investors about the buying, selling or holding of equity and debt instruments. Specifically, this objective suggests that the users depend on the returns that they expect from an investment, in the form of, for example, net cash inflows, dividends, principle and interest or market price increases. A key element of the assessment around future cash inflows are existing claims to those inflows captured in accruals, other liabilities, and the speed with which management discharges its obligations. Based on the above it would appear that leverage was significantly different and the historical financial statements were not useful.

Per SFAC8, characteristics of useful financial information must be relevant and faithfully represent the facts. SFAC 8 states that financial information is capable of making a difference in decisions if it has predictive value, confirmatory value, or both. Financial information is outlined in the Concept Statement as having predictive value if it can be used as an input to a process employed by users to predict future outcomes. To assess this in the study I found that the peer financial metrics were predictive of future earnings but the historical spin statements are not as predictive as their peer group. There was a significant difference in the predictability between the peer group and the historical spin metrics.

Per SFAC 8, to be useful and worth providing the benefits of the information should exceed its costs. The effort that goes into the creation of these statements is significant. Between the periods of 2009 to 2014 based on disclosures, it cost approximately $2 billion to provide this information for those years of the population. One firm spent $1.2 billion for the transaction cost and refinance. I was unable to locate any research on the effectiveness and its lack of effectiveness in predictability and its extreme cost. As an example, the company that paid $1.2 billion had a change between the historical financials and the end of Year 1 of an increase in total assets of 7%, an increase in total liabilities of 263%, a decrease in shareholders' equity of 69% and an increase in Net Income of 47%. In that example, it would appear that the historical information was not very informative to the user.

The regulation requires the preparation of 2 years of a balance sheet and 3 years of an income statement. In order to create three years of an income statement a starting point is needed so operationally 4 years of a balance sheet must be prepared. As noted in

review of the filing, many firms took substantial time to complete the registration process thus requiring more time and money spent on the creation of earlier periods that would drop off prior to final approval. The additional time required delays time to market. The inclusion of the historical period is less efficient and more burdensome. It also results in significant time by the preparer in review of the filing. Finally, it provides information to the user that does not meet the criteria of useful as the historical information is significantly different in many aspects and may confuse the reader. Additionally, SAB 99 mentions that information may be important in instances where it may provide trending. The results noted above had variances that were between 4% and 500% and statistically significant differences in earnings and the predictability of earnings; one might argue that the inclusion is misleading based on level of variances noted.

In 2013, the staff issued its *Report on Review of Disclosure Requirements in Regulation S-K,* which was mandated by Section 108 of the Jumpstart Our Business Startups Act (the "JOBS Act").6 Section 108(b) of the JOBS Act that required the Commission to submit a report to Congress. The results of this study suggest that this report needs to include specific recommendations of the Commission on how to streamline the registration process in order to make it more efficient and less burdensome for the Commission and for prospective issuers who are emerging growth companies.

The Commission staff has launched a broader initiative called disclosure effectiveness to evaluate the effectiveness of disclosures. The results of this study suggest that the board should revisit the filing requirement of three-year historical results and pro forma financial statements. The research supports the usefulness of the current reporting for peer companies. The research supports the usefulness of the pro forma information.

The research does not appear to support the usefulness of the historical information. The

filing requirement of three years should be reduced.

VII CONCLUSION

VII.1 Contribution to Practice

This study contributes to the practice in a number of areas. It provides insight into the usefulness of the information included in spin-off financial statements. Insights were gained on whether the financial historical information, pro forma information or both are capable of making a difference in decisions and are predictive. This is significant because if this data is not predictive, then markets are not as efficient as assumed. These insights may also help the regulator to evaluate a need to reduce the historical periods presented in these filings. Additionally, the study provided insights into the cost and benefits of the requirements.

VII.2 Contribution to Theory

This study contributes to the literature in a number of areas, including a quantitative assessment of the predictability of the peer firm's financial statements. It also provides a quantitative assessment of whether either the historical financials, pro forma or both are predictive for the firm's application of the regulation requirements for (SEC form 10- 12B) submission. The study provides the application of SFAC 8 to assess if the historical financial statements and pro forma financial statements are predictive of future earnings.

VII.3 Generalizability

The study provides a framework to assess the predictive value of future accounting standard changes where the comparative information is provided.

VII.4 Limitations and Future Research

This framework requires that accounting changes have a comparable period. The final new guidance on materiality was not available thus could not be used as a lens in which to evaluate these changes.

There is an opportunity to view the role of Agency theory in the interplay between the parent and the firm as demonstrated by the financial statement changes in future research. There is an opportunity to study the tax advantage of this strategy vs other strategies in future research.

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APPENDIX

Publication List

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VITA

Nancy Stempin is a twenty-five year accounting executive. She holds a B. S. and M.B.A from Drexel University. While at Drexel University, she was a teaching assistant and research assistant in the statistics department. She received the top teaching assistant award from the College of Business. She recently completed an EDB at Georgia State University, Atlanta, Georgia.

During her career, she has held a number of executive accounting positions. Early in her career Nancy was an auditor with PricewaterhouseCoopers where she staying into her manager years working on various clients across industries. While at a major Pharmaceutical company, she worked in internal audit and the financial planning analysis functions. She implemented a project management system across the organization. She also led the strategic operating plan for the function. While at a different top 10 Pharmaceutical company, she was responsible for US technical accounting on IFRS for a foreign filer. She led the technical accounting for all mergers and acquisitions, collaborations, licensing, clinical trials, contracts, etc. She led the acquisition of a public company including integration, consolidation, delisting, valuation, etc. She later worked as global controller for a division of a Dow 30 chemical company where she had oversight for accounting operations around the globe. Additionally, she worked on the spin-off of a major segment of the company. While at a different company, she administered the CPA Exam as the Director of Content for the exam.

She has been the US Controller for a Top Dow 30 pharmaceutical company for the past several years where she maintains oversight for their US Commercial Operations. She has led the oversight for the acquisition and integration of several Fortune 100 companies into operations. She has also led global assessment of new

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