ISO 9000 Certification Study: Selection of Financial Criteria

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Abstract

This study explores the possible criteria in which to financially measure ISO 9000 certification, and a response to "Does ISO 9000 Certification Pay?"; published by ISO Management Systems on July, 2002. Suggested criteria include return on assets (ROA), return on sales (ROS), earnings per share (EPS), contingency liabilities, service for existing products, warranty liability, warranty expense, and intangible assets. Criteria suggested to excluded from ISO 9000 measurement include; debt, stock price, Tobin's Q, revenue gains and losses, depreciation, and taxes.

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Overview

Summary

Due to the basis for selection of financial criteria; the decision to include certain financial criteria and exclude other financial criteria. The selected financial criteria are; return on sales (ROS), return on assets (ROA), warranty liability, warranty expense, intangible assets excluding goodwill, licensing, leasing and sale of intangible assets, earnings per share (EPS), contingency liabilities, and service for existing products. The excluded financial criteria are; stock price, debt, Tobin's Q, revenue, gains, depreciation, and taxation. There are several limitations to the study that impact of certification on the financial statements. However, I believe the selected financial criteria will be sufficient to move this study forward.

Introduction

The study of ISO 9000 certification and its impact of business financial statements can be overwhelming and expansive. The objective was to select financial items that may be impacted if a business chooses to incorporate ISO 9000 certification within their entity. Due to my expertise, this study focuses research on pro forma financial statements, and financial information that may be related to the financial statements.

The financial statements include the balance sheet, income statement, and statement of cash flows. These three statements are widely accepted by United States Generally Accepted Accounting Principles (US GAAP), and United States Securities Exchange Commission (SEC) as acceptable documentation to present fairly and accurately the financial and economic position of a business entity. Additionally, subsidiary accounts and financial items found in 10-K annual reports were reviewed to be acceptable as inclusion for review. The 10-K annual report would give a more inclusive viewpoint, and allow greater detail for the selection of financial criteria.

There is an assumption to this study.[1] The assumption is a relationship or measurable impact of ISO 9000 certification and the financial statements exist. There are three basis of selection for the financial criteria.

Basis of Selection

First, selection of non-manipulative information. All financial information may be manipulated to varying degrees. Therefore, the inclusion of information that would be resistant but not immune to arbitrary changes in accounting practices and policies is appropriate. The presence of economic or arm's length transactions within the criteria can be given greater weight for decision makers, due to the fact that arbitrary changes become more difficult to justify. The second basis is comparability.

Comparability is important for accurate evaluation across business entities and business sectors. However, due to differences allowed in US GAAP, differing entities may use the same identifying accounts or policies but contain differences in values. An example is revenue recognition. Revenue may be measured by several different methods (percentage of completion, cost, etc.) and contain differing values, but still be called "revenue".

The third basis is US GAAP. Chosen financial criteria included information found by US GAAP set forth by Financial Accounting Standards Board (FASB) for

[1] This study has several assumptions, however, a relationship between human capital and financial statements is the largest.

several reasons. Ignored in this study is information found exclusively through International Financial Reporting Standards (IFRS) set by Internal Accounting Standards Board (IASB). US GAAP is rules based accounting system, while IFRS is principals based accounting system. I choose US GAAP due to my background, the likelihood that the study will focus on businesses that report their financial information in the United States, and rules based accounting systems gives more comparability and restricts the manipulation of financial information.

Limitations

There are several limitations for the selection of financial criteria. Addressed is the most prominent and recurring limitations. First, the financial statements are representations of management. Management may misrepresent their position, and ascertaining their motives is difficult. This is an inherent risk in using the financial statements; however, the risk is mitigated by external auditors and regulatory bodies. The second limitation is that ISO certification permeates any organization that incorporates its use. Due to the nature and behavior that certification bears; it is difficult if not impossible to restriction its impact on the financial statements.[2]

Lastly, there is a scope limitation on this research for the selection of financial criteria. I selected financial information that may be found in published annual reports given to the SEC. This report is called the 10-K. The study did not use information that is solely derived from other sources; such as journals, financial equity markets, or publications.

Selected Financial Criteria

Return on Assets (ROA)

Return on assets also called return on investment is a performance trend that measures the efficiency of management at creating earnings. The calculation is created by dividing net income by total assets. There are several issues involved, it includes heavily manipulated financial information, such as, depreciation, taxation, revenue, classification of income, and non-operating assets.

Return on Sales (ROS)

Return on sales is another trend that measures performance. The calculation is net income before taxes and interest over sales (NIBIT/SALES). Alternative to the change from assets to sales being measured, ROS may give a more a precise measurement of performance. The removal of interest and taxes, are considered non-operating items. Interest and taxes in the financial statements are not considered solely dependent of an entities performance. Availability of credit, cost of credit, cost of capital, and nature of business transactions are greater influential factors of interest and taxes than the performance of operations. Therefore, return on sales may give greater precision than return on assets. *Alternatively, NIBIT over Assets may be more appropriate than net income over assets.*[3]

Earnings per Share (EPS)

Earnings per share (EPS) is a financial standard for the use of capital. EPS is a performance measure that values the net income per outstanding common share. EPS is a compromise solution from using market

[2] This lack of restriction allows serious issues to arise on whether any future study of this kind has any accuracy or reliability. Further development of measures and standards is clearly needed.

[3] NIBIT removes some arbitrary manipulation.

value price of an outstanding common share (stock price). Stock price will be evaluated in non-selected financial criteria. EPS is appropriate to measure the increase or decrease in value of outstanding common shares. Basic or Diluted EPS may be used. However, basic EPS may be more appropriate.

Contingency Liabilities

Contingency liabilities are potential future liabilities that may or may not exist. Contingency liabilities may or may not be found on the pro forma financial statements. When these liabilities are not found in the financial statements they are accompanied as disclosure notes. These liabilities are usually found in sections named business risks, going concern risks, or regulatory issues on the 10-K form.

	Dollar Amount of Potential Loss		
Likelihood	**Known**	**Reasonably Known**	**Not Reasonably Known**
Probable	*Liability accrued and disclosure note*	*Liability accrued and disclosure note*	*Disclosure note only*
Reasonably Possible	*Disclosure note only*	*Disclosure note only*	*Disclosure note only*
Remote	*No disclosure required*	*No disclosure required*	*No disclosure required*

Figure-1

The above table is the classification system used to identify and report contingency liabilities. The inclusion of contingencies that are either known or reasonably and probable or reasonable possible. This ensures that the contingencies will be reported and values of the contingencies are reportable.[4] For the purpose of this study, contingencies that deal with arbitrary regulations, tort compliance, and non-performance issues should be ignored.

Arbitrary regulations involve matters, such as, changes of issuances in permit and licensing dates. Additional exclusion is tort compliance issues that deal with form (form over substance debate). An example of tort compliance issue is consideration, or standing. An example of contingency liability is a contract dispute. A contract dispute may include a plaintiff alleging that delivered goods didn't meet specifications. This contingency liability would deal with performance and quality issues that ISO certification addresses.

Service for Existing Products

Service for existing products is a common sense approach to measuring the impact of certification. However, many companies do NOT report a line item called "Service or Repair of Product". This is for two reasons. First the cost of service to repair a product may be immaterial, allowing the company not to disclose this cost. This is a limitation of the study involving management discretion. Secondly, the line item will more than likely be aggregated into another account, which dilutes the accuracy and reliability of the data. While service for existing products is highly attractive for inclusion in the study, it is difficult to ascertain any reliable information from the 10-K, and the financial statements (scope limitation). A word of caution: **The maintenance and repair line item found in the income statement does not involve products or certification**. This line item deals with Property, Plant, and Equipment (PPE). The line item relates with property such as the building where workers create the goods, and paved roadways on business property.

Warranty Liability and Warranty Expense

Warranty liability found on the balance sheet and warranty expense found in the income statement is affected by certification. Certification seeks to improve or maintain the processes and quality controls for creation or service of products. Certification

[4] This selection criteria lays the basis for reliability and comparability for contingency liabilities.

does not ensure products from defect of design, but improves the processes that would detect defects or design flaws. The hypothesized relationship of warranty expense and liability compared to sales would be different from certified and non-certified business entities.[5]

Intangible Assets

Intangible Assets is a representation of human capital. Implementation of certification standards increases human capital. As firms seek to sustain higher standards of products and processes, workers will create unique methods and procedures to implement standards. These standards can be monetized through patent and copyright laws. Additionally, these standards may be licensed, sold, or held for future use. Companies who create patent and copyright material would seek to capitalize intangible assets. Studying the relationship of licensing and Fair Market Value (or cost) of intellectual property should be included for this study. Companies who create intellectual property would have an ability to provide greater revenue streams, create sustainable competitive advantages, increase assets on the balance sheet, and increase investment returns for shareholders.

Excluded is goodwill from intangible assets. Goodwill is impairment in value on the balance sheet. Goodwill most is notably derived from buying assets or entities greater than their fair market value or cost. This is not intellectual property. Additionally, this study dismisses Tobin's Q from being a reliable method to measure the impact of certification from the financial statements. An explanation for Tobin's Q is found in non-selected financial criteria.

Non-Selected Financial Criteria

Debt

This study will define debt as a future obligation which is due greater than; one operating cycle, fiscal year, or calendar year in exchange for immediate resources. This definition is a departure from US GAAP. Under this definition, debt is found only in long-term liabilities on the balance sheet. The balance sheet provides a snapshot in time on the business entity. This is a significant difference from the statement of cash flows and income statement, which measure changes over time. The balance sheet does not inherently measure changes in economic or fiscal position of entities. Only by comparison of different balance sheets can changes be noted. Furthermore, debt does not measure the performance of a business, but rather the financial status of a firm.

Performance is not normally a major consideration for the acquisition of debt. The largest factors for debt is, unsustainable costs, growth of business entities, the cost of capital (compared to cost of debt), and ownership of equity. Additionally, taxation and regulatory compliance are more considerable factors for the acquisition of debt, than performance of operating divisions. However, warranty liability may be included in the long term liability section of the balance sheet, and is the exclusion made for debt.

Stock Price

Earnings Per Share (EPS) is chosen over stock price for appropriate financial criteria. This is a comprise solution for individuals who are interested in returns for

[5] This hypothesis is heavily dependent on valuations being consistent, and being open to full disclosure. Additionally, comparability issues arise between different formulas and models of valuation.

shareholders and positions in equity. The price of outstanding shares being traded on equity platforms and markets are heavily impacted on assumptions which are not solely derived from the financial statements. Stock price is actually a measure of expected future performance and position of a business, which is expressed currently in value. Stock price derives much of its assumptions through agency theory. These assumptions are not easily measurable, and are heavily exposed to fallibility. Therefore, stock price is not a reliable indicator for measuring certification.

Tobin's Q

There are several reasons to exclude Tobin's Q from the selection of financial criteria. Tobin's Q is a measurement that is expressed as follows: (MVE+PS+Debt)/TA. MVE is the market value of outstanding common shares, PS is the liquidation of preferred stock, and TA is total assets. Current understanding of Tobin's Q is market value of outstanding stock is the summation of outstanding shares multiplied by stock price. This study excluded stock price as a reliable indicator for the study. Debt as mentioned before does not indicate performance.

Furthermore, Tobin's Q is a measurement indicator for a specific type of intangible assets. Tobin's Q is a measurement for goodwill. Tobin's Q is a measurement for decision makers on whether to sell or hold an asset. The assumption behind Tobin's Q is that operating units are performing positively. The following is a scale that would result from using Tobin's Q:

(-1)____________(0)_____________(+1)

Figure-2

If the measurement is positive, negative goodwill would exist. The decision maker would then hold the asset, because no gain would exist on sale. If the measurement is negative, then positive goodwill would exist. This tells the decision maker that it is more prudent to sell the asset than to hold, and a gain on the sale would exist. Therefore, Tobin's Q does not measure certification, because it indicates goodwill. *Goodwill is classified as an intangible asset, but is not intellectual property.*

Revenue, Gains, and Losses

Total revenue, gains, and losses is excluded from the selection of financial criteria. Revenue in totality includes revenue streams that may have nothing do with the performance of operating divisions. An example would be leasing of buildings. This type of revenue would bear no indication on the performance of operating divisions, which create products or ensure quality. Gains and losses are classified as unusual or intermitted sales that result from positive/negative sale of assets. Gains and losses are seen as non-reliable transactions that exist, due to their scarcity. Due to these factors revenue, gains, and losses are excluded as a selection of financial criteria for this study.

Depreciation and Taxation

Depreciation and taxation are expenses that occur due to arbitrary accounting policies and issues. Depreciation measures the value of economic changes in assets based on policies and classifications that may be changed. This violates the manipulation basis for selection. Taxation is based on the nature, timing, and extent of transactions, and government regulations. Due to the arbitrary nature that occurs in taxation it is not a reliable indicator of the impact for certification.

About The Author

Jeff Morrical is the author of JRM Ledger™; a weekly column dealing with accounting, ethics, fraud, government, and corporate governance. Jeff Morrical holds a master’s and bachelor’s degree in accounting and a bachelor’s in law enforcement justice administration. After graduating from Western Illinois University, Jeff founded JRM Financial Corporation.

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