

**GOING FROM A PRIVATE TO PUBLIC  
COMPANY AND THE IMPACT ON REVENUE  
RECOGNITION**

by

ALEXANDRA JECROIS MADRID

B.S, Universidad Centroccidental Lisandro  
Alvarado, 1998

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Major Professor  
Dr. Allen M. Featherstone

## **ABSTRACT**

PS International (PSI) is an international trading company that specializes in the trading of bulk agricultural commodities. It has global strength to both export and import a variety of agricultural products using affiliated offices positioned throughout the world.

To adapt to competitive pressures, advancements in technology, and economic conditions, privately-held companies are re-structuring their business by acquiring or partnering/merging with other companies. This results in a redefinition of the assets, operations, and relationships with the stockholders.

The acquisition of a private company by a publicly held company creates unique issues because the newly acquired private company must meet SEC accounting standards. One example of this is the acquisition of PSI by Seaboard Corporation, a publicly traded company. In 2010, the owners of PSI sold fifty percent share of the company to Seaboard Corporation. Today Seaboard Corporation owns 80% of PSI.

This research problem is based on the challenges that the acquisition of a private company by a public company faces. The focus of the analysis was on the accounting changes in the area of accounts receivable, in particular when revenue is recognized. PSI used cash basis accounting and Seaboard is required to use an accrual method that required a modification in PSI's accounting system. This research investigates the impact of those changes on PSI's accounts.

The main factors used for comparison of revenue recognition under the cash and accrual method were departure date, transit time and payment terms. The comparisons were based on a data from 196 deliveries made in 2012.

In the cash method, revenue was recognized for all the transactions during the month of shipment departure. This revenue was included whether or not the transactions were paid in full and whether or not the cargo arrived at its destination in the same month.

In the accrual method, only 20.92% of the transactions were recognized in the current month of shipment, because revenue must be earned and realizable to be consistent with the SEC criteria, otherwise revenue must be deferred until the payment is collected. Therefore, as the result of applying either the cash or accrual method in the income statement, transaction will be recorded as accounts receivables and/or deferred transactions. With the application of the accrual method, the working capital calculation and the annualized margin must take more into consideration by managers, the trading staff and logistic staff.

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## **CHAPTER I: INTRODUCTION**

### **1.1 PS International History**

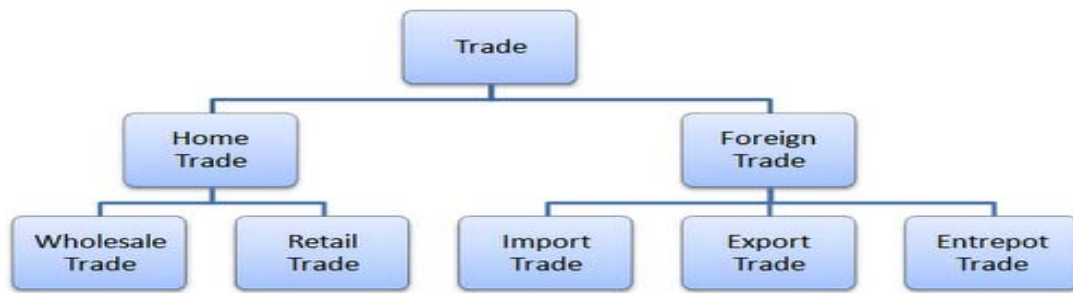
PS International (PSI) is an international trading company that specializes in the trading of bulk agricultural commodities and has the global strength to export and import and purchase a wide variety of agricultural products using affiliated offices throughout the world.

International trade is the exchange of capital, goods, and services across international borders or territories. Trade exists between regions because different countries have a comparative advantage in the production of some tradable commodity, or because size allows for the benefits of mass production. Trade also allows for the specialization and division of labor, allowing people to concentrate on a small aspect of production to increase efficiency while trading for other needed products.

Trade is essential for satisfaction of human wants. Trade is conducted not only for the sake of earning profit; it also provides a service to the consumers. Trade is an important social activity because society needs an uninterrupted supply of goods often increasing and ever changing to meet unlimited human wants. Trade began with the beginning of human life and shall continue as long as human life exists on the earth. It enhances the standard of living of consumers. Trade can be divided into two types as show in Figure 1.1 (Akrani 2011) : Internal or domestic trade and external or international trade. Eighty percent of PSI transactions are international.



**Figure 1.1 Types of Trade**



Source: (Akroni 2011)

PSI was founded in 1971 by Melvin “Mike” Fields. The main office is located in Chapel Hill, North Carolina, USA, with affiliated offices in France, Mexico, China and Korea.

The trading teams have years of experience sourcing products from a variety of international origins and negotiating the lowest prices. Many of the traders are native to the countries in which they have business relationships, allowing them to have a better knowledge of the client’s specific country and needs. Traders communicate fluently in over 10 languages.

PSI has experts in logistics of land and ocean shipments and in the arrangement for the movement of product, offering both containerized bulk and break bulk shipments in a range of packaging options. Delivering personal service through coordinated teamwork is the backbone of PSI’s sales commitment.

PSI understands that markets are constantly changing because of many factors such as the variation in exchange rates, international financial crises, international price changes, and trade policies. Once the decision to expand was made, PSI looked for a partnership that could provide continuity to the business and maintain the wellbeing of the employees that

had been part of the PSI for over 35 years. The potential partners when looking to expand were private or public companies.

## **1.2. Acquisition of PS International by Seaboard.**

To adapt to competitive pressures, advancements in technology, and economic conditions, privately-held companies are often forced to adapt their business by acquiring or partnering/merging with another company to remain competitive or to grow their business. This whole process means a redefinition in the assets, operations, and relationships with the stockholders in search of higher growth, new technology, business expansion, and greater revenues.

In 2010, the owners of PSI sold 50% of the company to Seaboard Corporation; a publicly traded firm. Today Seaboard Corporation owns 80% of PSI. Seaboard Corporation is a unique company with a rich history dating back more than 90 years. Although the company has evolved over time through acquisitions, partnerships and internal growth, its roots are in grain and agriculturally derived products.

Seaboard Corporation directly or indirectly employs more than 14,000 people worldwide. It is 427 on the 2012 Fortune 1000 list with net sales of approximately \$5.7 billion, annually. Seaboard is traded on the NYSE AMEX Equities under the symbol SEB.

The research problem is to measure the changes that the acquisition of PSI by Seaboard brought to the organization, which among others are economies of scale, benefit tax, financial resources, entry in new markets, growth and expansion, meeting competition, and increasing market share. The purchase required that the account receivables be measured differently way than they previously were. As a result PSI expanded the financial department to meet those challenges.

### **1.3 Objective**

The objective of this thesis is to determine the impact of the changes in the methodology applied to revenue recognition in account receivables on PSI, using the accounting procedure before and after the acquisition.

The data used to evaluate the impact was collected from Netsuite, the enterprise resourcing planning software (ERP), which has all the data related to all the transactions completed by PSI including (countries of origin and destination for the commodity, payment terms, transit time, sales price, revenue, among others).

The thesis is organized in six chapters as follows: Chapter 2 is a literature review of revenue recognition focusing on the requirement that publicly traded companies must comply with the Generally Accepted Accounting Principles (GAAP), basic concepts in revenue recognition and an introduction to the Sarbanes-Oxley Act. Chapter 3 describes the theory used as framework to establish the difference in the revenue recognition in private and public companies. Chapter 4 presents the procedure for the comparative analysis. Chapter 5 presents the findings from the data analysis and results. Chapter 6 provides a summary and explains the reason for the changes in the revenue recognition methods and implications.

## **CHAPTER II: LITERATURE REVIEW**

In this chapter, an overview of revenue recognition is presented, focusing on the requirements that publicly traded companies follow to comply with the U.S. Generally Accepted Accounting Principles (GAAP). These accounting principles are established by the Financial Accounting Standards Board (FASB).

### **2.1 GAAP History and Regulatory Entities:**

The great depression caused by the crash of the stock market in the late 1920s was a significant moment in history because large amounts of money were lost by banks and investors and the confidence in the market fell. There needed to be a mechanism to re-establish the confidence and trust in the capital markets.

Actions were taken and as a result, the U.S. Congress passed the Securities Act of 1933. This law, together with the U.S. Securities Exchange Act of 1934 that created the Securities and Exchange Commission (SEC) focuses on two aspects:

- “Companies publicly offering securities for investment must tell the public the truth about their businesses, the securities they are selling, and the risks involved in investing.
- People who sell and trade securities, brokers, dealers, and exchanges must treat investors fairly and honestly, putting investors interests first” (Securities and Exchange Commission 2012).

Lagassé (2010) studied the history of financial reporting in the U.S. and suggested that while the financial standards were created by the SEC, it may be better to have this done by the private sector where companies could provide input and guidance. With this, the power to establish financial reporting standards was moved to the American Institute of Certified Public Accountants (AICPA). The AICPA was responsible for establishing

accounting standards through two different committees: the Committee on Accounting Procedures from 1936 to 1959 and the Accounting Principles Board from 1959 to 1973.

AICPA strove to provide standards that would be beneficial to users and preparers of financial statements. During the 1960s, “it became apparent that standards affecting issuers (business and industry) and users (investors and lenders) of financial information could no longer be established unilaterally by public accountants”. The AICPA relinquished its power in 1973 to the Financial Accounting Standards Board (FASB) (Lagassé 2010).

The Financial Accounting Standards Board (FASB) has been the designated organization for establishing standards of financial accounting that governs the preparation of financial reports by nongovernmental entities. Those standards are officially recognized by the Securities and Exchange Commission (SEC) (Financial Reporting Release No. 1, Section 101, and reaffirmed in its April 2003 Policy Statement) and the American Institute of Certified Public Accountants (Rule 203, Rules of Professional Conduct, as amended May 1973 and May 1979). “Standards are important to the efficient functioning of the economy because decisions about the allocation of resources rely heavily on and understandable financial information” (Financial Accounting Standards Board n.d.).

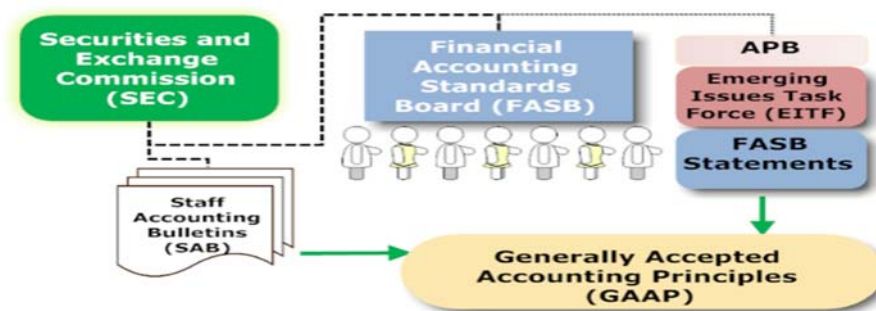
The Financial Accounting Standards Board (FASB) is under the supervision of the Financial Accounting Foundation with a Financial Accounting Standards Advisory Council advising and providing input on accounting standards. Other organizations involved in determining U.S. accounting standards are the Governmental Accounting Standards Board (GASB), formed in 1984, and the Public Company Accounting Oversight Board (PCAOB).

In the Figure 2.1, the Regulatory entities involved in the U.S. GAAP are illustrated.

The work of the FASB is an integral part of the United States economy as it demands that financial information put forth by companies is “credible, transparent, and comparable” (Financial Accounting Standards Board n.d.).

The U.S. Securities and Exchange Commission (SEC) mission “is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation”. The laws and rules that govern the securities industry derive from a straightforward concept: all investors whether large institutions or private individuals should have access to certain basic information about an investment prior to buying it, and as they hold it. Thus, the SEC requires public companies to disclose meaningful financial information to the public. This provides a body of knowledge that all investors use to judge for themselves whether to buy, sell, or hold a particular security (Securities and Exchange Commission 2012).

**Figure 2.1 GAAP Regulatory Entities.**



Source: <http://web.co5.in/2011/03/accounting-principles.html>

## 2.2 Sarbanes-Oxley Act

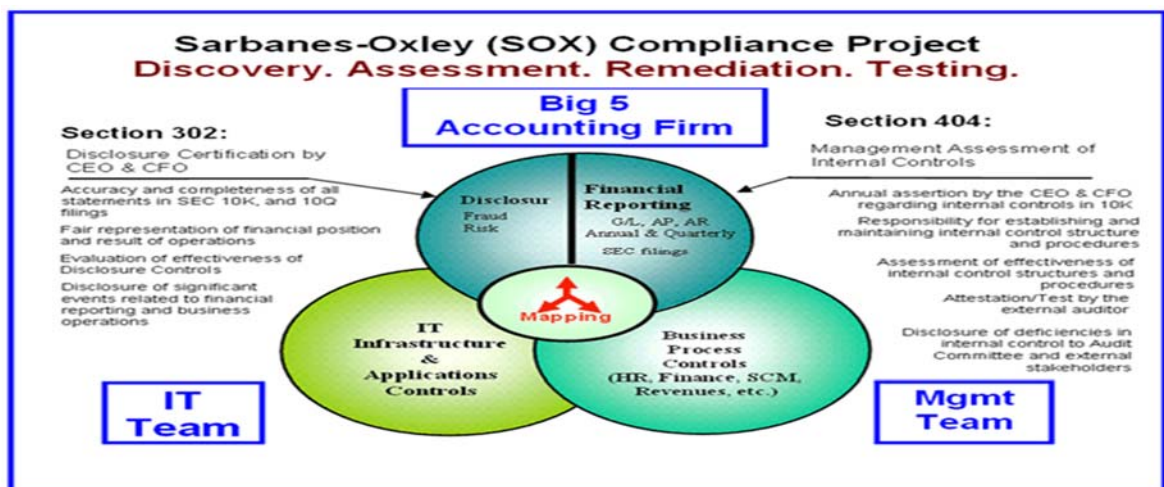
The intent of the Sarbanes-Oxley Act in 2002 was to protect investors by improving the accuracy and reliability of corporate disclosures.

The Sarbanes-Oxley Act created new standards for corporate accountability in addition to penalties for acts of wrongdoing. The Act changed how corporate boards and executives interact with each other and with corporate auditors. The Act specifies new reporting responsibilities, including adherence to new controls and procedures designed to ensure the validity of financial records.

The Act requires all financial reports to include an internal control report. This documents that not only are the company's financial data accurate, but the company has confidence in them. Year-end financial reports contain an assessment of the effectiveness of the internal controls. The issuer's auditing firm is required to attest to that assessment. The auditing firm reviews controls, policies, and procedures through a Section 404 audit, conducted along with a traditional financial audit (SOX -Online 2003).

The Internal control requirements are achieved by integrating, documenting and testing three functional areas: Financial Reporting, IT Security and Business Process controls (Figure 2.2) (Jones n.d.).

**Figure 2.2 Sarbanes Oxley (SOX) Act Compliance Project Management Best Practices**



Source: Med Jones, International Institute of Management (IIM).

The Sarbanes-Oxley Act created an independent accounting oversight board called the Public Company Accounting Oversight Board (PCAOB) to oversee the activities of the auditing profession. It provides additional enforcement tools to the Securities and Exchange Commission, restricts non-audit services by accounting firms, holds corporate executives accountable for the accuracy of financial reports, increases criminal penalties for securities fraud, and provides for the separation of investment banking and investment analysis.

The Sarbanes-Oxley Act identifies areas of reporting that are most susceptible to fraud or inappropriate manipulation in four major categories: (1) revenue recognition; (2) expense or cost recognition; (3) acquisition or merger related; and (4) “other” conduct including related party transactions, and improper accounting for foreign payments in violation of the Foreign Corrupt Practices Act (FCPA).

Some of the accounting issues related to revenue recognition had been improper timing of revenue recognition, fictitious revenue and improper valuation of revenue (US Securities and Exchange Commission January 24, 2003).

### **2.3 Basic Concepts in Revenue Recognition**

The conceptual basis for revenue recognition is that it is the process of recording an item in the financial statements as an asset, liability, revenue, expense, or the like.

There are four key elements for information to be recognized in the financial statements.

1. The information must meet the definition of an element of the financial statements.
2. The information must be measurable.
3. The information must be reliable.



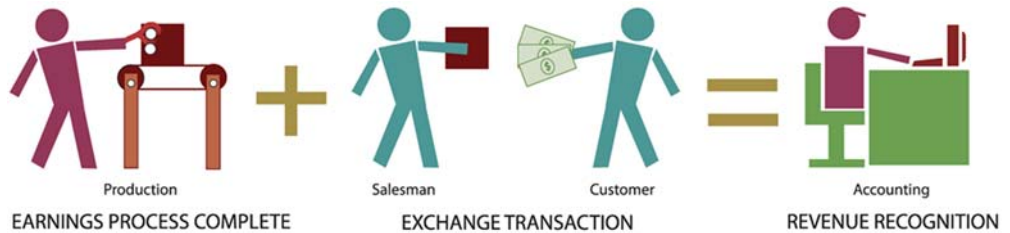
4. The information must be relevant.

According to the Statement of Financial Accounting Concepts No. 6 Elements of Financial Statement “revenues are inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity’s ongoing major or central operations” (Financial Accounting Standards Board 1985).

Assets increased by revenues may be of cash, claims against customers or clients, other goods or services received, or increased value of a product resulting from production. Transactions and events from which revenues arise are in many forms including output, delivery sales, fees, interest, dividends, royalties, and rents depending on the kinds of operations involved and the way revenues are recognized (Financial Accounting Standards Board 1985).

Paragraph 83 states “Revenues and gains of an enterprise during a period are generally measured by the exchange values of the assets (goods or services) or liabilities involved, and recognition involves consideration of two factors (a) being realized or realizable and (b) being earned, with sometimes one and sometimes the other being the more important consideration”. Figure 2.3 represents the revenue flow when the product is delivered from the seller to the buyer. In exchange for the product received, the buyer pays for the goods to the seller. Once the 2 steps had been fulfilled, the seller can recognize the revenue from the transaction.

**Figure 2.3 Revenue Flows**



Source: Principles of accounting.com

## **2.4 The SEC and Revenue Recognition**

The Securities and Exchange Commission issues guidance on revenue recognition in the form of Staff Accounting Bulletins (SAB). The purpose of a SAB is to provide an interpretation of GAAP. There are four key elements in recognizing revenue according to SAB 104 of which all four elements directly relate to (FASB) Statement of Financial Accounting Concepts No. 5, Recognition and Measurement in Financial Statements of Business Enterprises. They are

1. Persuasive evidence of an arrangement exists;
2. Delivery has occurred or services have been rendered;
3. The seller's price to the buyer is fixed or determinable; and
4. Collectability is reasonably assured".

The requirement that evidence of an arrangement exists ensures the understanding between the parties about the specific nature and terms of a transaction are finalized so that the sale of a product or service is documented to have taken place.

Delivery has occurred when the customer takes title and assumes the risks and rewards of ownership. Before revenue is recognized, the price of a product or service must have a fixed or determinable price.

The final key element for revenue recognition is that collectability of payment is reasonably assured. If the entity believes it could fail to collect payment for a transaction, revenue must be deferred until the payment is collected.

## CHAPTER III: THEORY

### 3.1 Revenue Recognition in Private and Public Companies

The framework of this research is based on the accounting profits which is the total amount of money received from sales (also known as total revenue) minus the cost of goods or services that are based on the quantity sold times the prices (Baye 2010). The total revenue is calculated according to Generally Accepted Accounting Principles (GAAP). GAAP is concerned with the measurement of economic activity, the time when such measurements are to be made and recorded, the disclosures surrounding the activity, and the preparation and presentation of summarized economic information in the form of financial statements (Bragg 2011).

Even though GAAP is widely used by public and private companies, the main difference in the way accounting is done is that public companies use as guidance the concepts related to FASB Statement of Financial Accounting Concepts No. 5, Recognition and Measurement in Financial Statements of Business Enterprises. It establishes that for revenue to be recognized, it has to be realized or be realizable and must have been earned.

The main focus of this thesis is to determine the impact of the changes in the procedures used for revenue recognition before and after the acquisition of PS International by Seaboard Corporation and how this influenced the overall performance of the company being measured by the efficient use of the working capital<sup>1</sup>, and the turnover of the working capital. The quicker the working capital turnover, the more new transactions can be done and this will result in better annualized margin returns<sup>2</sup>.

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<sup>1</sup> Working Capital: Current assets minus current liabilities.

<sup>2</sup> Annualized Margin Returns: A profit on an investment over a period of time.

It is important to indicate that private and public companies have different use for financial statements. The Financial Accounting Standards Board 2011 describes the factors that influence the differences between the ways revenue is recognized:

- Types of users,
- Access to management,
- Investment strategies,
- Ownership structures,
- Accounting resources, and
- Education.

Relating the above factors to this research, PSI was a mid-size trading, limited liability company (LLC). PSI was family owned for over 35 years. All of the main management positions were held by family members including CEO, CFO, and treasurer among others.

The information provided by the financial statements was used to evaluate how specific management decisions impact business activity, which was closely followed by the owners and their management team. The way the financial statements were presented provided the information necessary to maintain the relationship with their lenders and to take advantage of the best business opportunities to achieve long-term financial performance.

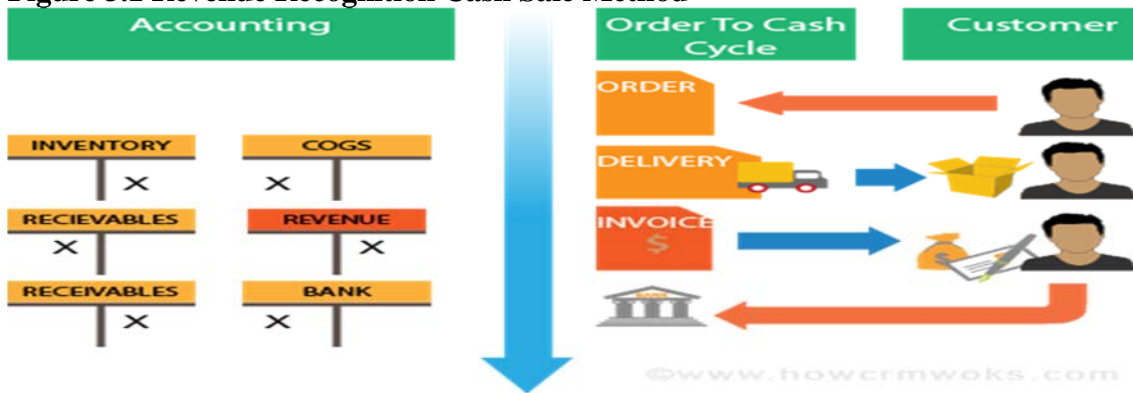
As a mid-size private trading company, the accounting department was managed by a team of only 3 to 4 persons because the needs of reporting, segregation of duties or dates to close the month were less rigid. Accounting reported the sales transactions using an

enterprise resourcing planning (ERP) software system called “NETSUITE” with additional spreadsheets.

Before the acquisition, the method PSI used for revenue recognition was the cash sale methods shown in Figure 3.1. Using this method, the accounting procedure for income realization was basic and revenue was recognized for all the transactions during the month of shipment departure. This revenue was included whether or not the transaction was paid in full and whether or not the cargo arrived at its destination in the same month

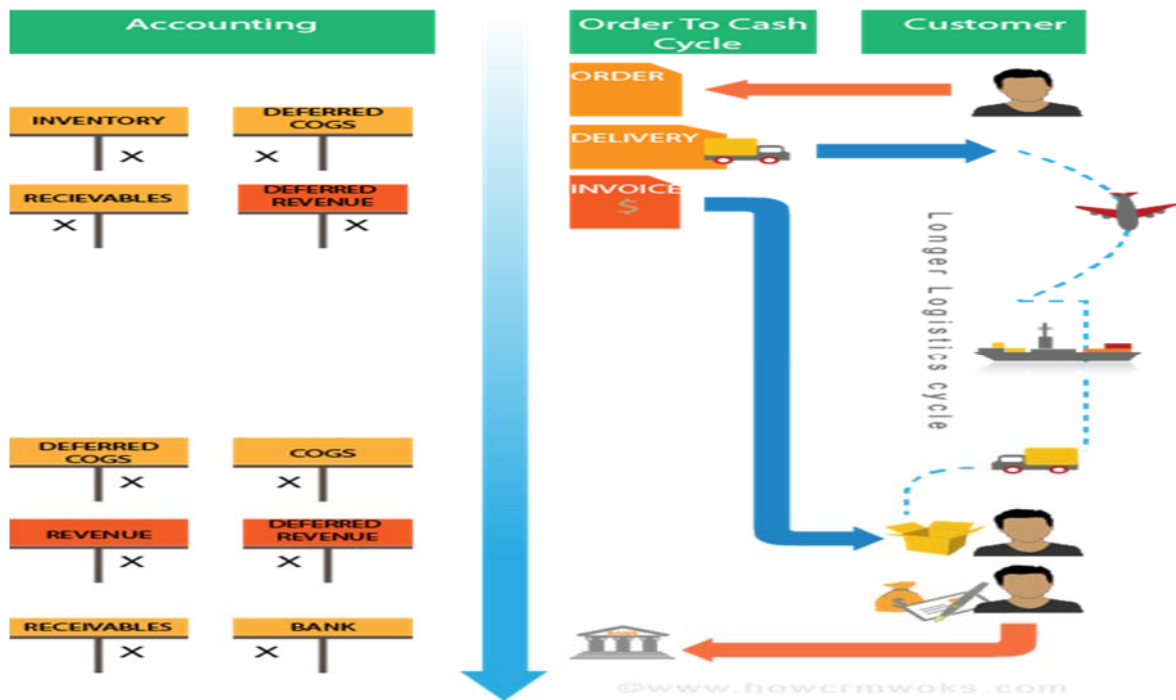
After the acquisition by Seaboard, the method PSI uses is the accrual method shown in Figure 3.2. With the accrual method, revenue is recognized when both of the following conditions are met: revenue is earned and revenue is realized or realizable. Revenue is earned when products are delivered or services are provided. Realizable means it is reasonable to expect that cash will be received in the future (Accountinginfo.com n.d.). The accrual method is used by Seaboard to fulfill the four criteria stipulated by the SEC.

**Figure 3.1 Revenue Recognition Cash Sale Method**



Source: <http://howcrmworks.com>

**Figure 3.2 Revenue Recognition Accrual Sale Method**



Source: <http://howcrmworks.com>

The new process of revenue recognition impacted four areas of the PS International:

- **Trader/Sales:** With the accrual method, the traders need to estimate at the end of the year working capital projections that will be required for each trimester of the year to come. Also the payment terms are determined to be fulfilled as per the contract.
- Under the accrual method, the responsibility of the traders goes beyond just looking for clients and selling product. The trader must make sure that the flow of the whole transaction from beginning to the end is done in a satisfactory manner. The traders are responsible to fulfill the policy established by the corporation in regards customer approval, country risk, payment terms, minimum profit to be gained for the transaction, and annualized margin, among others.
- **Logistics:** The logistics staff plays as an important, because they are the one in charge of the cargo, and following the cost structure that the trader has projected.

- The logistics staff is in charge of presenting the bills from the vendor to be paid, and delivers the information that will be used later by the accounting department in regards to item fulfillment, measuring inventories, invoicing, preparing documents, updating the arrivals and monitoring with the traders the payments from the customers.
- Information/Technology: The IT department is more important after the acquisition process due the fact that the data recorded allows the revenue recognition and the reporting activity to be automated so that information is provided accurately and more quickly.
- Accounting: Their responsibility is to link the activities of all the areas of the organization by integrating, documenting and testing the business process (trade/logistics), the financial reporting and the IT security.

The accounting department increased to 10 people. This occurred because the reporting required more detail. Duty segregation was established and the deadlines for closing each month became mandatory. This allowed a written process to be followed for internal control as required by the Sarbanes-Oxley Act. The needs in the accounting department are closely related to changes that occurred in Netsuite, the enterprise resourcing planning (ERP) software system to assure that the information is transparent with regards to revenue, invoicing and expenses.

The updates in the ERP system required that employees spend more time working with the process of a specific transaction because more steps were added for revenue recognition. Traders also faced some changes in their activity because of the need to be



more involved in the selection of customers, the credit limit for the customer and country, the report of inventory, and the purchase of long positions.

## CHAPTER IV: METHODS AND DATA

To measure the changes in the revenue recognition process, a comparative analysis was completed measuring the revenue before and after the acquisition. A comparative analysis is a technique that compares and contrasts two different theories or methodologies to determine commonalities and contrasts or differences (Walk 1998).

### 4.1 Data Collection

The data were collected from PSI's files. PS International has 4 divisions: Pulses, Sugar/ Grain, Oil, and Dairy/Protein. The focus of the analysis is the beans transactions of the Pulse Division where products are sourced from different origins and moved to their destinations by bulk/break bulk vessels or containers. Some of the transactions are done back to back and a few others done by taking a long position of product.<sup>3</sup>

The pulses division was chosen because pulses are a product harvested during different times of the year in North and South America as well in China and India. The transactions are also pretty consistent year around.

Netsuite is used by the organization to track transactions. The system collects the information from customers, vendors, and keeps a record of all the transactions that take place in a current month or in future months, all the payments to suppliers, products that have been invoiced to customers, inventories, movement of cargo, arrival of cargo, origin and destination, shipment period purchases and sales, accounts payable (AP), and accounts receivable (AR).

Starting January 2012, the monthly accounting procedure closed on the last Saturday of each month rather than on the last day of each month and therefore further

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<sup>3</sup> Back to Back Transactions are product purchases to be applied to a specific existing transaction. Long Position Transactions are a product purchased that will be applied to a future transaction.

posting of bills and invoice was not allowed. All cargo with bill of lading (B/L's) prior the close of the end of the month were recorded. All the expenses that had been accrued in the proposal were recognized even if the bills had not been received when the position of the product was taken.

Closing the monthly account on the last Saturday of the month was a change in the revenue recognition compared to the previous method. This change required a follow up by the logistics staff to confirm the arrivals at the end of the month, to confirm that all the expenses had been posted and billed and the customer was invoiced if it hadn't been done earlier.

Below is a short description of the steps to record the transaction in the Netsuite system:

**1. - PX Folder:** This is the beginning of the transaction. It includes the ID number assigned in the system for each customer, their information, the commodity group, name of the product, traders involved (trader who sales and trader who buys the product), shipment, sales and purchase terms, estimated time (ETS) of the first shipment, country and port of origin and country and port of destination. The ID number identifies the transaction and is included on each document generated by the system.

After the PX Folder is completed, the number automatically generated by the system is used to create the contract for the trader that sells the product and the trader that buys the product. An actual folder with the number generated by the system is provided to the logistics person that will be in charge of the transaction.

**2. - PX Proposal:** This is the proposal of the transaction and is associated with the folder number provide by the system and is submitted by the trader for management approval (senior commodity group leader and by finance). This includes the name of the trader,

buyer and logistics staff involved, payment terms for the sale, payment terms for the purchases, customer credit limit if any, customer account receivables (A/R) balance, number of days between accounts receivables and accounts payables (A/P), and interest cost amount.

The proposal shows a break-down of the costs associated with the transaction from product acquisition, inland transportation, stuffing, bagging, ocean freight, inspection, phyto-sanitary certificates, commission, cargo insurance and any other costs that could be included in the transaction and sales price. The proposal considers all the costs associated with the transaction and it generates an expected gross margin, an equivalent percentage, and an annualized return.

A physical print of the PX proposal is included in the folder that will allow the logistics person to follow the flow of the transaction. The logistics staff also files a copy of the contract/purchase order signed by the trader and customer and the contract/purchase order signed by trader and the supplier.

The proposal has to be approved by finance and the specific team leader for the department. The approval includes a check to ensure that all the basic costs are taken into consideration, purchase and payment terms are correct, verification of the customer credit limit, country credit limit or potential risk of the country or the customer, and the accounts payable or receivable.

Overall, the proposal allows the management team to evaluate if the profit of the transaction is above to the minimum criteria set up by the organization. Once management approves the proposal, the logistics team can start the shipment process. At this point of the trade, two of the criteria for revenue to be recognized stipulated by GAAP are fulfilled:

persuasive evidence of an arrangement exists, and the seller's price to the buyer is fixed or determinable.

Before the acquisition, the contracts for buyers and vendors were included in their correspondent folder, but since the acquisition this is mandatory, to follow the SEC criteria. Therefore payments cannot be done if a contract/ purchase order with a supplier of product is not in place, or a shipment cannot be started without a contract/ purchase order with the buyer.

**3.-PX Worksheet:** Once the proposal is approved by management and the logistics staff starts taking a position and making payment for product or services, the PX worksheet is created. This provides a comparison between the proposed revenue and costs and the actual cost and revenue once the transaction is completed. At this point, mandatory fields are provided such as estimates of the time of sailing (ETS) and time of arrival (ETA), vessel name and voyage, ocean equipment and number of ocean containers.

In the worksheet, the payments for product or services (inland, ocean freight, commission, insurance, etc.) are identified with a purchase order (PO) number. Once the PO is created, an item receipt is created that indicates the product is received and is in inventory. PSI is deemed to own the inventory when the risk passes to PSI. Item receipts and vendor bills should be recorded at the same time and any future adjustment is done if the quantity billed is different from the actual quantity received.

A significant change included in the revenue recognition process is that now there is an item fulfillment that takes the cost of the product out of inventory and applies it to the worksheet because, as per SEC rules, the inventory has to be reported at the end of each

month. Once the title of the product is owned by PSI through a bill of lading, the revenue commitment is done.

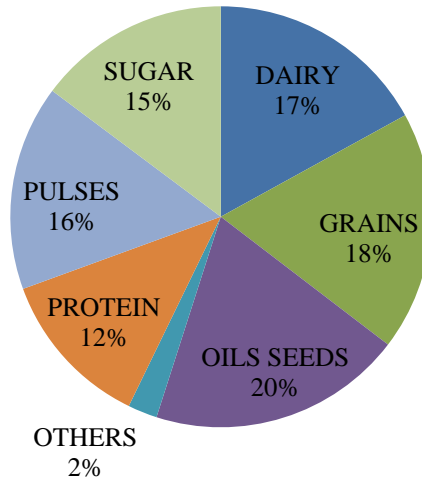
**4.-Invoice:** Customer invoicing has to be finished on the same date as the bill of lading(B/L). B/L by definition represents the title of the goods and inventory has to be received and fulfilled before invoicing, and has to match the revenue commitment. Copies of all the vendor bills, and the final B/L, invoice and PX worksheet approved by the trader/logistic staff should be part of the folder for further follow up by management/ finance or auditors purposes.

The last two steps involved in the data collection for the comparative analysis that should be part of the folder is proof of arrival and proof of payment that are the other two criteria stipulated by the SEC such that delivery has occurred and collectability is reasonably assured.

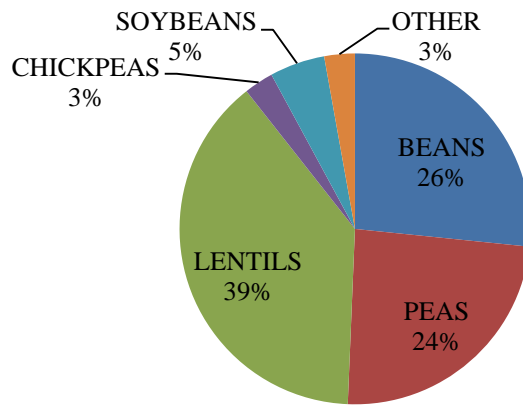
#### **4.2 Data Selection**

The data used for this analysis are from the pulse department. An overview of the revenue each commodity group contributes to the total revenue of PSI for 2012 is presented in Figure 4.1. PSI revenue was \$593,689,677. The revenue of the Pulses Department was \$93,767,718, representing 16% of the total revenue as show in Figure 4.1.

**Figure 4.1 Share of Revenue by Commodity Group for PSI in 2012**



**Figure 4.2 Share of Revenue of the Pulses Department in PSI in 2012**

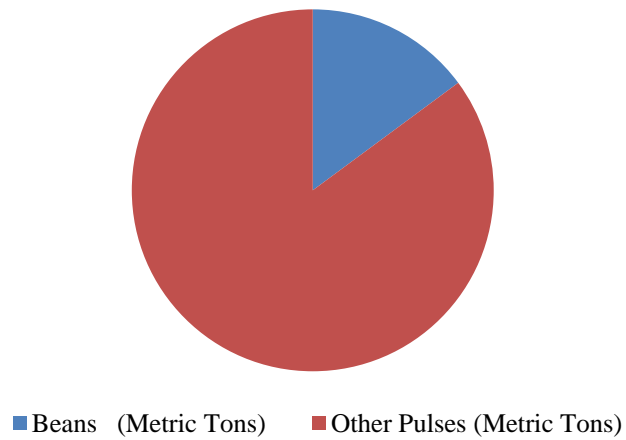


The pulses category are crops that come in a pod. The focus of this analysis will be based on the classification from the Food and Agriculture Organization (FAO) which recognizes 11 primary pulses that are crops harvested for dry beans, excluding green beans, green peas and crops for oil extraction. Taking in consideration the pulses trade for 2012 by PSI, the particular group selected is called beans which includes: alubia beans, black beans, black eye beans, purple speckled bean, lima beans, small red beans, redondo beans, navy beans, pink beans, and pinto beans. Beans represent revenue of \$24,965,168 equivalent to 26% of

the total pulses transaction (Figure 4.2). The bean trade included 196 transactions from January to December 2012 out of 1,083 total transactions from the pulses department.

Figure 4.3 represents the total quantity of pulses sold by the Department which was 156,202 Metric Tons. Of this total, 23,216 were beans, equivalent to 15% of the total metric tons sold.

**Figure 4.3 Total Volume of Pulses Sold by PSI in 2012**





## **CHAPTER V: DATA ANALYSIS AND RESULTS**

The results of the findings of the research are provided in this chapter. To do the comparison of the revenue recognition by PSI before and after the acquisition, the 196 transactions of the category beans for the pulses department for the year 2012 were organized taking into consideration three factors:

1. Date of Departure,
2. Transit time, and
3. Payment terms.

These factors are key in the revenue recognition process, taking into consideration that revenue are inflows as the result of goods sold, and depending on the recognition method, the revenue will be presented in the income and/or balance sheet once the revenue had been either realized, earned, or both.

Once the data for the date of departure, transit time and payment terms was segregated, the comparison in regards to the particular recognition method was completed.

It is important to mention that for this research out of the primary four criteria stipulated by the Security Exchange Commission (SEC):

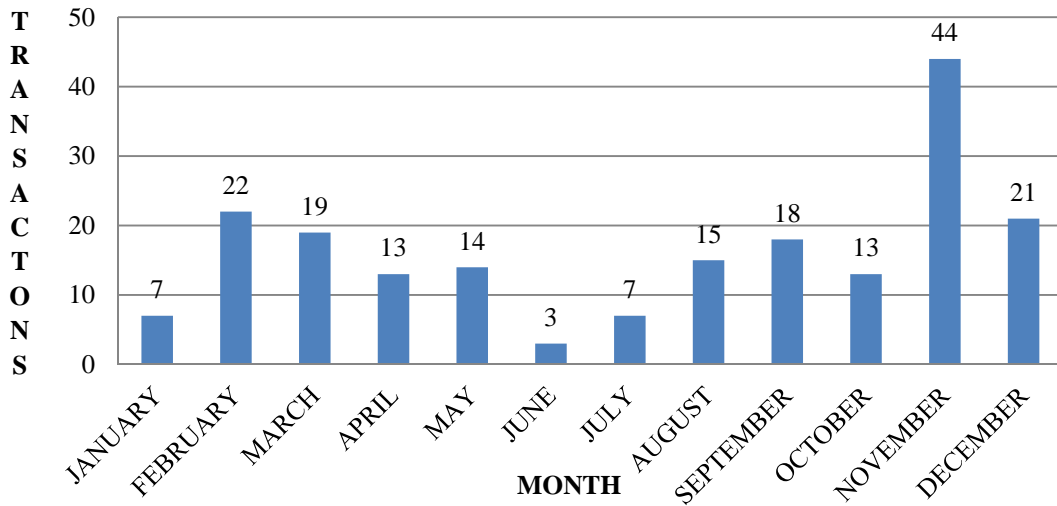
1. Persuasive evidence of an arrangement exists;
2. Delivery has occurred or services have been rendered;
3. The seller's price to the buyer is fixed or determinable; and
4. Collectability is reasonably assured.

The data were analyzed based on criteria 2 and 4 because shipment cannot be initiated or payment of product cannot be completed if there is not a contract in place with buyers and suppliers that will guarantee that arrangements exist and prices are fixed or determinable.

### 5.1 Date of Departure

The Day of Departure represents the date in which the shipping line vessel, bulk/ break vessel, train or truck depart from the port of origin. The 196 bean transactions were aggregated by month of departure during 2012 (Figure 5.1). The most shipments departed in November with the least occurring in June for beans.

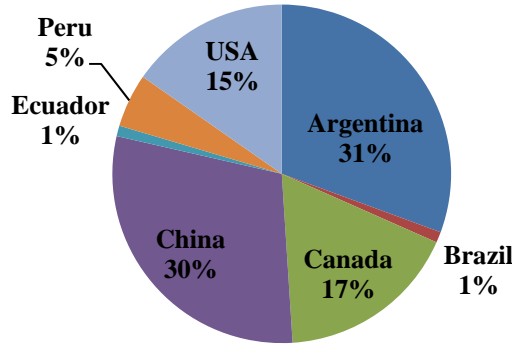
**Figure 5.1 Number of Transaction in the Category Beans by Month of Departure in PSI for Year 2012.**



### 5.2 Transit Time (TT)

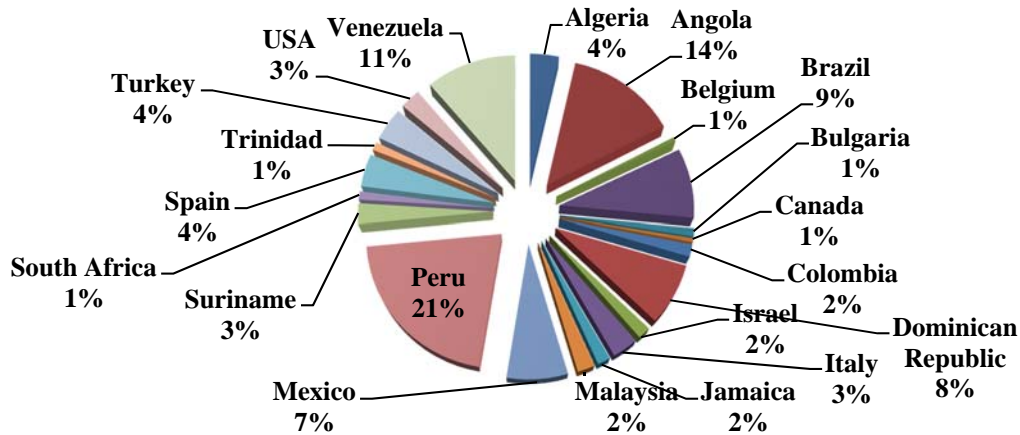
The transit time represents the total number of days that the cargo is on any specific method of transportation whether by rail, truck or vessels from the port of loading to the port of destination. Figure 5.2 illustrates the countries of origin of the beans exported. There were seven countries in total, with the top three exporters being Argentina (31%); China (30%); and Canada (17%).

**Figure 5.2 Origins of the Beans Export by PSI Pulses Department in 2012.**



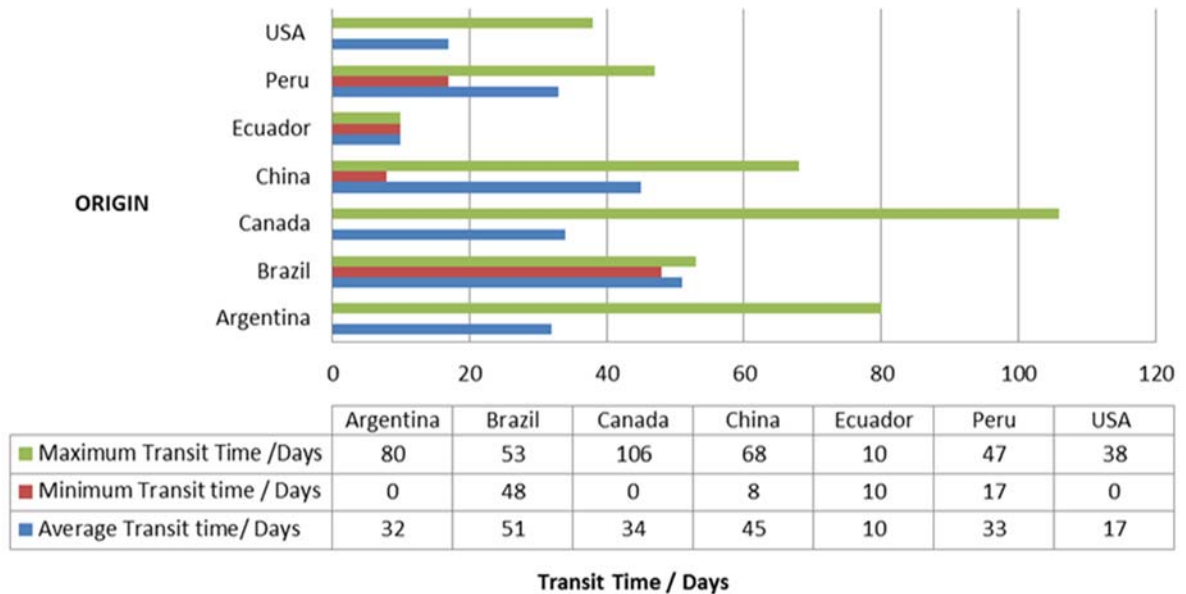
There were 21 countries of destination with the top three destinations equivalent to 21% or 41 transactions for Peru, Angola with 14% equivalent to 27 transactions and Venezuela with 11% equivalent to 22 transactions (Figure 5.3).

**Figure 5.3 Destination of the Beans Exported by PSI Pulses Department in 2012**



Knowing the origins and destinations of the 196 bean transactions exported by PSI during 2012, the transit time from the seven countries of origin to the 21 countries of destination is shown in Figure 5.4. The transit time is the data used in the analysis to confirm that the delivery has occurred. Out of the 3 main exporters, Argentina, China, and Canada, their transit time averaged 37 days.

**Figure 5.4 Transit Time from the Origin Countries for the Beans Exported By PSI Year 2012**



### 5.3 Payment terms:

The payment terms represent the amount due by the buyer once the seller had fulfilled their contractual obligation which means the product had been dispatched. The payment terms represent the expected date when the buyer will pay in full.

The amount due is presented to the buyer as an invoice. The invoice matches with the description of the product sold, quantity and price fixed under the contract. All of the invoices are dated based on the departure date that is supported by the corresponding bill of lading.

The payment terms are grouped in two categories Credit or No Credit. In PSI, the main difference between these categories is based on the moment when the original shipping documents are released to customers.

Transactions with credit documents are released to buyers without payment. Payments include credit terms such as: Net 14/30/60 /90 days B/L date and payment with Letter of Credit with 90 day B/L.

In the no credit terms, payment must be received first by customer before the original shipping documents are released. Figure 5.5 shows different payment terms used in the pulses department for the beans transactions in 2012. Transactions without Credit are Cash in Advance, Cash Against full set of copies of shipping documents at sight or payment when the full set of original shipping documents are presented to the bank and Letter of Credit (L/C) at Sight.

The payment terms are one of the most sensitive factors that affect trade agreement between seller and buyer due to the wide variety of existing payment terms used.

Letter of credit (L/C), represents the number one payment mechanism of credit because it protects on equal terms buyer and sellers. The L/C are issued by banks and they represent a guarantee of payment for the buyer upon presentation of the original or copies of the documents established in the L/C, if the documents are the same terms of the contract, or the documents prove that the shipment of the product agreed had been done.

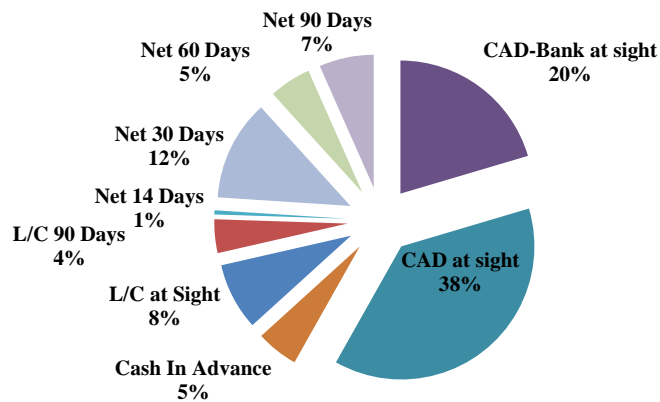
The letter of credit can be at sight which means that once the bank receives the originals or copies of the shipping documents and reviews them and is not discrepancy with the terms laid out in the letter of credit payment will be made to the seller immediately and the documents will be released to the buyers by the bank or by the seller. Also the letter of credit could have credit terms which means that the due day is related to the shipping date with some of them 90 days B/L date. This is the same process for the bank as for the At Sight L/C. In general terms, PSI requests the L/C to be issued from a first class bank in the U.S. or Europe.

Cash against Documents at sight (CAD) is a common payment term. All shipping documents mentioned in the contract should be present from the buyer to the seller by fax

or scanned copies as proof that the contractual obligations in regards to quantity, price, shipment period, origin and quality of the product among others has been fulfilled by the seller.

Cash against Documents to the bank at sight (CAD-Bank at sight) occurs when the buyer appoints the bank where the original documents will be submitted, to release original documents to buyer only when payment is done.

**Figure 5.5 Payment Terms for the Beans Exported by PSI in 2012.**



The percentage of credit and no credit transaction has a ratio of 24% of transactions with credit and 76% of transaction with no-credit (Figure 5.6). The payment term data is used in the analysis to confirm that collectability is reasonably assured.

**Figure 5.6 Percentual Relation of the Beans Exported with Credit and No Credit Payment terms in PSI in 2012**

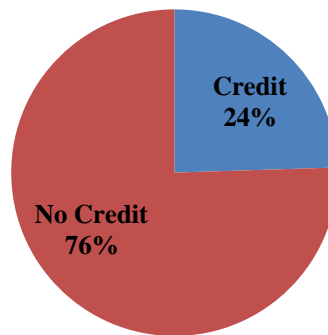


Table 5.1 and 5.2 provides a sample of the beans transaction and summary statistics for the full data used in this research. In the sample bean transactions, five random observations of the 196 transactions that represent the total number of transactions are presented. Each transaction has the ID number assigned to it by NETSUITE when the transaction is entered into the ERP system. The data identify the product by name is presented in the final quantity shipped, the sale price that was fixed when the contract was signed, the total revenue of the transaction, the date of sailing and arrival, transit time, payment terms which also were defined in the contract, the origin and the destination of the cargo.

Out of the 196 transactions, the cargo shipped was between 0.25 to 500 metric tons with a mean of 105.04 metric tons and standard deviation of 122.59 metric tons. The average price of the beans sold by PSI in the year 2012 was \$1,243 per metric ton, with a standard deviation of \$234 with a minimum sales price of \$800 to a maximum sales price of \$2,319. The total revenue gained in the beans transaction by the pulses department in PSI was on average \$115,047 with standard deviation of \$109,183 and minimum revenue

of \$358 and maximum revenue of \$559,125. The Transit time of the beans exported by PSI in 2012 had a mean of 37 days with standard deviation of 21 days, with a minimum of 0 days of transit up to a maximum of 106 days.



**Table 5.1 Sample Bean Transactions Exported by PSI in 2012.**

DESCRIPTION	QTY. SOLD (MT)	SALES PRICE (U\$D)	REVENUE (U\$D)	ETS	ETD	TRANSIT TIME (DAYS)	PAYMENT TERMS	ORIGIN	DESTINATION
ALUBIA BEANS	23.00	\$1,330.00	\$30,590.00	1/20/2012	2/17/2012	28	CAD-Bank Sight	Argentina	Italy
BLACK BEANS	499.00	\$835.00	\$416,665.00	7/13/2012	8/10/2012	28	CAD-Bank Sight	China	Brazil
BLACK EYED BEANS	46.00	\$1,386.00	\$63,756.00	5/21/2012	6/25/2012	35	CAD-Bank Sight	Peru	Brazil
LIGHT RED KIDNEY	166.92	\$1,650.00	\$275,424.60	10/26/2012	11/21/2012	26	Net 60	Canada	Colombia
PINTO BEANS	73.48	\$1,358.00	\$99,788.56	11/27/2012	1/27/2013	61	CAD-Bank Sight	Canada	Angola

**Table 5.2 Summary Statistics of the Full Data Exported by PSI in 2012.**

	QTY. SOLD (MT)	SALES PRICE (U\$D)	REVENUE (U\$D)	TRANSIT TIME (DAYS)
<b>MEAN</b>	105.04	\$1,242.84	\$115,046.86	37.3267327
<b>STDEV</b>	122.59	\$234.06	\$109,182.53	20.6157014
<b>MIN</b>	0.25	\$800.00	\$358.25	0
<b>MAX</b>	500	\$2,319.00	\$559,125.00	106

## **5.4 Revenue Recognition Methods**

### *5.4.1 Cash Method*

PSI as a private held company used the cash revenue recognition method. This method for income realization is basic and revenue is recognized when cash is received.

PSI transactions before and even after the acquisition were based on three premises:

1.-Transactions are 90% back to back where the product purchased is linked to a specific trade.

2.-Advance Payments were requested in 80% of the transactions with the advance being between 20% to 30% of the total contract.

3.-Never release the original shipping documents to the buyer if payment was not made in full, with the exception of a customer with open credit terms.

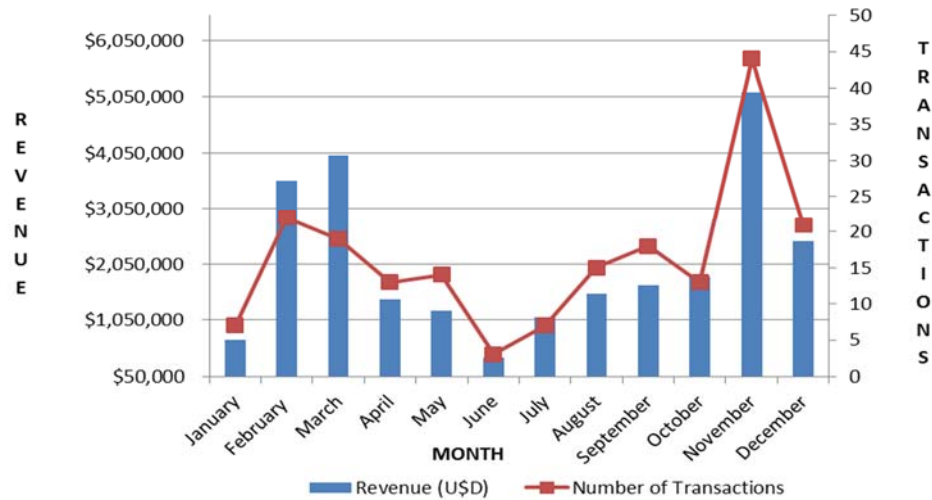
Because the income realization process was basic, before the acquisition the main issue to consider was the number of invoices with departure date in the current calendar month, and the recognition included whether the transaction was paid in full or not and whether the cargo arrived or not to the final destination (Table 5.3). Figure 5.7 shows the 196 transactions and the accumulated revenue by month of shipment for the beans exported by PSI for year 2012. With the Cash method, the amount of money recognized by month shows that June had the fewest transactions, because this is the time of the year where the inventories of beans are almost gone and the new crop is ready for shipment starting in September – October. Most of the buyers want to have beans available in their markets for the fall and winter months, therefore the sales pick up in November.

With the cash method, PSI could demonstrate to their lender that all the credit line has been used to pay for products and services that generated revenue.

**Table 5.3 Revenue Recognition with the Cash Method for the Beans Transaction in PSI for 2012**

	Date of the Beginning of the Month with Cash Method	Date of Closing of the Month with Cash Method	Number of Days	Number of Transactions Revue Recognized / Month	Amount USD Recognize/ Month
January	1-Jan-12	31-Jan-12	31	7	\$692,275.20
February	1-Feb-12	29-Feb-12	29	22	\$3,555,409.89
March	1-Mar-12	31-Mar-12	31	19	\$4,014,054.27
April	1-Apr-12	30-Apr-12	30	13	\$1,417,725.13
May	1-May-12	31-May-12	30	14	\$1,211,666.88
June	1-Jun-12	30-Jun-12	30	3	\$376,533.36
July	1-Jul-12	31-Jul-12	31	7	\$1,096,704.00
August	1-Aug-12	30-Aug-12	30	15	\$1,511,430.62
September	1-Sep-12	30-Sep-12	30	18	\$1,668,074.60
October	1-Oct-12	31-Oct-12	31	13	\$1,830,058.82
November	1-Nov-12	30-Nov-12	30	44	\$ 5,132,774.23
December	1-Dec-12	31-Dec-12	31	21	\$ 2,458,460.97
				196	\$24,965,167.97

**Figure 5.7 Revenue Recognition with the Cash Method for the Beans Exported in PSI for year 2012.**



#### *5.4.2 Accrual Method*

After the Seaboard acquisition, the revenue recognition method at PSI is the accrual method. For this method, revenue is recognized when both of the following conditions are met: revenue is earned and revenue is realized or is realizable.

Revenue is earned when products are delivered or services are provided and realizable means it is reasonable to expect that cash will be received in the future.

The data were re-analyzed according to the accrual method of revenue recognition to meet the SEC criteria of delivery of the goods and collectability of payment. This uses a combination of the departure date, transit time and payment terms.

The revenue period under the accrual method starts on the 1<sup>st</sup> day of January and it goes until the last Saturday of January, the following month starts February the last Sunday of the month (January) and will finish the last Saturday of February. This occurs there for the rest of the year except for December where all the days of the month are included (Column 1 and 2, Table 5.4), which means that every month has a number of transactions that are deferral, if cargo hasn't arrived or payment had not been received, the revenue cannot be recognized.

In Figure 5.8, the number of recognized and deferral transaction and the revenue by month of shipment for the beans exported in PSI for 2012 using the accrual method is displayed. With the accrual method, only few transaction of the total shipment are completed by month can be recognized in that month, because the SEC criteria needs to be met which means that that revenue had been earned and realizable with in the specific month, otherwise transaction has to be deferral until both criteria are fulfilled

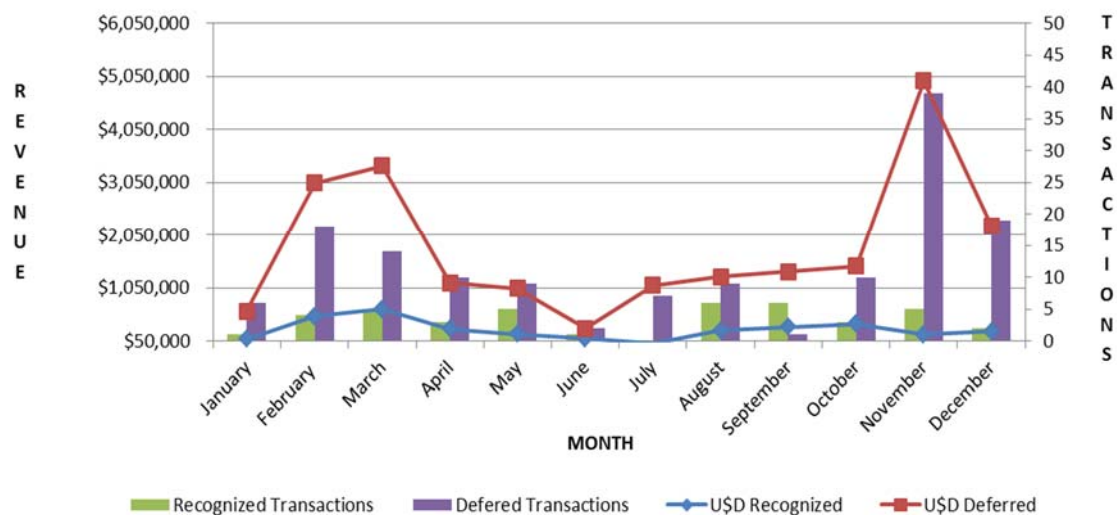
For 2012, only 41 transactions out of the total 196, equivalent to 20.92% of transactions were recognized during their month of shipment, and during the following

month of 2012 and until June 2013, the rest of the transactions shipped in 2012 were recognized.

**Table 5.4 Revenue Recognition with the Accrual Method for the Beans Transaction in PSI for 2012.**

	Beginning of the Month with Accrual Method	Date of Closing of the Month with Accrual Method	Number of Days	Number of Transactions Revue Recognized / Month	Amount USD Recognize/ Month	Number of Deferral Transactions / Month	Amount USD Deferred/ Month
January	1-Jan-12	28-Jan-12	28	1	\$ 82,150.00	6	\$ 610,125.20
February	29-Jan-12	25-Feb-12	28	4	\$ 512,976.00	18	\$ 3,042,433.89
March	26-Feb-12	24-Mar-12	28	5	\$ 644,610.57	14	\$ 3,369,443.70
April	25-Mar-12	28-Apr-12	35	3	\$ 275,320.00	10	\$ 1,142,405.13
May	29-Apr-12	26-May-12	28	5	\$ 174,966.90	9	\$ 1,036,699.98
June	27-May-12	23-Jun-12	28	1	\$ 96,093.36	2	\$ 280,440.00
July	24-Jun-12	28-Jul-12	35	0	0	7	\$ 1,096,704.00
August	29-Jul-12	25-Aug-12	28	6	\$ 249,640.08	9	\$ 1,261,790.54
September	26-Aug-12	29-Sep-12	35	6	\$ 312,967.00	12	\$ 1,355,107.60
October	30-Sep-12	27-Oct-12	28	3	\$ 372,284.60	10	\$ 1,457,774.22
November	28-Oct-12	24-Nov-12	28	5	\$ 169,409.02	39	\$ 4,963,365.21
December	25-Nov-12	31-Dec-12	37	2	\$ 224,454.00	19	\$ 2,234,006.97
<b>TOTAL</b>				41	\$3,114,871.53	155	\$ 21,850,296.44

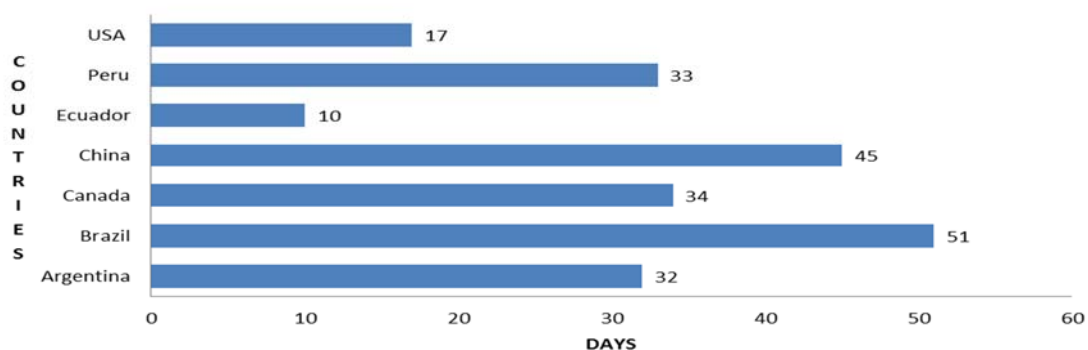
**Figure 5.8 Revenue Recognition with the Accrual Method for the Beans Exported in PSI in 2012**



Under the accrual method, to prove that the delivery has occurred, the data collected was based on the transit time.

As is represented in Figure 5.9, out of the 3 main exporter countries of beans for 2012, Argentina, China, and Canada represent 152 transaction out of the 196 total (equivalent to 77.55% of the transactions) with a transit time in average of 37 days. This defers transactions from one month to the other.

**Figure 5.9 Transit Time in Days from Country of Origin for the Beans Exported in PSI in 2012.**



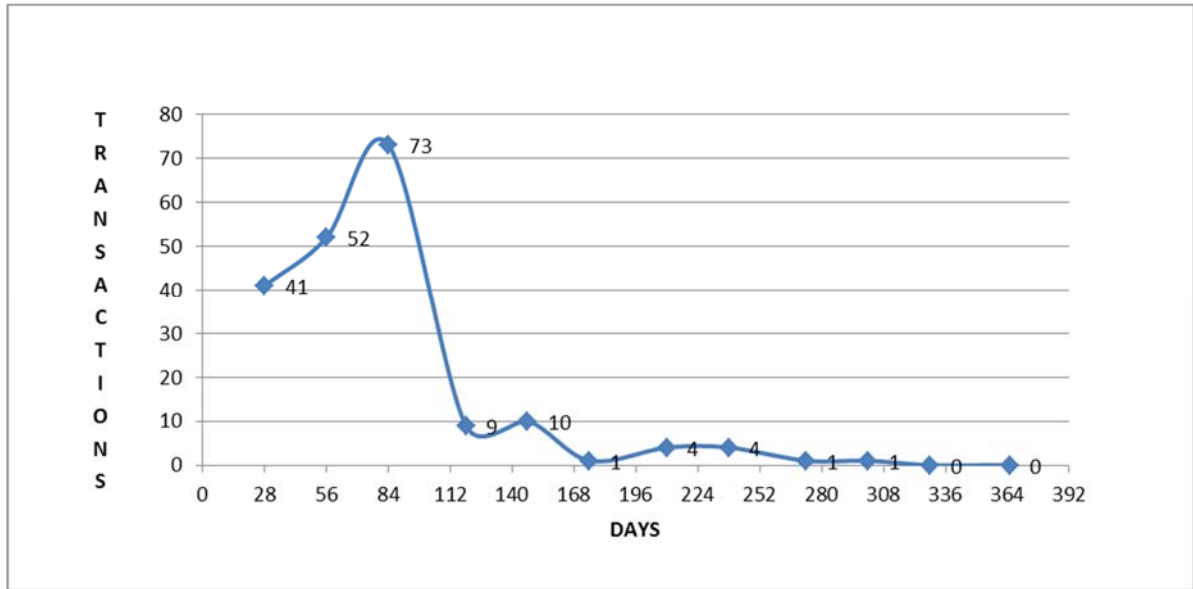
The last factor to take into consideration for the comparison with the accrual method is the assurance of collectability. The analysis was completed based on the departure month of the cargo until the day payment was received. As show in Table 5.5 and Figure 5.10, only 41 transactions (20.92%) were completely paid within 28 days of the date of shipment, 52 transactions (26.53%) within 56 days of the date of shipment and 73 transactions (37.24%) within 84 days of shipment which means that out of the total 196 transactions for 2012, 155 transactions (79.08%) had payment deferred at least for 68 days. Out of the additional 155 transaction with shipment during 2012, 45 transactions

corresponding to the month of June, October, November and December 2012, highlighted in the Table 5.5 had their payment deferred until 2013.

**Table 5.5 Days between Departure of the Cargo and Payment for the Beans Transaction Exported by PSI in 2012**

MONTH / ETD	DAYS BETWEEN DEPARTURE OF THE CARGO AND PAYMENT												Total Transactions/ Month	
	28	56	84	119	147	175	210	238	273	301	329	365		
JAN	1	4	2											7
FEB	4	7	7	1	1		1	1						22
MAR	5	2	4	3			1	3	1					19
APR	3	1	8			1								13
MAY	5	2	7											14
JUN	1	1												3
JUL	0	3	4											7
AUG	6	6	3											15
SEP	6	1	11											18
OCT	3	2	6											13
NOV	5	16												44
DEC	2													21
<b>TOTAL TRANSACTIONS 2012</b>													<b>196</b>	
<b>PAYMENTS RECEIVED IN 2012</b>	41	45	52	4	1	1	2	4	1	0	0	0		151
<b>PAYMENTS RECEIVED IN 2013</b>		7	21	5	9	0	2	0	0	1	0	0		45
<b>TOTAL TRANSACTIONS 2012</b>	41	52	73	9	10	1	4	4	1	1	0	0		196

**Figure 5.10 Days between Departure of the Cargo and Payment for the Beans Transaction in PSI For 2012**



There is a relation between the transit time and payment date and this may cause customers to not pay for the cargo until 1 week before it arrives or up to 2 weeks after the arrival depending on the free demurrage<sup>4</sup> days that the customer negotiated with the shipping lines. Therefore, in general, the more time the cargo takes to destination the longer customers will take to pay and as a result the longer deferral payments we will be.

Table 5.6 represents the correspondent month in which the deferral transactions were recognized. As it was mentioned before only 41 transactions were paid with in their month of shipment under the accrual method. These transactions are highlighted in the table. The revenue recognition process of some of the beans transaction for 2012 took place until June 2013.

<sup>4</sup> Free Demurrages Days are the numbers of days that the consignee of the cargo has to remove the container from the port without paying additional cost.



Table 5.7 represents the amount in USD recognized and deferred for each month with the accrual method starting in January 2012, \$82,150 were recognized and \$610,125 deferred, at the end of the month of February 2012, \$384,525 deferred from January 2012 was recognized plus \$512,976.00 shipped in February, for a total of \$897,501.20 recognized at the end of that month and \$3,268,033.89 deferred. For the following month, the same methodology was applied.

Another important consideration in regards to the accrual method is that the expenses related to each particular transaction such as product acquisition, inland freight, ocean freight among others even though the bills are paid to the vendors in the balance sheet are also presented as deferred, and they will be presented as USD in inventory. The largest effect of having all the expenses as inventory is that the working capital requirement increases until the revenue is actually recognized. Once the payment is received and the cargo arrives only at this moment is when the revenue and the expenses are recognized.

Taking in consideration that after the acquisition one of the biggest advantages had been the increase of the working capital, which allows an increased number of transactions. This is important for the traders and the logistic team to keep in mind that they must manage the use of the working capital to the best of their abilities, therefore traders must look for the deals with payment terms that are secure but also at the same time that represent a return in the shortest terms, and the logistics must move the cargo as quickly as possible booking ocean freights with good prices and short transit times, because the longer time between the accounts payable and the account receivables takes, it has a direct impact in the annualized margin returns

**Table 5.6 Month of Revenue Recognition with the Accrual Method for the Beans Transaction in PSI for 2012**

MONTH OF SHIPMENT	TOTAL TRANSACTIONS/MONTH	MONTH OF RECOGNITION IN 2012												MONTH OF RECOGNITION IN 2013						
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
JANUARY	7	1	4	2																
FEBRUARY	22		4	7	7	1	1		1	1										
MARCH	19			5	2	4	3			1	3	1								
APRIL	13				3	1	8			1										
MAY	14					5	2	7												
JUNE	3						1	1									1			
JULY	7							0	3	4										
AUGUST	15								6	6	3									
SEPTEMBER	18									6	1	11								
OCTOBER	13										3	2	6	2						
NOVEMBER	44											5	16	14	2	7				
DECEMBER	21												2	7	7	1	2			2
	196	1	8	14	12	11	15	8	10	19	10	19	24	23	9	9	2	0		2

**Table 5.7 Value in US\$ of the Transactions Revenue Recognized with the Accrual Method for the Beans Exported in PSI for 2012**

MONTH OF SHIPMENT	TOTAL AMOUNT US\$ SOLD / MONTH	MONTH OF RECOGNITION IN 2012												MONTH OF RECOGNITION IN 2013					
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JANUARY	\$ 692,275.20	\$ 82,150.00	\$ 384,525.20	\$ 225,600.00															
FEBRUARY	\$ 3,555,409.89		\$ 512,976.00	\$ 187,951.35	\$ 1,238,545.50	\$ 404,190.00	\$ 403,397.82		\$ 404,190.00	\$ 404,159.22									
MARCH	\$ 4,014,054.27			\$ 644,610.57	\$ 155,468.48	\$ 281,360.00	\$ 911,665.22		\$ 404,190.00	\$ 1,212,570.00	\$ 404,190.00								
APRIL	\$ 1,417,725.13				\$ 275,320.00	\$ 77,760.00	\$ 1,014,896.35		\$ 49,748.78										
MAY	\$ 1,211,666.88					\$ 174,966.90	\$ 127,798.98	\$ 908,901.00											
JUNE	\$ 376,533.36						\$ 96,093.36	\$ 95,040.00									\$185,400.00		
JULY	\$ 1,096,704.00								\$ 564,545.00	\$ 532,159.00									
AUGUST	\$ 1,511,430.62								\$ 249,640.08	\$ 778,340.54	\$ 483,450.00								
SEPTEMBER	\$ 1,668,074.60								\$ 312,967.00	\$ 34,040.00	\$ 1,321,067.60								
OCTOBER	\$ 1,830,058.82									\$ 372,284.60	\$ 244,062.80	\$ 1,153,928.02	\$ 59,783.40						
NOVEMBER	\$ 5,132,774.23										\$ 169,409.02	\$ 2,704,096.01	\$ 1,264,585.60	\$ 529,128.41	\$465,555.19				
DECEMBER	\$ 2,458,460.97											\$ 224,454.00	\$ 1,423,418.87	\$ 485,389.15	\$163,091.50	\$ 99,168.80		\$62,938.65	
	\$ 24,965,167.97																		
TOTAL AMOUNT US\$ RECOGNIZED /MONTH		\$ 82,150.00	\$ 897,501.20	\$ 1,058,161.92	\$ 1,669,333.98	\$ 938,276.90	\$ 2,553,851.73	\$ 1,003,941.00	\$ 1,218,375.08	\$ 2,481,564.54	\$ 2,102,344.60	\$ 2,138,729.42	\$ 4,082,478.03	\$ 2,747,787.87	\$ 1,014,517.56	\$814,046.69	\$ 99,168.80	0	\$62,938.65
TOTAL AMOUNT US\$ DEFERRED /MONTH		\$ 610,125.20	\$ 3,268,033.89	\$ 6,223,926.24	\$ 5,972,317.39	\$ 6,245,707.37	\$ 4,068,389.00	\$ 4,161,152.00	\$ 4,454,207.54	\$ 3,640,717.60	\$ 3,368,431.82	\$ 6,362,476.63	\$ 4,738,459.57	\$ 1,990,671.70	\$ 976,154.14	\$162,107.45	\$ 62,938.65	\$62,938.65	\$62,938.65

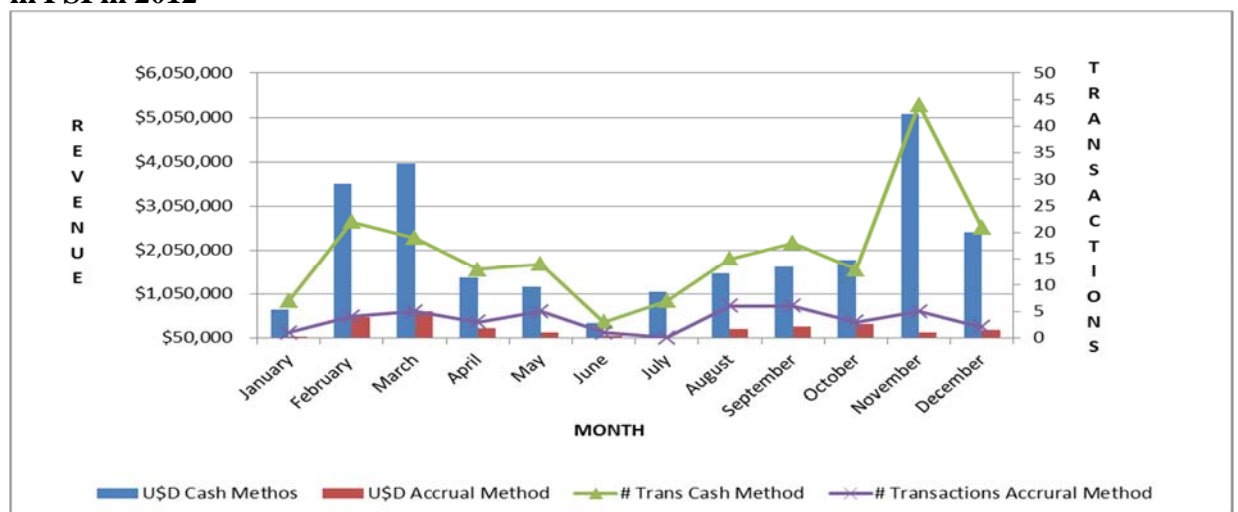
**Table 5.8 Value in U\$D of the Transactions Revenue Recognized with the Accrual Method as per the Number of Days of Payment for the Beans Exported in PSI for 2012**

AMOUNT (U\$D) RECOGNIZED ACCORDING TO THE NUMBER OF DAYS OF PAYMENT													
MONTH / ETD	28	56	84	119	147	175	210	238	273	301	329	365	TOTAL
JAN	\$ 82,150.00	\$ 384,525.20	\$ 225,600.00										
FEB	\$ 512,976.00	\$ 187,951.35	\$ 1,238,545.50	\$ 404,190.00	\$ 403,397.82		\$ 404,190.00	\$ 404,159.22					
MAR	\$ 644,610.57	\$ 155,468.48	\$ 281,360.00	\$ 911,665.22			\$ 404,190.00	\$ 1,212,570.00	\$ 404,190.00				
APR	\$ 275,320.00	\$ 77,760.00	\$ 1,014,896.35			\$ 49,748.78							
MAY	\$ 174,966.90	\$ 127,798.98	\$ 908,901.00										
JUN	\$ 96,093.36	\$ 95,040.00								\$ 185,400.00			
JUL		\$ 564,545.00	\$ 532,159.00										
AUG	\$ 249,640.08	\$ 778,340.54	\$ 483,450.00										
SEP	\$ 312,967.00	\$ 34,040.00	\$ 1,321,067.60										
OCT	\$ 372,284.60	\$ 244,062.80	\$ 1,153,928.02										
NOV	\$ 169,409.02	\$ 2,704,096.01											
DEC	\$ 224,454.00												
PAYMENTS RECEIVED 2012	\$3,114,871.53	\$ 5,353,628.36	\$ 7,159,907.47	\$ 1,315,855.22	\$ 403,397.82	\$ 49,748.78	\$ 808,380.00	\$ 1,616,729.22	\$ 404,190.00	\$ 185,400.00			\$ 20,412,108.40
PAYMENTS RECEIVED 2013	28	56	84	119	147	175	210	238	273	301	329	365	
		\$ 2,624,144.87	\$ 829,117.56	\$ 937,689.69	\$ 99,168.80		\$ 62,938.65						\$ 4,553,059.57
TOTAL TRANSACTIONS 2012	\$3,114,871.53	\$ 7,977,773.23	\$ 7,989,025.03	\$ 2,253,544.91	\$ 502,566.62	\$ 49,748.78	\$ 871,318.65	\$ 1,616,729.22	\$ 404,190.00	\$ 185,400.00			\$ 24,965,167.97

Table 5.8 represents the total amount of dollar revenue recognized for the year 2012 as per the number of days of payment with the accrual method. As mentioned before, only 41 transactions were recognized with in the month of shipment out of the total 196, that is equivalent to \$3,114,872. The additional 155 transactions were recognized between February 2012 and June 2013. The total amount recognized in 2012 was \$20,412,108.40 and for 2013 \$4,553,060. Roughly 18% was recognized during the following year.

Figure 5.11 shows the revenue and the number of transaction recognized under the cash and accrual method. The biggest difference between the methods is the specific month when the recognition of revenue was presented. In the cash method, a 100% of the transaction with departure in the current month was recognized. In the accrual method only few transactions were recognized because of the need to follow the SEC criteria. Therefore, as the result of applying one method or the other in the financial statements, transactions will presented as accounts receivables and or deferred transactions.

**Figure 5.11 Comparisons of Revenue Recognition Methods for the Beans Transaction in PSI in 2012**



Using the accrual method for revenue recognition and knowing that the product had been shipped according to contract terms and also the assurance of payment exists, the accounting department incorporates in their account receivables, future cash flow projected to be collected, in the next months. When the cash method was used, the financial statements were done only once a year because no projections were needed to be made monthly which reduces significantly the time that it takes for the closing of the month.

With the application of the accrual method, the working capital calculation and the annualized margin takes more into consideration for the managers, the trading, and logistic staff because all need to internalize that before the acquisition that working capital was limited. After the acquisition, working capital increased considerably due to the accounts receivable and deferred revenue increases. If the time for revenue recognition is longer or shorter, this will influence on the cash availability at the end of the month.

For the whole PSI team, the goal has to consider the use of the working capital and one of the ways to increase it is to reduce the days of accounts receivables and inventories.

The information presented at the end of each month to senior management to be part of the financial statements has to be measurable, reliable and relevant. A public company has to provide information that will allow investor to make their best decision.

## CHAPTER VI: CONCLUSION

The overall objective of this thesis was to determine the impact of the changes in procedures applied for revenue recognition before and after the acquisition of PSI by Seaboard.

PSI Revenue recognition before the acquisition was based on the cash recognition method. Once the product was on the water, recognition was done, without taking into consideration the arrival or payment terms of the cargo.

After the acquisition of PSI by Seaboard, starting in 2012, the procedure for the revenue recognition needed to comply with SEC requirements. These are based on the fulfillment of the following four criteria: 1) Persuasive evidence of an arrangement exists; 2) Delivery has occurred or services have been rendered; 3) The seller's price to the buyer is fixed or determinable; and 4) Collectability is reasonably assured.

Of the four criteria, the data analyzed confirmed that the delivery of the goods and collectability of payment occurred based on the departure date, transit time and payment terms.

A comparative analysis of 196 transactions collected from the trades done by the pulse department in PSI for 2012 indicated that beans represented 26% of the total sales with a total revenue of almost \$25 million. Beans sold were 23 thousand metric tons, equivalent to 15% of the total pulses sold.

The main factors taken in to consideration for the comparison of the revenue recognition methods under the cash and accrual method were: departure date, transit time and payment terms.

With the cash method, 100% of the transactions were recognized in the current month of shipment, but with the accrual method only 20.9% of the transactions were

recognized in the month of shipment because for the accrual method, revenue has to be earned and realizable.

To know when the revenue was realized under the accrual method the countries of origin and destination were determined. The average transit time between the origin and destination was 37 days.

The last factor taken into consideration was the assurance of collectability. The analysis compared the departure month of the cargo to the day payment was received, for the transactions in 2012. Only 41 transactions (20.9%) were paid within 28 days of the date of shipment, 68 transactions (35%) within 56 days of the date of shipment and 61 transactions (31.1%) within 84 days of shipment. Out of the 196 transactions, 155 transactions (79.1%) had payment deferred at least for 68 days.

In general, the process of data segregation, manipulation and validation was a long and complicated process for the change in revenue recognition after the acquisition for all the members of the organization. Therefore, managers, the logistic staff and traders worked with the finance team to improve the finance process but the biggest weaknesses was the ERP system used by PSI (NETSUITE). The system does not automate the revenue recognition and the reporting activities.

The biggest impact in the organization is to implement a new ERP system that collects data to allow management to implement business analysis and facilitate the revenue recognition process.

The implementation of a new ERP system will decrease the use of spreadsheets and avoid the manual processing of entering data and making the reporting more accurate and quicker.



It is important to remember that the main purposes of standardizing the process of the revenue recognition for public companies is to allow investors to have information that is accurate and reliable, that represents the common knowledge that all investors use to judge for themselves whether to buy, sell, or hold a particular security. The information provided in the financial statements has to be credible, transparent, and comparable. Automating this process can assure a more timely calculation reporting and reduces compliance costs.

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