SARBANES OXLEY ACT AND INTERNAL CONTROLS

- Case Company X Oy

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**TIIVISTELMÄ**

Täsmän opinnäytetyön tarkoituksena oli saada kokonaiskuva Sarbanes Oxley -laista ja varsinkin siihen liittyvistä sisäisen valvonnan kontroleista taloushallinnon näkökulmasta. Työssä on kuvattu toimeksiantajarytymien, Company X Oy:n sisäiset taloushallinnon kontrollit ja niihin liittyvät avainprosessit.

Sarbanes Oxley -laki, SOX, on Yhdysvalloissa vuonna 2002 käyttöönottettu laki, joka säätelee Yhdysvaltain pörssiin listautuneita yrityksiä. Koska toimeksiantajan pääkonttori sijaitsee Chicagossa, on mahdollista, että yritys tulee listautumaan Yhdysvaltain pörssiin tulevaisuudessa. Työn tarkoitus oli siis tapaustutkimuksen avulla kartoittaa toimeksiantajan taloushallinnon sisäiset kontrollit ja avainprosessit, jotta mahdollisen listautumisen tapahtuessa yrityksen kontrollit ovat valmiina ja SOX-kelpoisia.

Toimeksiantajarytymen sisäiset kontrollit olivat pääosin jo olemassa, mutta niitä ei ollut dokumentoitu. Tutkimuksen aikana huomattiin, että kontroileja ei sinänsä tarvitse muuttaa, jotta yritys täyttäisi SOX-kriteerit talouden kontrollien osalta, ainoastaan eri dokumenttien tekemistä ja hyväksymistä pitäisi tehostaa. Vaikka SOX ei tulisi koskaan koskemaan yritystä, kontrollien ja prosessien päivittäminen ja dokumentointi on silti tärkeää; esimerkiksi sisäiset tai ulkoiset tarkastajat saattavat pyytää dokumentteja nähtäville. Myös se, että yrityksen kirjanpitäjän, joka on tämän opinnäytetyön kirjoittaja, tiedot kontrolloista ja prosesseista on dokumentoitu eivätkä ne ole ainoastaan hiljaista tietoa, hyödyttää yritystä. Haastatteluiden avulla on hahmotettu muun muassa systeemikontroileja ja muihin sisäisiin organisaatioihin linkittyviä kontroileja.

**Avainsanat** Sarbanes Oxley -laki, sisäinen valvonta, talousprosessit

**Sivut** 68 sivua, joista liitteitä 14 sivua
ABSTRACT

The purpose of this thesis was to obtain a general view of the Sarbanes Oxley Act, SOX, and especially internal controls that are an essential part of SOX. Internal controls have been considered from a financial point of view. Thesis describes financial internal controls and key processes of the case Company X Oy.

Sarbanes Oxley Act is an act that has been launched in year 2002 in the United States and regulates companies that are listed on the United States Stock Exchange. Because the headquarter of the case company is based in Chicago, there is a possibility that the company will be listed on the US Stock Exchange in the future. The purpose of this thesis was to describe financial internal controls and key processes as a case study, in order to prepare the company for the possible listing.

Internal controls of the case company were already mostly implemented, but those were not documented. During the study, it was found out that the controls do not need to be changed in such, although documenting approval of different documents should be enhanced. Even though SOX would never be implemented in the case company, documenting controls and processes has been important; for example, internal or external auditors may want to see the documents. In addition, documenting silent knowledge that is only known by the accountant, who is also the thesis author, will benefit the company. Interviews have been used to gather information of system controls and controls that are linked to other internal organizations.

Keywords Sarbanes Oxley Act, internal control, financial processes

Pages 68 pages including appendices 14 pages
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1 INTRODUCTION

Growth and evolving are often clear objectives in the circle of company's life. With the growth expectations, getting listed on the Stock Exchange may become a current issue. Sarbanes Oxley Act, also known as SOX, defines and sets rules for the companies that are listed on the United States Stock Exchange. The rules concern company's board, management and audit.

Case company of this thesis is a Finnish company, referred as Company X Oy, which is a part of an international group. Headquarter of the group is based on Chicago so there is a possibility that in some timeframe the company will be listed on the United States Stock Exchange. Although, the headquarter of the company is situated in Chicago, there will be impacts of the possible listing also to the Finnish subsidiary. This thesis is considered from the Finnish subsidiary’s point of view.

According to the Sarbanes Oxley Act, companies have to define their important processes and key controls. Documentation of these processes and controls is a key factor in SOX. Internal control supervises that the company takes proper care of its SOX controls and the documentation of those controls.

This thesis deals with the effects of the SOX to the company’s daily routines and the actions in month end and year end closing from the internal controls’ point of view. The subject of this thesis is current for the case company and may also benefit other Finnish companies that have considered listing to the U.S. Stock Exchange. The author of the thesis works in the finance department of the case company so the subject is also current for the researcher. The subject is also professionally developing for the author in another way. Finnish companies that are listed on the United States Stock Exchange are often looking for finance professionals that are familiar with SOX.

1.1 Objectives and defining of the thesis

Objective of this thesis is to get a clear image of the main principles of the Sarbanes Oxley Act and the control requirements it sets to companies, focusing on what it means to the case company. Aim is to renew company's current processes to match SOX procedures and develop company's internal controls accordingly, focusing on financial processes. If the listing on the US Stock Exchange will happen in the future, all the procedures and practices are existing and ready to use. If the listing will not ever happen, updating and documenting controls and processes can still be useful for the company.
The main point of this thesis is to define and update key financial processes and controls in the case company and how these should be documented according to SOX. This means that the main question can be worded: What are the key financial processes and controls? It can also be asked that how controls should be documented to match Coveris group SOX requirements?

This thesis is defined to cover SOX and especially internal control processes from the case company’s point of view. Although the thesis is from the case company’s point of view, it may benefit other Finnish companies that are starting up with SOX.

This thesis will concentrate only on financial processes, mainly related to financial accounting. Other processes, such as the ones that are linked to human resources, will be left out. Also, the finance processes in case company that SOX does not affect will be excluded from the thesis.

1.2 Research methods and structure of the thesis

Theoretical framework begins with an introduction of the case company. Following chapters of the thesis describe the Sarbanes Oxley Act and focus more on the essential element of SOX, COSO internal control framework. Procure to pay and order to cash processes are described more deeply, because these processes are important from financial perspective and contain many internal controls. Internal audit is also explained in the theoretical framework in order to get a greater picture of the entire phenomenon.

The information base of the thesis has been gathered from professional literature and publications. The author of this thesis works as an accountant in the finance department of the case company which means that also observation and material from the company has been used as well. Also, the expertise of the researcher is exploited in this work.

The working process begins by going through the current processes in the company and during the thesis work, those processes are updated and presented in this thesis. Internal controls linked to these processes are described as well. The result will benefit the company in form of documented financial processes and internal controls.

Conclusions are made at the end of the thesis. In this chapter, the author summarizes the results of the study. Conclusions chapter also includes self-reflection, justification of the reliability and validity of the thesis as well as suggestions what could be done in the case company and ideas for possible new researches.

Research part of the thesis will be done as a qualitative study, as a case study research. Case study research has been chosen as a research method
because the study has been done for the need of one specific company. Interviews will be used to get a better understanding of the internal controls and how those are executed in the company. Observation will be used also as a research method. Observation is a natural part of the study because the researcher works in the finance department of the case company. Documents that the group has made about SOX and internal controls will be used as well.

Qualitative research is about understanding how people interpret their experiences, construct their worlds and what meaning they give to their experiences. Understanding the phenomenon from the participant’s perspective is the key factor in qualitative research. The researcher is the primary instrument of the data collection and analysis. In this research method, the pieces of information, observations or documents are combined. (Merriam 2009, 14-17.)

Case study is about a contemporary phenomenon which is investigated in its natural context. Different sources of evidence will be used in case study, for example theme interviews, observation and documents. Usually, the subject of a case study is one case of which the researcher wants to have a deep understanding. Research questions should start with “how” and “why”, although “what” is valid question for a traditional case study in order to produce a description or a narration of the phenomenon. (Kananen 2013, 54; 66.)

Interview is one of the most important sources used in case study. In a case study, interviews are often more like a guided conversation than a structured query which results to the fact that usually the interview questions are open-ended. When using a focused interview, the interviewer may want to confirm the facts that are already established. Questions can be open-ended but also carefully formulated in order to allow the respondent to provide a fresh statement about the subject. (Yin 2003, 89-91.)

1.3 Case company

Because of the confidentiality, the case company is referred as Company X Oy in this thesis. The case company of this thesis is a Finnish middle sized manufacturing company that is based on Hämeenlinna. Company is part of an international group which has production all over the world. Headquarter of the group is based on Chicago.

Group operates in manufacturing industry worldwide. Annual turnover of the group is 2,6 billion dollars. Group employs about 10500 persons in 22 countries. The number of facilities in these countries is 68. (Company X Oy Presentation, April 2016.)
Current facility of Company X Oy is highly automated. Daily production is about 4 million pieces, which makes the yearly production up to one billion pieces. 13 tons of material is processed yearly. (Company X Oy Presentation, April 2016.)

Turnover of the case company is approximately 40 million euros. Major part of the turnover comes from the domestic sales, although the share of export is constantly growing. Company X Oy employs about 200 people. (Company X Oy, April 2016.)
2 SARBANES OXLEY ACT

Sarbanes Oxley Act, which is also known as SOX, has been established 30.7.2002 in the United States. The act concerns all companies whose shares are traded in the stock exchanges in the United States. The act also concerns foreign subsidiaries of companies listed on the United States. (Ratsula, 2009.)

The objective of the act is to improve the validity and reliability of the information that companies publish. Regulations of the act concern reporting of the management, publishing of financial statements, responsibility of the auditors and arranging internal control among other things. (Ratsula, 2009.)

Sarbanes Oxley Act obligates that the managing director together with the finance director must give a written assurance of the validity of information in the interim report and in the financial statements. If there are noticed mistakes in the published reports, corporate management might get fines or even twenty years in prison at worst. The meaning of internal controls gets extra attention in SOX. All significant financial processes and key controls must be defined and documented. SOX obligates that both, the managing director and the finance director, have to sign a report annually which states that they are in charge of the internal controls and adequate procedures are used in financial reporting. Also, external auditors have to take a stand in the evaluation process of the management and to the efficiency of internal controls. (Ratsula, 2009.)

Annual financial reports are the primary media that must be reported periodically to those who own private companies and to the public. Proper preparation and content of financial reports are vital to the effective functioning and success of the market-based economies. Financial reports should give a true, fair, complete, comparable and transparent picture of the financial state of the company. Accounting and auditing standards are effective operating parameters for periodic accumulation and reporting of relevant accounting information through financial statements. (Garner et al. 2007, 3.)

It is a fact that the Sarbanes Oxley Act has affects to the public companies, but it also has a very significant impact on private companies if those companies have plans for going public in the future. If a private company is already SOX complaint, it will make it look more attractive to potential investors and also to the underwrites and the market makers. (Holt 2007, 26.)

Implementing SOX in a company is highly expensive as well as maintaining of an adequate internal control system. In addition, the costs of auditing process have increased after the launch of Sarbanes Oxley Act. (Holt 2007,
13.) Investors are aware that if a private company is already SOX compliant, it does not have to spend a lot of money to get compliant after the listing. (Holt 2007, 26).

2.1 **History of Sarbanes Oxley Act**

The kick off of the Sarbanes Oxley Act was caused by the demise of three large companies from the United States; Enron, Global Crossing and WorldCom, because of incentive compensation plans. The senior management and executives of these companies exercised their stock options for personal gains. They contributed to and saw beforehand the upcoming collapse of their companies and abandoned those. These events left the shareholders empty-handed and in financial collapse. (Holt 2007, 5.)

Right before the crash, in 2001, Enron was the seventh largest corporation in the United States, ranked by the Fortune magazine. Taken this into account, it was a complete surprise when the company filed for bankruptcy at the beginning of December 2001. The reason behind the crash was the management of the company that used so-called creative accounting and manipulated financial statements in order to enlarge the profits. (Northrup 2006, 5.)

The financial fraud in WorldCom was also caused by creative accounting entries that were not in accordance with Generally Accepted Accounting Principles. One example of their creative accounting is that the company had classified operating expenses as capital investments. WorldCom also created non-existent reserves to lift operating profits if they were about to fail the expectations of Wall Street. (Northrup 2006, 9.)

After the demise of the three companies, something needed to be done to prevent similar events from happening again. United States Senator Paul Sarbanes and Congressman Mike Oxley were appointed by President George W. Bush to create new laws that should prevent, or lessen at least, the possibility of similar corporate scandals from happening again. (Holt 2007, 5.) As mentioned in the previous chapter, the act was released 30.7.2002.

Self-regulation of the public companies in the United States came to an end after the Sarbanes Oxley Act was released. It meant that a new period of time had begun and brought with it a greater government regulation and oversight for the auditors in the United States and also in the whole world. New regulations strengthened government regulations over issuers of financial securities, the affiliated support companies and all those who are involved in the processes of financial reporting. (Garner et al. 2007, 54.)
2.2 Global accounting standards

In the current economy, every country has their own sets of rules for their accounting standards. It makes the operating in the global business environment difficult, especially if a company has subsidiaries in multiple countries. For example, a Finnish company which has a headquarter in Luxembourg, has to make two financial statements, according to International Financial Reporting Standards as well as according to Finnish Accounting Standards.

It is not a surprise that many in the United States think that their standards are the best in the world. It is also not unexpected that other nations usually have a different opinion. The global market would benefit from a single set of required accounting standards that would be consistent, comparable and relevant across the world-spanning environment of finance and commerce. National and international financial reporting authorities are currently working towards improving and converging their standards to meet that goal. These actions will ease the objectives of capital owners and capital users in their search for the optimum return in the world’s markets. (Garner et al. 2007, 24-25.)

Before the year 2000, development of international accounting standards had the goal of harmonization of country standards. After that, the goal has been changed from harmonization of country standards to convergence of country standards. There has been progress in both harmonization and convergence in moving the accounting standards closer to more comparable set of standards in mutual agreement and toward the final goal of development and adoption of one set of global accounting standards. (Garner et al. 2007, 27.)

The International Financial Reporting Standards, also known as IFRS, have been adopted in many areas of business, but the acceptance of IFRS as the one global accounting standard has remained as a work in progress. One problem in creating only one set of rules is that according to the International Accounting Standards (IAS) and the standards in the United States, the rules are the same for all companies, no matter what sizes. That may not work for smaller entities because of the high costs. There are some countries, such as United Kingdom and Finland, that do have separate standards for small companies. These standards have simplified accounting requirements in disclosure, presentation, recognition and measurement. (Garner et al. 2007, 31-32.)

Convergence is not an easy goal to reach. With the number and importance of the remaining differences between IFRS and the Generally Accepted Accounting Principles in the United States, also known as US GAAP, this is an ambitious target. (Garner et al. 2007, 36.) But still, the national standard-setters and market participants seem to have come to a consensus that the global markets and economies would benefit from
recognition and execution of one set of standards instead of having different standards in every country. (Garner et al. 2007, 38). This would ease the accounting requirements in multinational organizations. For example, the case company of this thesis makes two set of financial statements; IFRS and FAS (FAS being an abbreviation from words Finnish Accounting Standard).

There is a growing need for independent auditing as the economic activities keep expanding in volume, scope and complexity. Securities markets are not able to function properly without an effective independent audit, especially in the international business environment. The soundness of standards and practices, that are followed by all parties, in the financial reporting process is relevant to the credibility of corporate financial reports and to investors in their decision making. Financial reports are crucial for the investors to be able to make their decisions concerning their current possessions but also their future investments. Audited financial reports are the most reliable way to get a proper picture of the overall state of the company as well as its financial state. As the global market would benefit from one set of accounting standards, it would also benefit from one set of global auditing standards as well. (Garner et al. 2007, 39-40.)

2.3 Essential requirements of SOX

Sarbanes Oxley Act includes eleven chapters and seventy subchapters. There are requirements for board of directors and liability for damages to the top management among other things. The act covers also establishing and jurisdiction of Public Company Accounting Oversight Board, also known as PCAOB. (Ratsula 2016, 45.)

The purpose of PCAOB is to supervise and give instructions to the auditors of companies that are listed on the exchanges under SEC, U.S. Securities and Exchange Commission. Only audit companies that are registered to PCAOB are able to perform audits to the companies that are monitored by SEC. (Ratsula 2016, 45.)

Because there are a large number of chapters and sections in the Sarbanes Oxley Act, it is not essential to go through all of them. Only the most important sections are described.

SOX section 302 obligates the top management and the finance management to certify the annual and quarterly reports. The certification covers contents of the reports as well as the internal control system of the company. Both, managing director and finance director, personally are required to certify that they have reviewed the report in question and based to that signing officer’s knowledge, the financial statements do not contain any untrue or misleading information. Statements must give a fair and true picture of the financial condition of the company as well as from
the results of the operations. The signing officer is also responsible for establishing and maintaining internal controls. Internal controls must be designed in a way that it ensures that the signing officer has all the material information about the organization during the period when the reports were prepared. (Ratsula 2016, 48; Moeller 2013, 20-21.)

According to Moeller (2013), SOX section 404 is the most important section of SOX for many enterprises. SOX section 404 requires the company to build and document its own internal control processes. These processes will be reviewed and tested by an independent party, such as internal auditors, and then an external auditors review and attest to the adequacy of this overall process. (Moeller 2013, 25.)

The section related to the company’s code of conduct and ethics are included in SOX section 406. This section requires the management to publish information about has the company compiled and adopted the codes as a part of their operation. The codes require an honest and ethical conduct, including ethical reacting to actual or apparent conflicts in both personal and professional relationships. (Ratsula 2016, 50; Moeller 2013, 26.)

SOX section 304 prohibits that the auditor involved to the audit of the financial statements should not be targeted to fraudulent influencing, intimidation, manipulation or deception if the intention is to distort the information in the financial statements. Section 304 is about the consequences that can be placed to the management in cases of creating misleading financial information. The whistleblower protection that obligates the company to protect its employees that have revealed misdemeanors in the company is covered in section 806. (Ratsula 2016, 49-50.)

Section 404 requires that managing director and finance director of the company must sign a report that states that the company has adequate internal controls to ascertain the validity of the financial reporting in yearly bases. They also have to evaluate the efficiency of their internal controls. Also, internal and external auditors have to take a stand to the evaluation process of the management and to the efficiency of the internal controls. (Ratsula 2016, 45.)

The management of the company has to recognize the key controls and to test the efficiency of those controls. There are different kinds of ways that the company can use to test its controls; such as enquiry, perception and walkthrough of documents and transactions. The person who tests the controls should not be the same who makes the transactions. It is also a task of the management to document the evaluation process of the internal control system. (Ratsula 2016, 51-52.)
According to SOX, management must give an evaluation concerning the controls related to financial reporting on yearly basis. Evaluation should include a statement which announces that the management is responsible for the efficiency and maintaining the financial controls. There also should be mentioned the framework that the management has used while evaluating the efficiency of the financial controls as well as the valuation of the efficiency of the controls at the end of the fiscal year. The evaluation should also have a statement concerning possible weaknesses detected in the internal control system and a statement that notes that the auditor of the company has given a testimonial about the evaluation of the management. (Ratsula 2016, 52-53.) The concept of internal controls is presented in the following chapters.
3 INTERNAL CONTROL

An effective internal control system is one of the company’s most important players in defending against business failure. It helps to manage risks and enables the creation and preservation of enterprise value. Internal controls are designed to protect the company from a loss or misuse of its assets. An internal control system helps to ensure that transactions are properly authorized, supporting IT-systems are well-managed and the information in the financial reports is reliable. Internal controls are an integral part of company’s governance system which is actively monitored by company’s management and other personnel. (Moeller 2013, 2-3.)

Every member of the organization is responsible of carrying out internal controls. However, the principal responsibilities are with the management of the organization. The managing director is responsible for the operative management and obtaining the goals that are in place. This includes the overall responsibility of creating, implementing and maintaining the internal control system. The mission of the board of directors is to arrange the administration in the company and the members of the board to take responsibility for organizing the control of company’s accounting and financials. Operative management answers of creating, communicating and monitoring the internal controls in their own organizations in more detailed level. Every superior has an important responsibility to make sure that the subordinates are qualified to manage their tasks. (Ratsula 2016, 24.)

Internal controls of the company are meant to protect its assets, check the accuracy and reliability of accounting data, promote operational efficiency and encourage adherence to managerial policies. Information technology controls are also a very important part of internal controls, because those are designed to ensure that the information in the company flows as intended, the data is reliable and the company is following all applicable laws and regulations. (Moeller 2013, 3.)

There can exist severe consequences if a company neglects its internal controls. The reputation of the company might suffer. It could have a negative impact to the company’s shares as well as the value of the company. Shareholders could be withdrawn, which can lead to the weakening of funding. The loyalty and commitment of the employees can be lost as well as the loyalty of customer and other stakeholders. There can also appear financial consequences such as penalties. Effects of neglecting internal controls can lead to legal responsibilities of the management and board of directors and ultimately to the demise of the business. (Ratsula 2016, 28.)
Committee of Sponsoring Organizations, later COSO, was founded by a group of professional accounting and finance organizations. The impact of this organization to be founded, were the series of accounting scandals in the United States in early 1990s. The purpose of COSO is to develop a consistent framework to define the concept of internal control. COSO outlines the characteristics and concepts of an effective system of internal controls. COSO became a requirement for external auditors in their assessments of financial statement internal controls and it also became an important measure for persuading the Sarbanes Oxley Act compliance. New revised COSO internal control framework was published in May 2013. (Moeller 2013, ix.)

The difference between SOX and COSO is, that a company is legally required to comply SOX procedures in order to justify the adequacy of its internal controls. There are no such legal requirements in COSO. (Moeller, 2013, 234). COSO is mainly about best practices guidance. However, Moeller (2013, 292) states that as a part of a company’s SOX Section 404 internal control requirements, it is required to prove that the internal controls of the company are following the COSO internal control framework.

Renewed COSO was needed because of the changes that have happened over the years in businesses and their operating environments. Businesses and environments have become increasingly complex because of the IT driven systems and global enterprise arrangements. Stakeholders responsibility for building and managing business entities have become more engaged in improving the accountability and integrity of their processes. (Moeller 2013, 32.)

COSO defines internal control as a process that is affected by company’s board of directors, management and other personnel and which covers the achievement of objectives in effectiveness and efficiency of operations and reliability of financial reporting. COSO also covers the company’s objectives in compliance with applicable laws and regulations. (Moeller 2013, 30.)

As mentioned earlier, there are three objectives in COSO internal control framework. The first objective relates to the operations of the organization. This objective includes the efficiency and effectiveness of the operations as well as the performance of operational and financial objectives and protecting company’s assets from losses. Basis to these objectives are the mission, vision and strategy of the company. The second objective is about reporting. Reporting related objectives consist of internal and external reporting of financial and non-financial subjects. Compliance is the third objective according to COSO internal control framework. That objective is about obeying the rules and laws applicable
to the operation which builds the minimum requirements of the performance of the company. (Ratsula 2016, 16.)

Moeller (2013, 31) states that there are five basic principles that support company’s COSO internal controls. The organization demonstrates a commitment to integrity and ethical values. The board of directors shows independence from management and exercises oversight of the development and performance of internal controls. Management constitutes structures, reporting lines and appropriate authorities and responsibilities in the pursuit of objectives. In the pursuit of objectives, also the organization holds individuals accountable for their control responsibilities. Picture below demonstrates COSO internal control framework. Five basic principles are situated at the first side of the COSO internal framework cube. The following chapters will focus more on these principles. (Moeller 2013, 31.)

![COSO Internal Control Framework](image)

**Figure 1.** COSO internal control framework (Moeller 2013, 38).

### 3.1.1 Control environment

Control environment has been placed to the top of the cube of COSO internal control framework because it sets standards, processes and structures that provide the basis for implementing effective internal control activities throughout the company. The importance of internal controls should be communicated and emphasized by the board of
directors and the senior management including the expected standards of conduct. (Moeller 2013, 41.)

The control environment, as mentioned above, concerns stakeholders in every level of the company. Beginning from the top level, the board of directors should have the authority over significant decisions and it should review the assignments and limitations of authority and responsibilities of management. Senior management is responsible for establishing directives, guidance and controls to enable management and personnel to understand and execute their internal controls and liabilities. Management oversees the execution of the senior management's guidance. Every member of the personnel of the company should understand and operate by the company’s code of conduct. Also, this understanding should include assessed risks that are related to internal control goals, related control activities of the corresponding level in the company, expected communication and information flow as well as monitoring activities towards achieving the goals. The control environment concerns also outsourced service providers. They should follow the management’s definition of the scope of authority and responsibility. (Moeller 2013, 50.)

4.1.1.1 Code of conduct

Company’s code of conduct should cover ethical, business and legal rules and it should concern all company’s stakeholders. It should be clear and consist of set of rules or guidance about the rules for what is expected from the company stakeholders, whether they are employees, vendors or any other stakeholders. The code should be based on the values and legal issues concerning the company. Besides of the basic aspects in the code of conduct, such as sexual and racial discrimination, the nature of the business and its possible regulations must be taken into account. (Moeller 2013, 44.)

Ones the code of conduct has been done, it should not be forgotten. As Robert Moeller (2013, 46) describes, the code of conduct must be a living document. It is important that the management of the company understands and stands behind the code of conduct. It is a good message to give to all other stakeholders that the management believes to the codes and guidance. If there is a new code of conduct or major changes to an old one, it must be made clear to everyone using different channels, for example video or webinar. After the release and introduce of the code, it should be guaranteed that every member of the company stakeholders does understand and accept it. (Moeller 2013, 46.)
3.1.2 Risk assessment

As in general, also the COSO internal control framework defines risks as a possibility that something may happen which will make a damage to the achievement of some objectives of the company. It is a task for the management to determine how much risk the company is willing to take and have to try to preserve the risks within these limits. Assessing and understanding risks are crucial for the business to survive. (Moeller 2013, 59.)

Moeller (2013, 61) separates four key concepts in risk assessment principles. The company should specify its goals adequately so that it will be able to identify and analyze the risks that are related to the goals. Risks related to achieving the goals must be identified across the entity and analyzed in order to determine how risks should be managed. Potential fraud must be considered in assessing risks. Changes that could substantially affect the performance of company’s internal controls must be identified and evaluated. (Moeller 2013, 61.)

After the risks are identified in all levels of the business, management should discover how these risks should be handled. COSO internal control framework has four response strategy approaches relating to the risks. One of the strategies is avoidance. It basically means walking away from the risks. Then there is a strategy of reducing risks, reduction. Sharing risks is also one possible strategy. The idea of this strategy is to arrange some other party that is willing to accept some of the potential risk, with acknowledging that there may be costs relating to that activity. The fourth strategy is acceptance, which means that there will be no actions connected with the risks. The company should consider the possibility and impact of a risk and decide whether to accept it or not. (Moeller 2013, 67-68.)

A risk assessment in the company should cover all of company’s operations, compliance activities and reporting needs. The goals of the risk assessment should reflect the choices of the management in structure of the company, industry consideration and enterprise performance. (Moeller 2013, 71.)

3.1.3 Control activities

According to Moeller (2013, 73), control activities are possibly the core element in COSO internal control framework. These are actions that make sure that the guidelines of the management in reducing risks are carried out. Activities can be prohibitive or detective and may include manual and automated activities. The control activities are performed at all levels of the company, at various stages of the business units and processes and over the technology environment. Moeller sets an example that the person or automated function that starts a financial transaction should not
be the same person or process that approves it. This is one way to prevent frauds.

Prohibitive actions are placed to prevent undesirable events and risks from happening, for example with approval of purchase orders. Company values, principles, strategies and goals are also included to the prohibitive actions. Actions, like deviation reports and reconciliations, are called detective. The purpose of these actions is to detect and correct undesirable events. (KPMG 2008, 51.)

There are three principles of COSO control activities that define how the key control of the company should be identified and documented. At first, the company selects and develops control activities that contribute to the removal of risk in order to achieve company’s goals in all acceptable levels. Company selects and develops general control activities over technology to support the achievement of the goals. Company accommodates control activities through policies that establish what is expected and in procedures that put the policies into action. Link between risk assessment and control activities is that the control activities include actions that make sure that the response to assessed risks is performed properly and in time. (Moeller 2013, 75.)

The information in processing goals should be complete, accurate and valid. This means that the transactions should be recorded, transactions should be recorded in correct amount in the right account in time and the authorization of transactions should be according to the policies and procedures set by the company. The authorization process confirms that the transaction is valid. It basically means that the approval comes from the higher level to transaction performed by someone else. (Moeller 2013, 76-77.)

3.1.4 Information and communication

Information and communication are both important elements in order to the business to achieve its goals. Information is also necessary in carrying out internal control responsibilities to support the company goals. According to COSO framework, communication is a continual, iterative process that provides, shares and obtains necessary information. Communication can be either internal or external. The objective of the internal communication is to obtain that personnel gets a clear image of the internal control responsibilities from the senior management. External communication is about sharing relevant information and providing this information about requirements and expectations to external parties. (Moller 2013, 87.)

Recording transactions in a timely manner and breaking them into their component parts are actions that should be taken into consideration in the information and communication process of the company. The information
should be processed, summarized and reported for management and for accounting purposes. Captured and processed data should be stored in formats that can be summarized, audited, reviewed and reported quickly and easily. The information should also be in a format that can be used in management analysis and for internal control purposes. (Moeller 2013, 88.)

Information should come from relevant sources. Internal controls will be often improved by a wider access to information. In the modern world, this may also be a handicap because of the amount of information. It is also difficult to know whether the information is relevant or not. The right information in the right hand on the right time should be a primary target in the company. Information system quality is dependent on if it is sufficient, timely, current, correct, accessible, protected, verifiable and retained. (Moeller 2013, 92-95.)

3.1.5 Monitoring activities

Monitoring is performed in order to make sure that the internal control processes continue to work effectively. That is why it is a key objective in COSO internal control framework. There are many benefits in monitoring activities such as to identify and correct internal control problems in time and to produce more accurate and reliable information that can be used in the process of making decisions. Preparing accurate and timely financial statements is also one advantage of monitoring activities. The benefits also include that the company is in a position to provide periodic certifications or assurances on the effectiveness of internal controls. (Moeller 2013, 105.)

The place of the monitoring activities in the cube of COSO internal control framework is on the bottom because the activities assess if the other five components of internal controls are present and functioning. Monitoring activities can be carried out through a combination of separate evaluations or through continuous monitoring processes. Ongoing evaluations are usually defined as routine operations that are built into business processes, carried out on a timely basis and reacting to changed conditions. Separate monitoring evaluations, on the other hand, include observations, inquiries, reviews and other examinations that insure if the internal controls affect principles across the company and its subunits are present and functioning. (Moeller 2013, 107-110.)

3.1.6 COSO reporting process

As all the elements related to Sarbanes Oxley Act, also COSO is all about reporting controls correctly in all levels of the company. Proper reporting should happen both internally and externally. Reporting control activities must be in place to identify and capture all data and information elements
to be included in reports. Reporting control activities are also needed to process these materials before releasing the reports, using IT systems and other necessary equipment and to guarantee that the needed information reaches all the right persons and entities at the right time. (Moeller 2013, 137-138.)

There are many reports that need to be prepared by the companies. Probably the most important documents in the public companies are the annual and interim financial statements and earning releases. As Moeller states in his book (2013, 140), the quality and integrity of the external financial reporting controls might be the major issue that has launched the development of original COSO, and later, SOX legislation. Financial management of the company is responsible for making these documents using accepted accounting standards. As COSO and SOX have emphasized the meaning of internal and external audit, these reports are also reviewed first by internal auditors for the adequacy of internal controls and after that by external auditors for their release. (Moeller 2013, 140.)

All financial reports should be prepared with care but especially the external reports mentioned above. There are no room for errors. Reports should be reviewed carefully and the approvals from management, external auditors and other parties should be in place before the release of the documents. Attention should be given also to report filing times and that the reports are published in time. Audit trail in all of the materials should be in place. Every reporting control should have a strong approval process, version controls, roll backs and audit trails as mentioned earlier. (Moeller 2013, 141;150.)

3.1.7 COSO GRC

GRC, according to COSO, stands for governance, risk and compliance. Governance is for managing the whole business. This means to make sure that everything is done according to the standards set by the company, and follows the regulations and board of directors’ decisions as well as governmental laws and rules. Risk means that everything that is done and all operations include some amount of risk. Many laws and directives are affecting business and citizens nowadays; this is for compliance. (Moeller 2013, 163.)

Term corporate governance consists of rules, processes and laws by which businesses are operated, regulated and controlled. It includes the responsibilities and practices exercised by the board of directors, senior management and all levels of functional management in many areas, communicating these rules in the company and controlling rewards and punishments based on company’s compliance with these rules. (Moeller 2013, 165.)
All risks in the company should be assessed and the risk managements should be planned. Every type of risk cannot be identified or planned but the company should have an ongoing analysis of various potential risks which the company may face. Risk management process contains the identification and analysis of the risks and potential risks. Companies should develop plans and strategies of how to revive normal processes in case of risks occur. Tools and facilities should be in place so that the company is able to monitor risks that are already identified. (Moeller 2013, 165-167.)

3.1.8 COSO ERM framework

According to Moeller (2013, 17), COSO enterprise risk management, ERM, focuses on activities that the company and its directors may or may not do. It provides a tool or an approach to improve and manage risks in overall operating environment. (Moeller 2013, 17.)

The purpose of COSO ERM is to help companies to have a consistent definition of the meaning of risk and to reflect to risks in a consistent manner in all over the company. The framework was published in 2004 and it has been developed by the worldwide auditing company PricewaterhouseCoopers (PWC). Risk management is a process which is designed to identify all potential risks that may affect the company, and, manage those risks according to its risk appetite. Risk management should be taken into consideration in the company’s strategy. ERM is a process that is designed to achieve this result. The process should include a series of documented steps in order to review and evaluate potential risks and to take action based on a wide range of factors across the entire company. (Moeller 2013, 220.)

ERM framework is about providing a model for companies to better consider and understand their risk-related activities in all levels of the company and also their impact on each other. Understanding the risk appetite is an important element in implementation of the ERM framework in a variety of company environments. The concept of risk appetite means the amount of risk that a company and its managers are willing to accept in their pursuit of value. The objective of the ERM is to help managers and other professionals in the company to better understand and manage risks that the company may face. (Moeller 2013, 220-223.)

Internal foundation components of ERM framework consist of different types of elements that are presented in this chapter. One of the components is risk management philosophy that is a set of shared attitudes and beliefs that will tend to characterize how the company considers risks in everything that it does. Risk appetite, described in the previous chapter, is also one of the components. Attitudes of the company’s board of directors have an important role in overseeing and
guiding the risk environment of the company. Management is responsible for the commitment to competence which means that they decide how critical assigned tasks will be accomplished through developing appropriate strategies and assigning proper people to perform these often-strategic tasks. Other components of the internal foundation of ERM framework are integrity and ethical values, strong corporate mission statement and written codes of conduct, enterprise organizational structure, assignment of authority and responsibility as well as human resource standards. (Moeller 2013, 223-225.)

A company should evaluate risks from two perspectives, the possibility of a risk occurring and its potential impacts on the business. When risks are evaluated and identified, according to the COSO ERM, it should be decided how to respond to these identified risks. It is a management’s responsibility to do a careful review of the possibility of risks occurring and the impacts of those risks and to develop appropriate risk response strategies. (Moeller 2013, 229-230.)

After developing a strong understanding of the identified risks, the company and its management should develop control procedures to monitor these risks. There should exist certain testing procedures to define are those risk-related control procedures working effectively or not. Tests of the control procedures should be made in order to be able to determine are the risk monitoring processes working effectively and as expected. The final point in this risk management process is to make adjustments or improvements to improve the risk monitoring processes. (Moeller 2013, 234.)

According to Ratsula (2016, 63), the new version of COSO ERM is being prepared and will be published on COSO website in the near future. The updates to COSO ERM were published when this thesis was being prepared in the middle of year 2017. Because the theory of the thesis was already finished when the updates were published, COSO version 2013 is used in this thesis. Recent updates of COSO and more information can be found from COSO website: https://www.coso.org.

3.2 Key controls and processes

Key processes of a company are processes that usually have a clear link in producing financial information. Purchasing, manufacturing and sales processes are examples of typical key processes. Important controls are also the ones that concern accounting, information technology and human resources. Key processes can be identified by asking is the process that kind of process, where an error or mistake in that process causes most damage to the company, for example reporting of false financial information. (Ratsula 2016, 152.)
There are some typical end-to-end key processes in every company. Sales process begins from creating customer relations and ending with sales bookings or possible claim. Manufacturing process starts with acquiring raw-materials and ends when finished goods are delivered to the customer. Purchase process goes from selecting the supplier to the payment of the invoice. Accounting process begins with making the bookings and ends to the financial statements. It is obvious that the list goes on, but here were listed a few most typical processes. (Ratsula 2016, 152.)

End-to-end processes are not necessarily described in the companies, but the bigger the company, the meaning of defining and describing the key processes comes more valuable. When processes are defined, the company is able to better understand the whole process as well as the possible deficiencies of the process. Defining processes might also help to avoid overlapping tasks. (Ratsula 2016, 153.)

After the key processes are identified and defined, it is time to concentrate on the key controls inside these processes. Key controls are the ones that produce enough evidence about the state and efficiency of company’s internal controls. Key controls should cover all significant accounting related risks that might cause essential errors to financial reporting and to other controls. All key controls should be properly documented. (Ratsula 2016, 155-156.)

An organization must be careful when it modifies its processes and implements new controls. New controls should produce more value and benefits than it consumes resources. Persons that are responsible of guaranteeing that the controls are followed, should also understand the meaning of the controls in question. Sometimes it is in place to question existing controls and procedures and evaluate if there is an opportunity to make tasks more efficiently. (Ratsula 2016, 171-172.)

3.2.1 Financial processes – procure to pay

From financial perspective, procure to pay process starts when the purchase invoice is received. The process ends when the invoice has been entered into the accounting system, paid and archived. (Lahti & Salminen 2014, 53.)

However, the process starts already before it reaches finance. An efficient purchase to pay process is based on a purchase proposal that is entered into the system and approved in the system. Once the proposal is approved, the system will create a purchase order which will be sent to the supplier. After goods or services are delivered, receipt of the received goods or service is made to the system. The supplier sends an invoice of the goods or services, which in most efficient cases, can be received as an e-invoice directly to company’s invoice processing system. Basic data of
the invoice includes purchase order number and the invoice can be matched to the purchase order. Purchase order already includes the accounting, so it will be transferred to the invoice as well. If the invoice matches to the purchase order, there will be no need for an approval flow in the invoice processing system because the order has been approved earlier. If there are differences in the quantity or amount, invoice is sent to an approval flow in the invoice processing system. Payment data will be gathered from the approved invoices and transferred to bank for payment. (Lahti & Salminen 2014, 56.)

Controls inside the procure to pay process deal with supplier data, handling the invoices and payment of the invoices. Possible controls are listed below:

- Only restricted persons are able to access supplier master data. When only a few people can access the supplier data, it is easier to guarantee that the information is correct. Dangerous working combinations can be prevented when a person who maintains the supplier data does not have rights to input purchase invoices to the system or pay invoices.
- The system has a log which shows the changes made to the supplier data and the person who has made the changes.
- System prevents duplicate invoice numbers. The weakness of this control is that if the same supplier has been entered into the system for example twice, the same invoice can be entered to both supplier numbers. This will create a need for another control which prohibits entering, for example, the supplier VAT number more than once.
- 3-way matching is in place; invoice can be matched to the purchase order when the receiving has been done in the system. If purchase order and invoice have the same information, invoice is approved for payment. If there are differences in quantity or amount, system requires further actions.
- Delivery information is compared to received invoices. When the bookings, expense and liability, are made as soon as the delivery is received, it is possible to track orders which are not invoiced from a liability account.
- Fixed approval flows.
- Approval of new suppliers. Certain rules can exist in the process of opening new suppliers into the system. This can mean that only restricted persons have rights to ask a new supplier to be entered into the system or that if there is a new bank account in a supplier’s invoice, it has to be verified from the supplier before changing it to the system.
- Balance confirmations with suppliers and invoice aging reports. (Lahti & Salminen 2014, 193-195.)
3.2.2 Financial processes – order to cash

As well as the procure to pay process, also the order to cash process is larger than the financial part of the process. From financial perspective, the process begins when a new sales invoice is created and ends when the payment has been received from the customer and the entries are transferred to the general ledger. An electronic invoicing process can be divided into four main stages which are creation of an invoice, sending of the invoice, archiving of the invoice and accounts receivable. The stage accounts receivable includes making receipts to the system as well as the dunning process. (Lahti & Salminen 2014, 78.)

In Finland, the banking systems and the payment reference number make it possible to almost completely automate the receiving of the domestic payments. Payments can be matched to the sales invoices automatically with the reference number. Accounting systems automatically create accountings and transfers to the general ledger. (Lahti & Salminen 2014, 96.)

Month end in accounts receivable means that the previous accounting period must be closed in order to prevent transactions to be booked to the wrong period. Balance confirmations at month end are important in order to find out possible mistakes that have occurred during the period. The most important reconciliations in accounts receivable are reconciliation of accounts receivable subledger to general ledger, reconciling accounts receivable to bank statements and reconciling accounts receivable balances with customer accounts payable balances. (Lahti & Salminen 2014, 161.)

Examples of financial controls related to order to cash process:

- Credit control in the system; if it is prohibited in the system to sell anything for a customer, system does not allow entering orders or making deliveries to that customer.
- Dunning; sending dunning letters and transferring the debt to a debt collection agency if necessary.
- Reports to show that all delivered goods and services are invoiced.
- Balance statements to customers.
- Payment programme demands an approval from a different person who has made the payments.
- Reconciliations between sub ledgers and bank account statements. (Lahti & Salminen 2014, 197-198.)
4 INTERNAL AUDIT

According to The Institute of Internal Auditors (IIA), internal audit is an independent and objective action of evaluation, insuring and consulting that is meant to add company’s value and to enhance its actions. Internal audit is an essential part of the organization and its processes. In Finland, there is a recommendation that a public company should have an internal audit, but it is not mandatory. (KPMG 2008, 113-114.)

Internal audit is an essential part of organization’s management system. Internal audit:

- operates as a tool of the board of directors and a partner of the management;
- is involved in all significant projects starting from the strategic level;
- evaluates operations of the whole organization comprehensively and extensively;
- consults as an essential part of its work;
- focuses to the enterprise risk management;
- guides and makes use of self-assessments such as risks, monitoring and management work;
- exploits information technology and evaluates controls of ICT risks;
- evaluates misdemeanours;
- presents internal audit opinions related to different tasks as well as an overall opinion of the whole company. (Holopainen et al. 2010, 84.)

The benefit of having an own internal audit unit is that the internal auditors have a better understanding of the operations of the company as well as the organization culture and its operating environment. Internal audit unit also knows the information systems of the organizations, and in that way, is able to operate more efficiently than external auditors. The problem with internal audit is that internal auditors can never be completely independent and having a qualified internal auditor is often more expensive than using an external consultant. Internal audit can also be outsourced completely or partly. (KPMG 2008, 115.)

4.1 Background of internal audit

Internal auditing as a profession was established in year 1941 in New York, when a group of auditors founded an organization called The Institute of Internal Auditors, also known as IIA. The organization was made to act as an independent internal evaluator of the organization that is focused on accounting, financing and other processes, and in that way acts as a
safeguard and developing service for the management of the company. (Holopainen et al. 2010, 70.)

In 1978, international standards for the professional practice of internal audit were published. These standards guided the development of the profession until the end of the millennium. During those twenty years, the profession was standardized all over the world. (Holopainen et al. 2010, 71.)

Big changes, such as globalization and digitalization, in the operational environment of the companies forced to pay attention to the existing standards. The new approach in internal auditing was created at the end of the millennium. This paradigm has different layers that construct the internal auditing. The top layer is formulated from the definition and ethical codes of internal audit which makes the framework of internal audit. The second layer is about professional standards. Together with the definition and ethical codes, the standards form a driving part of the framework that every internal auditor must follow. The validity of the framework is evaluated at least once in every three years. (Holopainen et al. 2010, 71-72.)

4.2 Internal audit in public companies

As said before, internal auditing is not mandatory in Finland, but it is recommended. If an internal auditing is in place, public companies should report on how the internal audit is arranged in the company. Report should contain information about how the internal audit is organized and the basic principles of the auditing work. Basically, this means following the international framework of IIA as well as the standards that are related to the framework. (Holopainen et al. 2010, 198.)

A public company must give a report about its management and steering system as a separate part of its financial statement. A task of internal audit is to evaluate and confirm the objectivity and sufficiency of the information in the report, if this risk area has been detected important in the planning of the operation. Public companies are also required to report the principles of their risk management, which include the control system of the company. (Holopainen et al. 2010, 199.)
5 EMPIRICAL PART OF THE STUDY

The reason to start this thesis was the possibility of the group to get listed on the US Stock Exchange in the future, because the headquarters of the company is based in Chicago. The process of getting units ready for SOX was started in the company but it was later put on hold. Defining the key controls set by headquarters was started also in Finland, but never completed after the project was terminated. The idea to this thesis came up when the finance director of the company and the accountant (thesis author) discussed that it would be a good idea to build controls ready if the project will continue in the future. Also, as a part of the thesis work, flowcharts related to the financial processes, were updated since the group has determined in their SOX training material (2015) that flowcharts are the preferred documentation method.

When the SOX project was first started, the group made a list of controls that should exist and should be documented in the units. This thesis answers to the question on how controls are implemented in the case company. Author of this thesis was able to use her own experience in writing down most of the controls. Author has been working almost ten years as an accountant in the case company and in her own work executes processes where the controls are related to. Some of the controls are linked to other organizations inside the case company and interviews have been used to find out how these controls are executed.

There are five categories of controls related to finance in the case company. The first one is order to cash, covering subjects like customer master data, placing an order to the system and accounts receivable. The second one is fixed assets. Fixed asset controls include, for example, controls that refer to the approval of capital expenditure commitments and depreciations. Record to report controls are mostly related to reporting and that journal entries are done and approved correctly. The fourth category is called procure to pay. Controls in this category deal with supplier master data, purchase orders and invoices as well as payment of invoices. Fifth category is inventory. Inventory controls include controls that are related to, for example, obsolete inventory and cycle count. The common features of all these categories are that everything must be properly documented, approval flows in place and user access has been restricted only to certain people. Approval limits are set in the system where it is not possible to approve over the limit that is set for the approver. Also, the system has a log which shows who has made changes in the system and when.

As mentioned, each of the five categories include a lot of controls. These controls have been defined by the group (Company X Oy SOX training material, 2015.) How controls are implemented in the case company is presented later in this chapter.
5.1 Interviews

Study method chosen to be used in this thesis is qualitative study. Interviews were used in order to get a better understanding on how controls are implemented in the case company.

Interviews were made in order to find out facts that the interviewees know that cannot be observed and to better understand what has been observed. Qualitative interviewing begins with the assumption that the perspective of the interviewees is meaningful and can be opened up. (Patton 2015, 426.)

Qualitative study material usually is gathered from fieldwork where the researcher spends time in the organization where the case can be observed, people interviewed and documents analyzed. (Patton 2015, 14). Qualitative methods typically produce detailed information about a small number of people and cases, which increases the depth of understanding the phenomenon (Patton 2015, 18).

In a semi-structured interview, the research questions are structured but there are no ready answer options. The questions are open ended. (Kananen 2008, 73.) Because the researcher has been working in the case company for several years and it was clear what questions need to be answered and who is the best to answer to the questions, semi-structured interviews were used. Some of the interview questions were sent by e-mail so the answers were received in writing. Other answers were written down during the interviews. The word document where the answers were written, was projected to a screen during the interviews so the interviewees were able to see that the answers were documented according to what they said.

The first interview was carried out as an e-mail inquiry. Questions were mainly about system controls and the interviewee was the development engineer of information systems. This person was chosen as an interviewee because of the knowledge and experience of case company’s ERP system. She is the system administrator and controls all user rights in the ERP system. Questions were sent by e-mail 18.1.2017 and the answers were received on the same day. A few points were amplified on the next day. The idea of this interview was to get a clearer picture of how system controls are working in processes that are mostly involving customer service but owned by finance. Also, it was clarified the functioning of the interface between case company ERP system and warehouse system in internal controls point of view.

A few internal controls needed a clarification from the purchase department. The purchase director of the case company was on maternity leave, so the questions were asked from her substitute. Interview questions concerned new suppliers and rebate calculation. Stand-in
purchase director was interviewed on 29.1.2018 in the premises of the case company. Questions concerned new suppliers, since the process of opening new suppliers is linked to financial controls even though it is owned by purchasing department; and supplier rebate calculation. Due to the fact that the substitute purchase director is not so familiar with the process concerning new suppliers, this question was sent by e-mail also to the purchase director who was on maternity leave.

The final interview was arranged on 30.1.2018. This interview was a face-to-face interview in the case company’s meeting room. Interviewee, the finance director, was chosen as an interviewee because of her expertise and knowledge, and also, because she is the process owner of financial processes. The aim was to clarify some controls that were not completely clear for the interviewer. Inventory controls were discussed in most part because that area is not so familiar to the interviewer.

5.2 Controls and processes

Next five chapters will describe the five categories of internal controls in the case company. Controls are also gathered to a separate chart which can be found from the attachments (attachment 4). Also, process flowcharts linked to these controls were updated and are presented as well. A few new process flowcharts were also created during this study. Controls are documented and described based mostly on the researcher’s own experience. Some of the points are based on the results of the interviews.

5.2.1 Order to cash

There are 26 controls under order to cash process. The first controls are related to customer credit management. In the case company, new customers and credit limits are approved by the finance director. Sales team prepares a customer information form which contains invoicing and sales information. The form is sent to the accountant, who takes customer’s credit information from the credit agency’s webservice. Also, it is reviewed at this point, that the potential customer is not in any restriction lists. This is done by the financial assistant. Finance director decides the credit limit based on the sales order size as well as credit information and signs the customer information form. Customer service opens the customer to the ERP system and the accountant adds credit limits to the customer master data. Forms are archived by finance (accountant) to the finance archives. Credit limits are reviewed annually by sales managers and approved by finance director. For this update, at first, IT department takes customer listing with current credit limits from the enterprise resource planning system (ERP). Then sales directors will review limits and suggest changes. Changes are then reviewed by the finance based on the payment history of the customer. Credit information
is also inspected if needed to back up the decision. Finance director approves and signs the changes. Accountant makes changes to the customer master data and archives the signed document. Only customer service and finance team are able to access customer master data. This is controlled by system administrator.

ERP system is configured to block sales orders when not enough credit is available or customer has overdue invoices. Only finance director and managing director have authority to approve incremental amount as a business risk. Approval is achieved by accountant. If an order goes to credit hold, accountant looks over reasons and informs customer service, finance director and sales directors if needed. Accountant also gives a recommendation how to proceed. If it is approved by finance director to release the order, accountant releases the order and archives the approval. If the release is not approved, accountant, together with sales team and customer service, will make further actions. There is a possibility that the order has gone to the warehouse system earlier, and after that, the credit situation of the customer has changed. In these cases, an automatic e-mail will be received by the customer service and a normal credit check process can be started.

![Diagram of credit check process]

**Figure 2. Process: credit check**

Order to cash controls include also controls that are related to the shipment of goods. Shipping and invoicing documents are generated based on their respective sales orders to ensure correct customer order details. Order data goes from case company ERP through an interface to outsourced warehouse system, from where the warehouse supervisor releases shipments to collectors. Collectors collect shipments according to the order and shipments are made based on the scheduled ship date that
is mentioned in the order data. After the shipment has been made in the warehouse system and the goods are shipped to the customer, information transfers back to the case company ERP system and invoices can be printed out. Controls are set in the case company; warehouse staff is not able to make changes to the order data. (Development engineer, e-mail 18.1.2018.)

After the delivery is shipped from warehouse and the ship confirm comes from warehouse system through interface to case company’s ERP system, next scheduled automatic invoice run creates the invoice (Development engineer, e-mail 18.1.2018). Accountant checks daily that the invoice creation and printing requests have been completed normally. A scheduled, automatic program transfers invoices to an outsourced operator, which sends invoices to customers in different ways; in paper format, as pdf file via e-mail or as e-invoices directly to customers invoice processing system. After invoice creation and printing, an automated request transfers invoices to an electronic archive. Invoices can also be found from the ERP system. In case that the customer needs to be credited, there are approval rights in place.

As instructed by the Coveris group, only finance director and managing director have the authority to approve making of credit notes. Credit notes that are related to customer claims, are first processed by the quality manager and then approved by managing director. Finance director, in turn, approves credits concerning mistakes in invoicing, for example if there has been a wrong price in the price list or a typing error. (Finance director, interview 30.1.2018.) Only after a written approval, credit notes can be made. Approvals are archived by customer service or the accountant.

Figure 3. Process: creating sales invoices (based on flowcharts of Company X Oy, edited by author).
System creates an automatic report daily, which shows the amount of shipments from the warehouse and compares it to invoiced amounts per shipment. These reports are reviewed every day by the customer service and shipments that are not invoiced are investigated. ERP system has also a report which shows shipment lines and the corresponding invoice numbers. In addition, there exists a report which shows invoices that are not completed. Without completing an invoice, it is not created. In accounts receivable clerk, there is an interface which is reviewed by the accountant at least on monthly basis. If there are errors in the invoice data, the invoice will get stuck to the interface and no invoice will be created. Possible reason for an invoice to get stuck in the interface is, for example, the lack of daily currency rates in the ERP system for customers in different currency than euro. Currency rates are automatically uploaded from the banking system every morning, but in case of a delay in bank for providing the rates, rates are not automatically uploaded. Invoice lines have to be corrected in the interface before the invoice can be created. This is done by the accountant.

Accounts receivable aging is reviewed weekly by the accountant, finance director, sales and customer service. Dunning letters are sent weekly and the third dunning letter has a stamp “to be sent to dunning agency”. Overdue invoices are reviewed by accountant and finance director with the sales team at this point, and sent to dunning agency after discussion with the customer.

Figure 4. Process: dunning (flowcharts of Company X Oy).

Then, what happens when the payments are received? Payments are received either as reference payments or without a reference. Finnish companies usually use reference numbers in their payments, which means that once the payments are transferred to the ERP system those are automatically allocated to correct sales invoices. Other receipts have to be done manually, and those mostly consist of foreign payments as well as if a Finnish payment includes a credit. Assistant reconciles receipts to sales invoices every morning. Differences are investigated in daily basis and went through together with customers if needed. Lockbox (reference payments) receipts are reviewed from the bank statement and system
shows the unreconciled amount if there is any. Reconciled cash receipt is marked with “C” (completed) to the bank statement in daily basis. Automatic postings are scheduled to ERP and accountant checks daily that the requests are completed and not in error.

Assistant makes postings to the bank statements every morning in the banking program from where the postings are imported to general ledger. Bank accounts are reconciled with general ledger on monthly basis. Document is prepared and archived by accountant. Bank statements and reference payments are printed and archived in finance archives. Reconciliations between bank account and general ledger can be found from the finance disc drive. The accountant reviews receivable accounts from the balance sheet at least once a month to make sure that there are no unreconciled receipts.

![Diagram]

Figure 5. Process: bank statements and reference payments (based on flowcharts of Company X Oy, edited by author).

Accounts receivable sub ledger is reconciled monthly by the accountant. Adjustments are reviewed and approved by finance director. Accounts receivable entries are scheduled to be transferred and posted automatically to general ledger every evening. Accountant schedules the transfer at the beginning of every month. In accounts receivable, there is a system check that makes sure that there are not any unposted entries before closing the period at month end. New periods are opened and old ones closed by the accountant. At every month end, there should be bookings made where transactions with different currencies are valued to that date’s rate. It is also mentioned in the process flowchart below. However, it was found out that this step has not been in place and was added to the monthly checklist.
ERP system is configured in a way that the document numbers can be used only once and system gives document numbers in numerical order. System is configured to allow invoicing and shipping documents to be generated only when a sales order is set to the system. System automatically calculates extended costs by multiplying quantity ordered by price per the price list. System also automatically records entry based on shipping information per delivery unit according to the order. (Development engineer, e-mail 18.1.2018.) Customer must be open and active in the system before sales orders to the customer can be made. Sales account numbers for transactions are recorded to the customer master data. It is possible to inactive customers in customer master data. It is not possible to make orders or book invoices to inactivated customers.

If an item is inactivated, no transactions can be done. An obsolete item cannot be manufactured but everything else is possible (for example can be purchased or sold). The application is configured in a way that the system date is the same as default date. (Development engineer, e-mail 18.1.2018.) The date can be changed for manual invoices within an open period.

5.2.2 Fixed assets

From finance perspective, fixed asset process begins with an approved capital expenditure commitment, also known as CAPEX. In the case company, the authorization for fixed assets projects/budgets (planned project cost) occurs in a Database via automatic routing to the delegated approvers. Each CAPEX has to be approved. The group has set approval flow as follows:

- Industrial approval (local technology & product development manager)
- Financial approval (local finance director)
- Local general manager approval
• Finance director Northern Europe
• Rigid technology and innovation director (Finance director, interview 30.1.2018.)

If the CAPEX equals or is smaller than 20,000.00 euros, rigid technology and innovation director is the last approver. After his approval, the project can be opened and started. If the CAPEX is over the specified amount, approval flow continues:

• Chief Operating Officer
• Chief Financial Officer
• Chief Executive Officer (Finance director, interview 30.1.2018.)

Leases are treated the same way as CAPEX since most of the leases are capital leases. This means that the leased assets will be booked to the balance sheet. Approval flows are equal to CAPEX approvals. (Finance director, interview 30.1.2018.)

CAPEX expenditures are compared against budget on monthly basis by the finance director. After the final approval in the database, accountant opens the asset to the ERP system and to the invoice processing system, according to the approved CAPEX document. Project numbers are given by the accountant once the CAPEX is approved. Approved CAPEXs can be found from the database and are also archived by the accountant when the project is opened. Asset classification is done in ERP system. Fixed asset purchases are ordered in purchase management system, which requires a project number. After the purchaser has placed an order, the purchase of the asset is approved by a different person who has appropriate approval limits in the purchase management system. New assets should have a label that links the asset to the fixed assets ledger. Asset lists are reviewed and compared to existing physical assets every year by production and maintenance departments and possible adjustments are done to the fixed assets ledger by accountant and approved by finance director.

Figure 7. Process: opening fixed assets (flowcharts of Company X Oy).
CAPEX related expenses as well as repairs and maintenance expenses are approved in purchase management system before ordering the goods or services. Invoices are processed in invoice processing system (see procure to pay process). After invoices are transferred to ERP system, accountant reviews transactions and directs transactions to the right assets. Moreover, fixed asset additions can be made through journal entries. Journal entries are most often correctional entries, always done by the accountant, and are also directed to right assets. Accountant runs a program in ERP, which creates journal entries based on the additions. When the project manager informs that the project has been completed, accountant capitalizes the project in ERP and removes project number from purchase management and invoice processing system in order to prevent new bookings to the project. Accountant runs depreciations in the ERP system and this run creates transactions, which are then posted to general ledger. Finance reviews CAPEX and maintenance expenses in monthly basis.

Figure 8. Process: addition to fixed assets (flowcharts of Company X Oy).

Accountant runs depreciations in ERP at the end of each month. System calculates the depreciation amount based on the asset value and life time. Life time is defined under the classification of assets and can also be adjusted manually if needed. Asset value comes from the purchase invoices and possible manual memos. Fixed assets ledger is reconciled to general ledger on a monthly basis by the accountant. Depreciations are reconciled also to profit and loss report as well as to balance sheet every month. At this moment, reconciliations are saved to the finance disc drive. If SOX will be implemented, reconciliations have to be approved by finance director and archived after the approval.
When a fixed asset is sold or retired, there are controls to make sure that the process goes correctly. When it is proposed to sell or retire an asset, it has to be presented for the managing director and finance director. Local managing director is allowed to approve sale or retirement of an asset to maximum 20,000.00 Euros net book value. Asset sales or retirements with over 20,000.00 Euros net book value must be approved by Chief Operating Officer. (Finance director, interview 30.1.2018.) Gains and losses are calculated by accountant or finance director before making the decision to dispose the asset. When the retirement is made in the ERP system, system automatically calculates and records depreciations.

All entries are posted to general ledger by the accountant, no automatic postings are scheduled. Accountant checks that everything is posted to general ledger and reconciled before closing the period. Only finance team has access to fixed assets master data.
5.2.3 Record to report

The first control of record to report process reflects to the access rights of company’s chart of accounts. In the case company, access to ERP chart of accounts is restricted only for accountant and finance director. Any changes to the chart of accounts are decided together by accountant and finance director and approved by finance director. Mapping of accounts from ERP to group reporting system has been documented and can be exported from the reporting system. Chart of accounts in company’s invoice processing system is maintained by the accountant. This chart of accounts is restricted only to the account combinations that are needed in purchase invoice postings. The chart of accounts is updated manually if needed.

New sequence numbers are opened every year to the system by case company’s ERP support, as an outsourced service. Accountant makes a ticket to the support system which includes instructions on what should be done. The support opens sequences at first to the test environment where accountant verifies that everything is correct and changes can be made to the production environment. When new sequences are opened to the production environment, those are again reviewed and approved by the accountant.

Automatic journal entries and batches, as well as manual entries, are sequentially numbered by the system. System will not allow duplicate journal entry numbers. Accruals and manual memos are made and printed by the accountant and approved by finance director. After the approval, accountant enters journals into the system manually. Accountant archives accruals and manual memos and those can be found from the finance archives. In general ledger, there is a window where all unposted journal entries are shown. It is inspected almost daily and always in the month end before closing the period, that there are no unposted transactions. This is done by the accountant. Accountant runs accrual reversal program in ERP after the month has been closed and checks that all accruals have been reversed to the new period.

![Flowchart](image)

Figure 11. Process: accruals and manual memos (flowcharts of Company X Oy).
Case company has a monthly closing checklist and timetables which guarantee that month end procedures are all completed in time. In addition, group finance department sends group reporting timetables each month end to the units. During month ends accountant prepares a reporting package. If SOX will be implemented, the package should be approved by finance director before uploading it to the group reporting system. Group reporting package includes profit and loss report, balance statement, intercompany reconciliations, accounts receivable and accounts payable aging, headcount reporting (headcount calculations are made by human resource department, reported to group by the accountant), inventory aging and sold euros and tons divided by technology. In addition, there are some balance sheet accounts that need to be classified. At the end of each quartal, payments and sales are reported by country.

Accountant makes reconciliations between subledgers and general ledger every month after sub ledger transactions have been transferred to the general ledger. Currently, reconciliations are not approved, but if SOX requirements will be applied, reconciliations have to be approved by finance director. This means that the reconciliations have to be printed out for finance director signature and then archived to finance archives. Accountant reviews and reconciles also balance sheet details monthly. Trial balance is reviewed by the finance team at the month end.

Intercompany transactions are confirmed every month end between intercompany units. Sales and purchases, as well as open balances, will be confirmed by business units before uploading balances to the reporting

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**Figure 12. Transactions to general ledger**
Intercompany statements are sent to the intercompany units at the first day of the month as soon as accounts receivable period is closed. Units send back confirmations of the balances. Statements coming from other units will be confirmed as soon as those arrive and the final bookings are made to the ERP system. If needed, accountant asks missing documents from the counterparties or informs if there is something to be clarified. The confirmation is done by the accountant and sent back to the sending unit.

Figure 13. Process: intercompany balance confirmations

Accountant controls accounting periods. Finance director as well as business controller have also access rights to control periods. Only the current period is open, except at month end, subledger periods and general ledger period will be open as long as the final bookings are made. Access to closed periods is not possible in the system. Closed periods can, however, be opened again in general ledger, accounts receivable ledger and accounts payable ledger. It is not possible to open inventory period or fixed assets once the period is closed.

There exist naturally also system controls linked to the record to report process. System is configured to map accounts to financial statement lines. Financial statement reports are built in ERP and the accounts are mapped to financial statements automatically. System is configured to make double-entry accounting.
5.2.4 Procure to pay

Procure to pay controls start from new suppliers and supplier master data. New suppliers fill in their information to the template that buyer will sent to the finance assistant. Finance assistant checks that all needed information is on the template, checks that the VAT number of the supplier is valid and that the supplier is not in any restriction lists. After these checks, finance assistant opens supplier to the system according to the template. Supplier bank accounts are managed by the accountant. Once the supplier has been opened to the ERP system, accountant opens the bank account and directs the right account to the right supplier. Purchasing department transfers supplier data to the purchase management system if needed. Data is managed in ERP by finance. Although opening new suppliers is a process that is owned by purchasing department, there are many links to finance including the fact that finance is in charge of supplier master data.

![Diagram](image)

**Figure 14. Process: opening new suppliers**

After the supplier has been set up in the system, controls proceed to purchase orders. Raw material orders of the case company are made in the ERP system and orders of other items and services in PM (purchase management system). Approval limits are set up in both systems and controlled by administrators. If there is an invoice without an approved order it will be reviewed by the buyer and approved by a cost center owner before it is sent to the bookkeeping.

All invoices go to the Invoice Processing system (IP). Invoices can be received either in a paper format and then scanned to the system, in pdf format via e-mail or as e-invoices directly to the system. Basic data of e-invoices (for example supplier name, payment term, et cetera) is created to invoice processing system automatically, whereas the basic data of paper invoices as well as pdf invoices must be manually inserted to the
system. Financial assistant inserts basic data and makes sure that basic data is correct also in e-invoices.

If there is an approved order that matches perfectly to the invoice (tolerance in indirect purchases 5%, ERP orders 0%), it will be automatically processed and then transferred to ERP system. If the invoice does not match the purchase order or there is a variance in quantity or amount, finance assistant sends it to review for the purchaser who makes accounting entries, reviews the invoice and sends it to approval for the cost center owner or to a dedicated person (for example freight invoices may include freight costs to multiple cost centers, so it is agreed that the purchase director approves all freight invoices). After the approver has approved the invoice, it will be transferred to ERP by the finance assistant. A system control guarantees that the same person who reviews the invoice cannot approve it. 3-way matching is done in the invoice processing system. The goods must be received in the system (ERP/PM) before matching to the invoice can be done. All exceptions will be monitored at this point by the buyer. ERP also checks that the purchase order will match the accounting in ERP interface.

Figure 15. Process: purchase invoices part 1 (based on flowcharts of Company X Oy, edited by author).
Payment of purchase invoices requires own controls. There are two steps in the payment process of the case company. First step is to print and process a preliminary payment list. This means that the assistant prints a preliminary payment list which is then reviewed by the accountant. After the review, assistant modifies the list if needed. Preliminary payment list is approved in ERP by business controller or finance director. In the second step, assistant transfers the payment file to the banking system. After the payments are transferred to the banking system, payments will be approved once more by a member of the finance team before those can be sent to the bank. Finance team includes finance director, business controller and accountant. After the file has been sent to the bank, accountant checks that the right payment amount has left from the bank account. Once the payment is made in ERP, the invoice will show as paid and it cannot be modified. ERP system automatically processes electronic payments of approved invoices based on the due date of the invoice. Due date is calculated according to the agreed payment term, which is saved to the supplier master data. Manual payments are also possible in ERP system, only done by the accountant. Preliminary payment registers are archived to the same binder as bank statements as a proof that connects the payment to the bank statement. Final payment registers are archived to own binders after the approval. All binders are then archived to finance archives.
Accounts payable controls are next controls in procure to pay category. Accounts payable is reviewed monthly by the accountant. Aged invoices are reviewed by finance team and purchasers. Accounts payable is reconciled to general ledger in monthly basis by the accountant and possible adjustments are approved by finance director and recorded by accountant. All received goods are booked to purchase accrual account automatically by the ERP system to wait for an invoice (see inventory controls). This applies only to raw material purchases which are done in the ERP system. Other purchases are done in purchase management system, which has no interface to ERP. If needed, these purchases are manually accrued in ERP by the accountant at month end. In addition, an accrual will be made monthly against intercompany units if invoices are not received before closing the accounts payable period. Accrual to general ledger is made by the accountant and approved by finance director.
Figure 18. Process: month end in accounts payable (flowcharts of Company X Oy).

System automatically records raw material invoice entries based on 3-way matching. This means that there has to be an approved purchase order, goods have to be received to the inventory with corresponding automatic bookings, and an approved invoice from the invoice processing system. All purchase orders and invoices are sequentially numbered by the system and system will not allow duplicate numbers. System is configured in a way that the receiving of raw materials (orders in ERP system) makes a booking to purchase accrual account. Other goods and services are ordered and received in purchase management and invoice processing systems so those are not accrued in ERP. Possible accruals are made manually to ERP system by the accountant and approved by the finance director. System assigns coding to purchase orders based on accounts set to the item master data. VAT accounting is made based on the VAT in supplier master data. Accounts are selected from the account options that are set to the system. Chart of accounts in purchase management and invoice processing systems is restricted to certain accounts and this is controlled by the accountant.

Accountant reviews a report “accrual reconciliation” on monthly basis. Report shows all purchase orders that are not totally invoiced, invoiced quantity exceeds invoice received or there are some other variances. Significant outstanding items are investigated. Adjustments are reviewed and executed by accountant and purchaser and approved by finance director.

System is scheduled to post accounts payable entries automatically to general ledger every evening. Accountant checks on next working day that all postings have gone through correctly. System does not allow closing of the accounting period if there are unposted transactions in the subledger or invoices are on hold for some reason. Reasons why the system places a hold to an invoice include: difference between invoice amount and matched purchase order line amounts, variance in tax amount, quantity of goods invoiced exceeds the quantity received, or the quantity received
exceeds the quantity ordered. All holds must be corrected or manually released before the invoice can be paid or the period can be closed. Different types of holds are handled in different ways by authorized persons. Hold correction requires manual measures either to the invoice lines or to purchase order. System records the person and timing behind the manual measures. System is also configured to allow payment of an invoice only once. After the invoice is paid it cannot be modified or paid again.

It is possible to inactive suppliers in the supplier master data. In the case company, there is a principle that if there are no purchases to the supplier in past two years, the supplier will be inactivated. If there will be purchases in the future, supplier data has to be confirmed by the supplier. After the supplier has been inactivated it is not possible to make orders or to book invoices for the inactivated suppliers. Also, if an item is inactivated in the system, no transactions can be done to that item. An obsolete item cannot be manufactured but everything else is possible, for example, it can be purchased or sold (Development engineer, e-mail 18.1.2018.) Access to the supplier master data is restricted only to finance team. Access rights are controlled by system administrator. Access to create purchase orders is restricted both in ERP and purchase management systems. System administrators control access rights in both systems. Only the executive team of the case company has authority to ask system administrators to change user responsibilities. These requests are archived by system administrators.

Supplier rebate calculations are not calculated by finance, but calculations are received monthly in order to make necessary bookings, if needed. This means that the accountant makes a manual memo and records it to the general ledger after finance director approval. Manual memos are archived by accountant to the finance archives.

If there are rebates that are based on group purchases, the purchase director of Coveris Rigid Finland Oy sends calculations to the group (as other units do also), and then group allocates rebate to the units. Group also informs the amounts that need to be accrued at month end or year end. At the moment, there are no local rebates. One possible rebate agreement is being prepared. If this happens, purchase director will send calculation to finance department at month ends for monthly bookings. (Purchase director, interview 29.1.2018).

5.2.5 Inventory

First inventory controls are related to item pricing. Raw-material prices are updated in monthly basis. This is done by the purchaser and archived to finance archives. Other prices are updated yearly by business controller. Standard costs are updated based on review of prior year results and current year assumptions. Access to item master data is restricted and
controlled by system administrator. (Finance director, interview 30.1.2018.)

When goods are received to the inventory, receipts are matched against purchase orders by warehouse. Quality is monitored and rejected materials are segregated and claimed. Goods are entered into the system as soon as those have arrived.

A full physical of goods on hand is performed monthly for the goods on the shop floor. Finished goods are cycle counted in a way that the cycle and areas are defined so that all areas are cycle counted within a year. Because the finished goods warehouse is outsourced, inventory reports and check reports are provided by the outsourced service provider if needed. Cycle counts are reviewed by Finland finance department. (Finance director, interview 30.1.2018.)

Obsolete inventory is reviewed in monthly basis by the quality manager. Slow-moving inventory is also reviewed monthly, in this case by finance director, demand manager, sales and purchase departments. Possible adjustments are booked by the accountant and approved by finance director. (Finance director, interview 30.1.2018.)

Product margins are reviewed bi-weekly. This is done by a large group of people from different departments including production, sales, purchasing and finance. Standard cost variances are reviewed monthly. Raw material prices are updated every month. If large variances exist, costs are re-allocated. (Finance director, interview 30.1.2018.)

Posting transactions to general ledger is made weekly and before closing the period by the accountant. Inventory accounts are reconciled monthly by the accountant. Possible adjustments are also made by the accountant approved by finance director and posted in timely basis. Accountant opens the next period before the first day of the month. At the first day of the month, accountant checks from ERP that are there pending transactions in the last period. If there are pending transactions, those need to be solved before the period can be closed. Accountant informs production assistant about pending transactions. Production assistant makes correctional transactions to clear pending transactions. When all pending transactions are cleared, accountant runs inventory reports from ERP. After this, accountant closes the period in inventory. System automatically starts a process that creates accounting transactions when the period is closed. After the inventory period is closed and transactions made, transactions will be imported to the general ledger by the accountant. Inventory values are reconciled to general ledger on a monthly basis. This is done by the accountant and reconciliations as well as inventory reports are archived to finance archives.
Figure 19. Process: month end in inventory (based on flowcharts of Company X Oy, edited by author).

Purchasing transactions are transferred to general ledger weekly and at month ends at the same time as inventory transactions. Accountant imports and posts the transactions to general ledger.

Bookings made to inventory accounts are mainly automated in the ERP system. Only part of the raw material bookings for work in progress jobs are booked manually. System is designed to automatically calculate cost of sales based on predefined criteria, which is the COGS of the goods that have been taken from the warehouse. COGS is an abbreviation from words cost of goods sold. (Finance director, interview 30.1.2018.)
6 CONCLUSIONS

Implementing SOX will require a lot from a company, especially from finance department of the company. The best way to prepare a company to be SOX compliant is, in author’s opinion, to make sure that proper internal controls are in place and, as importantly, internal controls are properly documented. Meaning of internal controls to the company, especially finance departments, is significant. Internal controls, when properly implemented, reduce risks and possibilities to commit frauds. Functioning internal control system also improves the reliability of company’s financial reporting.

It has to be mentioned that there would be a need for global accounting standards. As an accountant of a Finnish middle-sized company which is a part of a large group, preparing financial statements according to different standards is time-consuming. Hopefully one set of standards could be implemented someday. This would also ease the standardization of internal controls.

6.1 Results of the study

When this thesis was started, the first idea was to focus more on actual consequences that SOX has to the case company in more general level. During the theory research, it came clear that meaning of internal controls was emphasized everywhere. Also, because SOX package of the group clearly focuses on internal controls, it was decided to document the controls and update process flowcharts on the side.

It was found out that even though controls were already mostly in place and existing in the case company, the documentation has been lacking. Controls were documented during the thesis work. As been said, controls were already in place, but it was mainly silent knowledge. Because of the own experience in the case company, and as a person whose job description includes tasks that require internal controls, it was a good idea to describe the controls that are mostly in researcher’s own head. Some of the controls and processes go across organization borders and that is one reason why it was so important to create these documents. This way it is guaranteed that the information is available for everyone and responsible persons are identified.

Case company has transactions in accounts receivable regularly in different currencies. Also, there are occasionally transactions in different currencies in accounts payable. These transactions should be valued per the currency rate of the last day of the month at every month end. This, however, has been forgotten even though it has been included in the old process flowcharts. Corrective actions have been made, and this has been added to the monthly checklist.
When this thesis was prepared, all reconciliations were done by the accountant on a monthly basis, but reconciliations were not approved. If SOX will be implemented someday, all reconciliations need to be approved by finance director. At this moment it seems like an additional effort, but it is good to bear in mind that it is mandatory when following SOX procedures.

This thesis is useful for the case company. Even though it is relatively possible that SOX will not be applied in the case company ever, documenting internal controls and updating financial processes are beneficial for the company. It is possible that either internal or external auditors want to see the process charts, and now those are documented clearly and properly. The same applies, of course, to internal controls. Also, it is possible that this same accountant will not be working in the case company for ever so this documentation guarantees that the knowledge of internal controls related issues is in writing and can be found from the company.

Controls and processes presented in this thesis have also been gathered to a separate document. This eases the case company to find out controls and processes without seeking those from the text of this thesis. Controls have been assembled in to a chart (attachment 4), which is divided based on the five control categories presented earlier in this thesis. Based on the theory, it can be said that developing and documenting controls will improve the financial reporting of the company and have also helped in updating financial processes.

This thesis, updating internal controls and processes, is a case study made to a specific company so the results may not be able to be exploited in another company as such. However, it is possible to use controls and processes as a base, in case another company needs to update or document their controls and processes, especially if SOX becomes a current issue.

SOX and internal controls are presented in the theoretical framework of this thesis and support the research part of the thesis. The most important aspects of internal controls, related to procure to pay and order to cash, have additionally been described in the theoretical framework. Although, internal audit is not included in the research part of the thesis, a few pages have been added to describe it in order to build a more precise picture of this whole topic.

The main question of this thesis was to find out key financial processes and controls of the case company. Although, controls related to SOX were given by the group, this thesis project has described how these controls are implemented in the case company. Processes linked to these controls were found out while describing the controls of the case company.
processes were updated and new ones created based on the internal controls. Another research question was to find out how these controls should be documented to match Coveris group SOX requirements. It was decided to document controls to a separate table where one column is the control given by the group and another column describes how the control is executed in the case company. Also, as mentioned before, it has been found out that there should be more documentation, even though the controls are already in place. In the description of controls, it has been mentioned who is in charge of the documentation of control activities and where the documentation can be found. It is said in the SOX training material by the group (2015), that the preferred documentation method is flowcharts. That is why flowcharts were updated during the thesis process and new flowcharts were created when needed.

6.2 Validity and reliability of the study

The results and conclusions of a thesis should be correct, believable and reliable. Reliability can be seen as an indicator of the thesis outcome. Reliability also measures the quality of the thesis. In addition, validity is another concept of credibility. To be able to consider case study reliable, the corner stone is precise documentation, meaning that every choice made in the research process is documented and justified. This aims to an audit trail which the reader can follow and is able to find out that the choices the researcher has made have been correct and the evidence is solid. (Kananen 2013, 115-116.)

Research method and processes are defined in the thesis. Justification for the chosen methods is adequate. Although, the documentation of controls and updating processes are mainly done based on the researcher’s own knowledgebase and observation, it is justifiable because of the expertise of the researcher which has been built over almost a decade of experience in the case company. Because the author is familiar with the know-how of co-workers in the case company, it was relatively easy to indicate questions to the right people. It has been argued in the text, why exactly these persons were chosen as interviewees. Research questions were not in form of a question. Questions were formatted as a group of internal control descriptions. In this way, there was no leading towards a certain direction, and the interviewee was able to describe how the controls are executed in the case company.

6.3 Self-reflection of the study process

From author’s own perspective, this whole thesis process has been beneficial and developing. The subject was only a little familiar because of the SOX project was already started in the case company, although it was quite soon interrupted. Going through the theory base related to this thesis has deepened the knowledge about the subject and made to realize the
need of documentation of internal controls, which is an essential fact. Process has been professionally developing in the researcher’s current workplace. It may benefit the author also in the future, as mentioned in the beginning of this thesis, because Finnish companies that are listed on the United States Stock Exchange, may require SOX knowledge when they hire new employees. One objective in this thesis process was to build personally a more broader perception of the whole topic and that goal has been achieved.

It has to be mentioned that the thesis project was not as easy as first thought. It is quite consuming to write a thesis and do research at the side of a fulltime job. As a hint for the new students of master’s degree, in author’s own perspective, it was a good idea to accomplish all courses first and then focus on the thesis. It is quite overwhelming to work fulltime and focus on the course assignments while working on the thesis at the same time. Having this said, the thesis idea and almost all of the theory was built during the first year of the studies, but as the research part takes more time and effort, it was a relief to get the courses done earlier and to focus only to the research in addition to fulltime job.

6.4 Venues for future action and research

It has been detected that there could be a need to implement and document internal controls also in other departments besides finance, especially in human resources department. In addition to financial controls, there should be more focus on the controls related to, for example, payroll.

Also, during the interview of purchase directors (the one on maternity leave and the substitute), it was found out that there is no proper flowchart and instructions in the process of opening new suppliers. Although, the process is mainly executed by the finance team, purchasing department owns the process. Process and controls related to the process should be properly documented and presented to other departments. At the moment it seems that the purchase department does not realize that it should be in charge of the process. For example, it should be defined who is authorized to ask finance department to open new suppliers. It is confusing that currently anyone can do that, even the persons that are not authorized purchasers. It is clearly stated that only the persons that do have access to the purchasing tools, are the only ones that are allowed to place orders. Leaning to this, why it is not instructed that only those persons have right to ask new suppliers to be opened. In addition, because of the lack of instructions, it is not stated that the new suppliers should be approved in any way.

The discussion of how physical fixed assets can be connected to the asset register in ERP system has been going on for quite some time. As described in the fixed assets controls, after the accountant has added the asset to the
ERP system (which creates the asset number), project owners should place a label to the physical asset which would connect the asset to the asset in ERP. Finance opens the asset according to the approved CAPEX, and names the asset as the CAPEX has been named. If the name is not personalized enough, it is hard to find the corresponding physical asset after a period of time.

When all processes and improvements are implemented and functioning in the case company, a follow up research could be made to find out how the improvements have benefitted the company. Because SOX emphasizes documentation and all documents, including reconciliations, have to be signed and approved, it would be an interesting idea for a research to find out if all this documenting and approving caused more work for the company. It could be investigated how much time each following and documenting of internal controls consumes. Furthermore, one possibility for a study could be an opportunity to improve electronic archiving and electronic signatures because it is against the idea of a paperless office if all documents should be printed, signed and archived.
REFERENCES


Company X Oy SOX training material. 2015.


Flowcharts of Company X Oy. 2015.


INTERVIEW SUBJECTS: DEVELOPMENT ENGINEER

Shipping supervisor reviews each shipment, comparing sales orders to shipping information prior to shipment.

System automatically generates invoice when shipment is recorded.

A reconciliation of goods invoiced to goods shipped is performed monthly. Reconciled items are investigated and resolved timely. Adjustments are reviewed and approved.

System automatically calculates extended cost by multiplying quantity ordered by price per the price master file.

System automatically records entry based on shipping information.

System does not allow different invoice/shipment dates.

System is configured to post an invoice number only once.

System is configured to total/input information correctly.

The application is configured to restrict purchases, receipts and invoices to defined suppliers in the vendor master file and defined goods and services in the item master file.
INTERVIEW SUBJECTS: PURCHASE DIRECTOR

New vendor set-up is reviewed and approved.

Rebate calculations are reviewed and approved by appropriate personnel.
INTERVIEW SUBJECTS: FINANCE DIRECTOR

Credit notes, due to discounts, short pays, returns and disputes, are reviewed and approved prior to posting. What are the approval limits?

Annual capital expenditures budget is prepared by management based on expectations of capital acquisitions needs, and is reviewed and approved by the Board. How do the approval flows go?

All leases are reviewed appropriate lease treatment and approved.

System assigns coding to purchase orders via the vendor and item master files.

Assumptions for standard costing (bill of materials) are periodically reviewed and revised. Standard costs are updated based on review of prior year results and current year assumptions.

Price masterfile is reviewed and updated annually. Access to the price masterfile is appropriately restricted.

A full physical of good on hand is performed annually and reconciled to the perpetual records. Adjustments are reviewed and approved and posted timely.

Inventory is cycle counted weekly (daily?). Counts results are reviewed and approved prior to updating the system.

Assumptions for excess and obsolete inventory are reviewed annually. Excess and obsolete inventory calculation is performed quarterly. Adjustments are reviewed and approved and posted timely.

Product margins are reviewed. Assumptions for lower of cost or market are reviewed annually. Lower of cost or market calculation is performed quarterly. Adjustments are reviewed and approved and posted timely.

Standard cost variances to be reviewed at least quarterly. Adjustments greater than $XX are capitalized. Adjustments are approved and posted timely.

System automatically tracks inventory movement through the use of inventory type indicators.

System is designed to automatically calculate cost of sales based on predefined criteria.
**INTERNAL CONTROL CHART**

Controls are based on Company X Oy's SOX training material (2015).

<p>| OTC1 | Credit worthiness of customers is supported. Credit limits are reviewed and approved annually, or as circumstances warrant. | New customers and credit limits approved by finance director. Forms archived by finance (accountant). Credit limits reviewed annually by sales, approved by FD. IS to take the excel sheet and current credit limits, sales directors will review, finance director to sign the changes. |
| OTC2 | Sales orders are compared against credit limits before being entered into the system. Sales orders are reviewed and approved. | ERP system is configured to block sales orders from being executed when not enough credit is available or customer has overdue invoices. Only FD has right to approve that customer don't have credit check. Only finance director and sales Directors have authority to approve incremental amount as a business risk. Approval is achieved by accountant. |
| OTC3 | Price overrides during order entry process must be approved. | Sales sends price lists to customer service. CS uploads prices lists to the system. Price overrides can be made to the price list. No additional approval. |
| OTC4 | Shipping documents are automatically prepared from information contained in the sales order and customer master files. | Shipping and invoicing documents are generated based on their respective sales orders to ensure correct customer order details. |
| OTC5 | Shipping supervisor reviews each shipment, comparing sales orders to shipping information prior to shipment. | Order data goes from ERP to outsourced warehouse system from where the supervisor releases shipments to collectors. Collectors collect the order according to the order. |
| OTC6 | System automatically generates invoice when shipment is recorded. | Once delivery is shipped from warehouse and the ship confirm comes to ERP, next invoice run creates the invoice. |
| OTC7 | A reconciliation of goods invoiced to goods shipped is performed monthly. Reconciled items are investigated and resolved timely. Adjustments are reviewed and approved. | System creates an automatic report daily which shows amount of shipments and invoice amounts. These are reviewed daily and not invoiced shipments are investigated. ERP system has also a report which shows shipment lines versus invoices. |
| OTC8 | AR aging is reviewed monthly. Allowance for doubtful accounts is calculated monthly. | AR aging is reviewed weekly by accountant, finance director, sales and customer service. Dunning letters are sent weekly, 3rd dunning letter has a stamp = to be sent to collector. |</p>
<table>
<thead>
<tr>
<th>OTC9</th>
<th>AR sub ledger is reviewed and reconciled to the general ledger monthly. Adjustments are reviewed and approved prior to posting.</th>
<th>AR sub ledger is reconciled monthly by the accountant. Adjustments are reviewed and approved by finance director.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTC10</td>
<td>Credit notes, due to discounts, short pays, returns and disputes, are reviewed and approved prior to posting.</td>
<td>All credit notes are approved. Credit notes related to claims are processed by quality manager and approved by GM and mistakes in invoicing (e.g. wrong price in price list, typing errors…) approved by FD.</td>
</tr>
<tr>
<td>OTC11</td>
<td>Lockbox receipts/log of checks received are compared to customer remittances and variances are investigated.</td>
<td>Assistant reconciles receipts to invoices daily. Differences are investigated daily and checked with customers if needed. Lockbox receipts are checked from bank statement and system shows the unreconciled amount if any.</td>
</tr>
<tr>
<td>OTC12</td>
<td>Cash receipts are reconciled to general ledger postings daily.</td>
<td>Reconciled cash receipt is marked with “C” to the bank statement in daily basis. Auto postings are scheduled to ERP and accountant checks daily that the requests are completed and not in error.</td>
</tr>
<tr>
<td>OTC13</td>
<td>Bank reconciliations are prepared and reviewed timely.</td>
<td>Assistant reconciles bank statements every morning. Bank accounts are reconciled with general ledger on monthly basis. Document is prepared and archived by accountant.</td>
</tr>
<tr>
<td>OTC14</td>
<td>Subsidiary and general ledger are automatically updated upon shipment.</td>
<td>Warehouse software is linked with interface to ERP. Once Ship confirm tap is done by warehouse staff, information comes to ERP interface. Scheduled Autoinvoice program runs once a day and creates invoices to AR. Posting from AR to GL is automated and scheduled daily.</td>
</tr>
<tr>
<td>OTC15</td>
<td>System automatically calculates extended cost by multiplying quantity ordered by price per the price master file.</td>
<td>System automatically calculates extended costs by multiplying quantity ordered by price per the price list.</td>
</tr>
<tr>
<td>OTC16</td>
<td>System automatically posts subledger entries to the general ledger.</td>
<td>AR entries are scheduled to be posted automatically to GL every evening. AR checks that there are not any unposted entries before closing the period in month end.</td>
</tr>
<tr>
<td>OTC17</td>
<td>System automatically records entry based on shipping information.</td>
<td>Yes – per LPN/delivery unit according to the order</td>
</tr>
<tr>
<td>OTC18</td>
<td>System does not allow different invoice/shipment dates.</td>
<td>System allows different invoice/shipment dates (for example dropshipments).</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>OTC19</td>
<td>System is configured to post an invoice number only once.</td>
<td>Yes</td>
</tr>
<tr>
<td>OTC20</td>
<td>System is configured to total/input information correctly.</td>
<td>Yes</td>
</tr>
<tr>
<td>OTC21</td>
<td>Application is configured to disallow unordered shipments (i.e. a valid sales order must exist before shipment can be processed).</td>
<td>The system is configured to allow invoicing and shipping documents to be generated only when a sales order is set.</td>
</tr>
<tr>
<td>OTC22</td>
<td>The system is configured to verify customer and sales account numbers before processing sales orders.</td>
<td>Customer must be open in the system before sales orders to the customer can be made. Sales account numbers are in customer master data. It is possible to inactive customers in customer master data. It's not possible to make orders or book invoices to inactivated customers. Also, if an item is inactivated, no transactions can be done. An obsolete item cannot be manufactured but everything else is possible (can be purchased, sold etc.).</td>
</tr>
<tr>
<td>OTC23</td>
<td>Application is configured so the system date is the default date.</td>
<td>The system date is the default date. The date can be changed for manual invoices within an open period.</td>
</tr>
<tr>
<td>OTC24</td>
<td>Application is setup to match payment with invoice.</td>
<td>Finnish reference payments are automatically matched to the invoices. Other payments (mostly foreign payments) are matched to the invoice manually.</td>
</tr>
<tr>
<td>OTC25</td>
<td>Application is setup to not allow duplicate cash receipts.</td>
<td>The application does not allow same transaction numbers to multiple receipts.</td>
</tr>
<tr>
<td>OTC26</td>
<td>Access to customer Masterfile is appropriated restricted.</td>
<td>Only customer service and finance team are able to access customer master data. This is controlled by system admin (IS).</td>
</tr>
</tbody>
</table>

Fixed assets

<p>| FAS1 | Annual capital expenditures budget us prepared by management based on expectations of capital acquisitions needs, and is reviewed and approved by the Board. Management tracks its CAPEX approvals: | The authorization for the fixed assets projects/ budgets (planned project cost) occur in Lotus Notes Database via automatic routing to the delegated approvers. CAPEX approvals: |
| FAS2 | Fixed asset purchases require a Capital Expenditure Requisition, with appropriate approvals. Additions to fixed assets require appropriate supporting documentation. Individual asset information is entered into the PP&amp;E system using information from the approved voucher packet. Asset classification is validated when the fixed asset is added into the PP&amp;E system. | After the final approval in the database, accountant opens the asset to ERP according to the approved CAPEX document. Asset classification is done in ERP. FA purchases are done via purchase management which requires a project number. Project numbers are given by the accountant once the CAPEX is approved. The purchase is approved in the PM system. |
| FAS3 | All fixed assets should be clearly identified and an inventory of all assets should occur annually. Actual counts are reconciled to the fixed assets ledger and adjustments are reviewed, approved and posted timely. | New assets will have a label that links the asset to the ledger. Asset lists are reviewed every year by production/maintenance departments and possible adjustments are done to the ledger by accountant and approved by Finance Director. |
| FAS4 | PP&amp;E fixed disposals require appropriate documentation, evidence of disposal and approval by management. Gain/loss calculations are reviewed and approved prior to posting. Gain/loss of 250,000 dollars are approved by Corporate Accounting. Depreciation on retired assets is calculated, approved and recorded. | Approval for the disposals comes from the managing director and finance director. Gains/losses are calculated by accountant/finance director before making the decision. When the retirement is made in the system, the system automatically calculates and records depreciations. |
| FAS5 | Fixed asset system is accurately configured to calculate and track. | Accountant runs the depreciations in ERP monthly. System calculates depreciation. |</p>
<table>
<thead>
<tr>
<th>FAS6</th>
<th>Asset should be reviewed for potential impairment every five years or as business circumstances warrant. Any impairment adjustments should be documented and approved prior to posting.</th>
<th>See FAS4, no actual impairments made. Yearly inventories.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAS7</td>
<td>PP&amp;E roll forward is prepared at least quarterly. PP&amp;E roll forward is reviewed and approved. Subledger is reconciled to the general ledger monthly. Any adjustments are reviewed and approved prior to posting.</td>
<td>FA is reconciled to GL on a monthly basis by accountant. Depreciations are reconciled also to PL and BS monthly. Reconciliations approved by finance director and archived by accountant.</td>
</tr>
<tr>
<td>FAS8</td>
<td>Fixed asset repairs and maintenance expenses are reviewed annually and assets capitalized as warranted. Any adjustments to repairs and maintenance are approved.</td>
<td>Repairs and maintenance expenses are approved in PM before the purchase. Finance reviews expenses monthly and assets are capitalized quarterly.</td>
</tr>
<tr>
<td>FAS9</td>
<td>All leases are reviewed appropriate lease treatment and approved. All leases over 50,000 dollars or 3 years approved by Corporate Accounting.</td>
<td>Treated same way as CAPEX (see FAS1).</td>
</tr>
<tr>
<td>FAS10</td>
<td>System automatically posts subledger entries to the general ledger.</td>
<td>All entries are posted to GL by accountant. No automatic posting. Accountant checks that everything is posted in GL and reconciled before closing the period.</td>
</tr>
<tr>
<td>FAS11</td>
<td>System is configured to total/input information correctly.</td>
<td>Yes</td>
</tr>
<tr>
<td>FAS12</td>
<td>Access to fixed asset master data is restricted.</td>
<td>Only finance team has access to fixed assets master data.</td>
</tr>
</tbody>
</table>

Record to report

<p>| FSC1 | Access to chart of accounts is appropriately restricted. Changes to chart of accounts is documented and approved. | Access to ERP chart of accounts is only for accountant and FD. Changes are discussed by accountant and FD and approved by FD. Mapping to group |
| FSC2 | A monthly closing checklist and timetable is completed each month. | Checklist is completed each month. |
| FSC3 | Journal entries and batches are sequentially numbered by the system (or manual reconciliation of JE numbers). | New sequence numbers are opened every year by ERP support and reviewed by accountant. Automatic journal entries and batches are sequentially numbered by the system as well as manual entries. |
| FSC4 | A journal entry approval hierarchy is defined to control the approval process. All journal entries require review and approval. | Journals are made and printed by the accountant and approved by FD. After the approval accountant enters journals into the system manually. |
| FSC5 | Posting of journal entries is restricted to open periods; open periods are restricted. Access to open a closed period is restricted to appropriate individuals. | Finance department (accountant) controls the periods. Only current period is open, except at the month end GL period will be open as long as open bookings are made. Access to closed periods is not possible in the system. Closed period can however be opened again in GL, AR and AP. |
| FSC6 | A report displaying all journal entries yet to be posted is reviewed on a frequent basis. | In GL, there is a window where all unposted journal entries are shown. It is checked almost daily and always in the month end before closing the period. This is done by the accountant. |
| FSC7 | Account reconciliations are completed monthly for all accounts. Reconciliations are reviewed and approved xx days after month-end. | Account reconciliations are completed monthly to most accounts by the accountant as soon as the period is closed. Reconciliations approved by FD. |
| FSC8 | Intercompany account balances are reconciled prior to BU submission. | Intercompany statements are sent to IC units at the first day of the month as soon as the AR is closed. Statements coming from another units will be confirmed as soon as those arrive. |
| FSC9 | Foreign subsidiary financial statements are converted to the reporting currency. Rates used in translation are reviewed/compared to published rates. Currency translation is reviewed and approved prior to local consolidation. | All IC transactions are made in euro. |
| FSC10 | Elimination entries are defined in the system. Elimination entries are done at group level. | Elimination entries are done at group level. |</p>
<table>
<thead>
<tr>
<th>FSC11</th>
<th>Trial balance is reviewed for any unusual accounts or unexplained variances.</th>
<th>Trial balance is reviewed by the finance team at the month end.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSC12</td>
<td>System is configured to map accounts to financial statement lines.</td>
<td>Yes</td>
</tr>
<tr>
<td>FSC13</td>
<td>System is configured to double-entry accounting</td>
<td>Yes</td>
</tr>
<tr>
<td>FSC14</td>
<td>System is configured to compile financial statements accurately</td>
<td>Yes</td>
</tr>
<tr>
<td>FSC15</td>
<td>System is configured to total/input information correctly</td>
<td>Yes</td>
</tr>
<tr>
<td>FSC16</td>
<td>System will not allow duplicate journal entry numbers.</td>
<td>All journal entries are sequentially numbered by the system and it will not allow duplicate journal entry numbers.</td>
</tr>
<tr>
<td>FSC17</td>
<td>On a quarterly basis, the reporting package is reviewed and approved prior to submission.</td>
<td>Accountant prepares the package and it is approved by FD.</td>
</tr>
<tr>
<td>FSC18</td>
<td>Monthly reconciliation between sub-systems to GL system is performed.</td>
<td>Accountant makes reconciliations every month as soon as the period is closed. Reconciliations are approved by FD.</td>
</tr>
<tr>
<td>FSC19</td>
<td>Monthly, review accruals to determine prior month accruals are reversed.</td>
<td>Accountant runs accrual reversal in ERP after period has been closed and checks that all accruals have been reversed.</td>
</tr>
<tr>
<td>FSC20</td>
<td>Balance sheet details are reviewed for completeness and accuracy monthly.</td>
<td>Accountant reviews and reconciles BS details monthly.</td>
</tr>
</tbody>
</table>

**Procure to Pay**

<table>
<thead>
<tr>
<th>PTP1</th>
<th>New vendor set-up is reviewed and approved.</th>
<th>New vendors fill in their information to a template that buyer will sent to the finance assistant. Finance assistant checks that all needed information is on the template, checks supplier’s VAT and that it is not in restriction lists and opens the supplier to the system according to the template.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTP2</td>
<td>Corporate Table of Authority exists mandating required approvals for new vendors, contracts, purchase orders, p-cards, and non-purchase order expenditures. All purchases require an approved purchase</td>
<td>Raw material orders are made in ERP and other items and services in PM (purchase management). Approval limits have been set up in both systems and controlled by administrator. If there is an invoice without an approved order it will be checked by the buyer and approved by the finance assistant.</td>
</tr>
<tr>
<td>PTP3</td>
<td>All invoices are approved in accordance with the Table of Authority prior to entering into the system.</td>
<td>All invoices go to Invoice Processing system (IP). If there is an approved order that matches perfectly to the invoice (tolerance to indirect purchases 5%) it will be automatically processed to wait for transfer to ERP. If the invoice does not match to a purchase order or there is a variance it will be manually reviewed by the purchaser and approved by cost center owner before it will be transferred to ERP.</td>
</tr>
<tr>
<td>PTP4</td>
<td>Exceptions to 3-way match are investigated daily and adjusted as needed. All adjustments are reviewed and approved.</td>
<td>3-way matching is done in IP system. Goods must be received in the system (ERP/PM) before matching to the invoice can be done. All exceptions will be checked at that point by the buyer. ERP also checks that PO will match the accounting in the ERP interface.</td>
</tr>
<tr>
<td>PTP5</td>
<td>Purchase price and quantity tolerances are specified within the application to mitigate the risk of inaccurate receipt, invoice entry and payment.</td>
<td>Price tolerances are specified in the system, PM orders 5% and ERP orders 0%. Quantity tolerance has not been specified in the system, buyers should check that tolerance limits don't exceed. After the invoice has been transferred to ERP, ERP places a hold if the quantity ordered exceeds.</td>
</tr>
<tr>
<td>PTP6</td>
<td>Accounts payable sub ledger aging is reviewed. Aged invoices are reviewed and investigated timely.</td>
<td>AP is reviewed monthly by the accountant. Aged invoices are reviewed by the finance team and purchasers.</td>
</tr>
<tr>
<td>PTP7</td>
<td>Accounts payable sub ledger is reconciled to the general ledger monthly. Adjusting entries are reviewed and approved prior to posting.</td>
<td>AP is reconciled to GL monthly by the accountant and adjustments approved by finance director.</td>
</tr>
<tr>
<td>PTP8</td>
<td>An accrual for goods received not invoiced is calculated monthly. The accrual is reviewed and approved prior to posting.</td>
<td>All received goods are booked to purchase accrual account automatically by the system to wait for an invoice. In addition, an accrual will be made monthly for IC units if the invoice is not received before closing the period. Accrual is made by accountant and approved by FD.</td>
</tr>
<tr>
<td>PTP9</td>
<td>Rebate calculations are reviewed and approved by appropriate personnel.</td>
<td>Rebate calculations are made in group or locally by purchasing manager. Bookings</td>
</tr>
<tr>
<td>PTP10</td>
<td>Debit memos require approval prior to posting.</td>
<td>Debit memos are approved in Invoice Processing system before transferred to ERP. Same person cannot review and approve the invoice.</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PTP11</td>
<td>Proposed payment listing is reviewed and approved prior to payments.</td>
<td>There are two steps in the payment process. 1. preliminary payment list is made and processed (accountant decides what will be paid and assistant makes the payment). Preliminary payments are approved in ERP by business controller or FD. 2. Assistant transfers payment file to banking system and after the transfer it os approved once more by finance team before it can be sent to the bank.</td>
</tr>
<tr>
<td>PTP12</td>
<td>System automatically writes checks and/or processes electronic payments based on value of approved invoices.</td>
<td>System automatically processes electronic payments based on the approved invoices.</td>
</tr>
<tr>
<td>PTP13</td>
<td>Disbursements greater than specified dollar amounts require additional approval.</td>
<td>All disbursements require an approval. No additional approvals required.</td>
</tr>
<tr>
<td>PTP14</td>
<td>Unmatched purchase order reports and receiving reports are reviewed monthly. Significant outstanding items are investigated. Adjustments are reviewed and approved.</td>
<td>Accountant reviews a report “accrual reconciliation” monthly. Significant outstanding items are investigated. Adjustments are reviewed by accountant and purchaser and approved by FD.</td>
</tr>
<tr>
<td>PTP15</td>
<td>System automatically records entry based on (3-way matching) (purchase order, receiving report and invoice entries).</td>
<td>Yes, for raw material purchases. Other invoices are either matched to PM orders or do not have an order (for example mobile phone invoices).</td>
</tr>
<tr>
<td>PTP16</td>
<td>System does not allow duplicate purchase order or invoice numbers.</td>
<td>All purchase orders and invoices are sequentially numbered by the system and it will not allow duplicate numbers.</td>
</tr>
<tr>
<td>PTP17</td>
<td>System is configured to total/input information correctly.</td>
<td>Yes</td>
</tr>
<tr>
<td>PTP18</td>
<td>The application is configured so that goods or services are accrued upon receipt.</td>
<td>Receipt of raw materials (orders in ERP system) makes a booking to purchase accrual. Other goods and services are ordered and received in IP so those are not accrued in ERP.</td>
</tr>
<tr>
<td>PTP19</td>
<td>The application is configured to restrict purchases, receipts and invoices to defined suppliers in the vendor master file and</td>
<td>It is possible to inactive suppliers in supplier master data. It's not possible to make orders or book invoices to inactivated suppliers. If an item is</td>
</tr>
<tr>
<td>PTP</td>
<td>Description</td>
<td>Details</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>PTP20</td>
<td>System assigns coding to purchase orders via the vendor and item master files.</td>
<td>Accounts are set in the item master file. VAT accounts are based on the VAT in supplier master data.</td>
</tr>
<tr>
<td>PTP21</td>
<td>System automatically generates POs sequentially.</td>
<td>Yes, the system is set up to generate POs sequentially.</td>
</tr>
<tr>
<td>PTP22</td>
<td>System automatically posts sub ledger entries to the general ledger.</td>
<td>AP is scheduled to automatically post entries to GL daily.</td>
</tr>
<tr>
<td>PTP23</td>
<td>System presents invoice for payment only after 3-way match.</td>
<td>All invoices will be matched, reviewed and approved in Invoice Processing system before they are transferred to ERP. Payments are created in ERP.</td>
</tr>
<tr>
<td>PTP24</td>
<td>System allows payment of an invoice only once.</td>
<td>Yes. After the invoice is paid it cannot be modified or paid again.</td>
</tr>
<tr>
<td>PTP25</td>
<td>Access to the vendor Master file is appropriately restricted.</td>
<td>Access to the supplier master data is restricted to finance team.</td>
</tr>
<tr>
<td>PTP26</td>
<td>Access to create purchase orders is appropriately restricted.</td>
<td>In ERP and PM, the access is restricted. Admins control the rights.</td>
</tr>
</tbody>
</table>

**Inventory**

<table>
<thead>
<tr>
<th>INV</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV1</td>
<td>Assumptions for standard costing (bill of materials) are periodically reviewed and revised. Standard costs are updated based on review of prior year results and current year assumptions.</td>
<td>Raw materials reviewed monthly by purchaser, other items yearly by business controller. Archived to finance archives.</td>
</tr>
<tr>
<td>INV2</td>
<td>Price masterfile is reviewed and updated annually. Access to the price masterfile is appropriately restricted.</td>
<td>See INV1. Access to price master data is restricted and access rights are controlled by system admin.</td>
</tr>
<tr>
<td>INV3</td>
<td>Goods receipts are matched against purchase orders. Goods are checked for quality and rejected materials are segregated. Goods are entered into the system timely.</td>
<td>Receipts are matched against purchase orders by warehouse. Quality is checked and rejected materials are segregated and claimed. Goods are entered into the system as soon as those have arrived.</td>
</tr>
<tr>
<td>INV4</td>
<td>A full physical of good on hand is performed annually and reconciled to the perpetual records. Adjustments are reviewed and approved and posted timely.</td>
<td>Shop floor monthly, Finished Goods cycle count is defined in a way that all areas are cycle counted within a year. Warehouse archives the check reports.</td>
</tr>
<tr>
<td>INV5</td>
<td>Inventory is cycle counted weekly (daily?). Counts results are</td>
<td>See INV4</td>
</tr>
<tr>
<td>INV5.1</td>
<td>Cycle counts are reviewed by Corporate Accounting on a quarterly basis for all locations. Corporate will provide written approval if a full annual count is not required.</td>
<td>Cycle counts are reviewed by Finland finance department.</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>INV6</td>
<td>Assumptions for excess and obsolete inventory are reviewed annually. Excess and obsolete inventory calculation is performed quarterly. Adjustments are reviewed and approved and posted timely.</td>
<td>Excess and obsolete inventories are reviewed monthly. Obsolete: quality manager, slow-moving: FD, demand manager, sales &amp; purchasing.</td>
</tr>
<tr>
<td>INV7</td>
<td>Product margins are reviewed. Assumptions for lower of cost or market are reviewed annually. Lower of cost or market calculation is performed quarterly. Adjustments are reviewed and approved and posted timely.</td>
<td>Product margins are reviewed bi-weekly. This is done by a large group of people from different departments, including production, sales, purchasing and finance.</td>
</tr>
<tr>
<td>INV8</td>
<td>Standard cost variances to be reviewed at least quarterly. Adjustments greater than $XX are capitalized. Adjustments are approved and posted timely.</td>
<td>Standard cost variances are reviewed monthly. Raw material prices are updated every month. If there are large variances, the costs are re-allocated.</td>
</tr>
<tr>
<td>INV9</td>
<td>Inventory sub ledger balances are reviewed and reconciled monthly. Adjustments are reviewed and approved and posted timely.</td>
<td>Inventory is reconciled monthly by accountant as soon as the period is closed. Adjustments are approved by finance director and posted timely.</td>
</tr>
<tr>
<td>INV10</td>
<td>System automatically tracks inventory movement through the use of inventory type indicators.</td>
<td>Bookings to inventory accounts are mainly automated. Only part of raw material bookings to work in progress jobs are booked manually.</td>
</tr>
<tr>
<td>INV11</td>
<td>System is designed to automatically calculate cost of sales based on predefined criteria.</td>
<td>Yes, COGS of the goods that have been taken from the warehouse.</td>
</tr>
<tr>
<td>INV12</td>
<td>System automatically posts sub ledger entries to general ledger.</td>
<td>Postings are made weekly by accountant as well as before closing the period.</td>
</tr>
<tr>
<td>INV13</td>
<td>System is configured to total/input information correctly.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>