International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Case Study

The Process of Controlling and Monitoring Operational Risk Using COSO ERM at PT. Agro

Matias Andika Yuwono[1], Dyna Rachmawati
Department of Accounting, Widya Mandala Catholic Surabaya University, Surabaya, Indonesia

Received 27 July 2023 Revised 29 September 2023 Accepted 9 October 2023

Abstract

PT. Agro is a growing company engaged in the plantation sector. As a growing company, companies need to improve company performance by implementing a risk management process based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management (ERM) to reduce disruption to daily operational activities, and companies can allocate resources more effective and efficient so that company goals can be achieved. To implement COSO ERM effectively, companies must conduct a thorough coordination and integration process in their operational activities. This qualitative study aims to analyze the application of COSO ERM in controlling operational risk in the trading division at PT. Agro. The risk management process carries from the risk identification process to the monitoring process. The results of this study indicate that the trading division has significant risks in its primary activities. Hence, it is necessary to carry out a monitoring process and appropriate actions to control these risks not to harm the company.

Keywords: COSO ERM, Enterprise risk management, Operational risk, Risk management.

[1] *Corresponding author's Email: andika.yuwono@gmail.com*

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

Introduction

Along with the rapid development of technology, every company will often face risks in their daily operational activities. Another definition of risk is the possibility of an event that can occur and impact achieving the company's strategy and objectives (Nurlaela & Suhendi, 2021). Risk has several categories, including operational risk, which is the risk that arises due to failure or inadequacy of the company's internal processes or systems. The influence of operational risk is extensive, ranging from chain supply, process execution, source Power people, technology, sustainability effort, satisfied customers, and product or service failures. Another is a standard risk related to a company's financial health condition. As with PT, the operational risk significantly impacts the company's finances if not adequately anticipated. Asuransi Jiwasraya resulted in the company experiencing failure to pay customers in early 2021. The failure of this payment is because Jiwasraya Insurance has a high level of operational risk. After all, it does not have strong corporate governance, and the company does not have a guideline portfolio regulating high-risk product assets. With nothing limits on high-risk investments in the end, Jiwasraya is free to create type high-risk products regardless of the company's financial condition, and this condition is increasingly made worse because Jiwasraya manipulated financial statements (Mola, 2021). PT Kalbe Farma also experiences incident failure anticipating operational risk. Kalbe Farma resulted in two patients dying at the Siloam Karawaci Hospital in February 2015. The deaths of the two patients were due to the injection of drugs that Kalbe Farma should have withdrawn from market circulation, but some hospitals still have supplies of these drugs. From incident 2, companies have proven that the impact of operational risk that is not adequately anticipated will cause loss for the company, both financial risk, loss of customers, loss of good reputation of the company, to the cessation of operations of a company.

Companies that do proper risk management will be expected to make the level of risk that occurs can be reduced or eliminated (Zain, 2022), and one method For controlling risk using the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management (ERM). Understanding COSO ERM is a process carried out by directors and management until personnel others are applied in setting a strategy in the company, and designed to identify incident potential influence entity, manage risk, and provide assurance adequate about achieving company goals (Hock et al., 2019; Zain, 2022). Companies implementing COSO ERM will get several benefits, such as reducing disruption to the company's operational functions, utilizing better power, better cost control, increased ability to achieve goals, and the profit of the existing opportunities (Zain, 2022). The company needs to carry out the process of coordination and integration throughout the company's operational activities at COSO ERM to reach the proper risk control target (Gleim Publications, 2021).

This research is qualitative research with the case study method at PT. Agro. PT. Agro is a growing company in the city of Surabaya engaged in plantations and trade. Trading Division PT. Agro has a relatively sizeable inherent risk in terms of daily operational activities. The trading division's innate risk has risks already attached to operational activities before management does action mitigation (Hock et al., 2019; Zain, 2022). The trading division has a sizeable impact on the company's finances because the company is experiencing a loss of around 20% of the profit net if the operational risk is not adequately

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

anticipated. So, application risk management is required by the company so that it can provide benefits, effective performance, and cost efficiency.

The trading division has the primary function of looking for raw materials at relatively low prices and having the quality of goods expected by the company, after which the goods are sold back to the customer potential. From the difference in the buying and selling price, the company will get profits, and of course, the selling price has been considered with shipping costs, employee salaries, and so on. In daily activities, there is a case in the trading division where raw material purchases still do not follow Maximum Standard Operational Procedure (SOP). The company's SOP is informed that for every purchase, laboratory trials are carried out before the goods are purchased because laboratory tests will determine whether the quality of the goods follows the specifications set by the company. After passing the laboratory test, the trading team can submit a purchase price for goods that the superior trading team determines and approves. However, in events in the field, the trading team can make purchases of goods before carrying out the analysis process laboratory with limited reasons for raw material products in the field and the factor of fighting over goods with competitors. Operational risk in the trading division arises because the trading team does not carry out the SOP properly, which can ultimately result in financial risk for the company with the impact that the company can buy raw materials at higher prices or the company has to buy goods of poor quality.

This research will conduct simulations from the identification process to the response to risks in each division that faces risk opportunities. The results of this research attempt to control operational risk by implementing COSO ERM. Anticipating operational risks is crucial for the survival of PT. Agro. Based on the analysis description in the background above, they can be presented as follows: What is the process of implementing COSO ERM in controlling operational risk in the trading division at PT. Agro?

Theoretical Foundations

Definition of Corporate Risk

Enterprise risk has the meaning of two words, namely the words risk and company. Risk defines all the opportunities for events that influence achieving the expected goals (Hock et al., 2019). According to Sukirno (2010), the company earns profits because each individual and group can meet their needs. From this understanding, company risk means the company's opportunity to suffer losses or gain profits smaller than the expected target (Hurley et al., 2019; Verbano & Venturini, 2013). Risk can occur due to 2 factors (Hock et al., 2019), namely:

1. Volatility can be interpreted as inconsistent results obtained by the company, such as the level of sales that suddenly rises or falls drastically. Volatility can increase the probability of the worst future outcome.

2. Time is one factor that has a vital role in risk. The longer the project is carried out, the project will have a higher level of risk compared to projects that are carried out in a shorter time.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

Based on their scope, risks can be grouped into two categories (Hock et al., 2019), namely:

1. Internal risk, namely the risk that occurs within the company's internal.
2. Risks, namely risks that occur outside the company's internal.

Definition of Operational Risk

Operational risk arises due to insufficiency or incompetence of the company's internal processes, failure of human resources, or failure of the company's systems. Operational risk can also be defined as a risk that arises from the type of work performed by a person or company and has the nature of a low-risk opportunity but has a significant impact (Anderson, 2013; Popov et al., 2016). To minimize operational risks, adequate management supervision is needed because poor supervision will be the main factor causing poor risk management (Anderson, 2013). Improper decision-making by individuals or small groups within a company can cause significant losses for the company, such as fraud or simple mistakes in doing work (Musallam, 2023). To avoid this, companies need an adequate control system, such as effective performance monitoring by company managers.

COSO Enterprise Risk Management

Risk management can be interpreted as identifying, assessing, managing, mitigating, and controlling potential situations to provide acceptable assurance to achieve company targets and reduce negative impacts on the company (Hock et al., 2019; Zain, 2022). The definition of risk management, according to the COSO ERM, is a combination of culture, capabilities, and practices integrated with strategy determination and implementation that an organization relies on in managing risk to create, preserve, and realize corporate value (Zain, 2022). Risk management uses a holistic approach to risk, where risk is identified as a combination of environmental issues, programs, and company situations (Adiputra, 2021) (Pritchard, 2014) so that it can provide several benefits (Hock et al., 2019) such as:

1. Increase shareholder value by minimizing losses and increasing opportunities to achieve company goals.
2. Reduce the surprise of unwanted events.
3. Better cost control.
4. Do better strategic planning.
5. Reducing disruption to the company's operational activities.
6. Better utilization of resources.
7. Increase ability to meet goals and take advantage of opportunities.
8. Increase the trust of employees, stakeholders, and the government.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Implementing COSO ERM means integrating strategy and company performance to implement risk management throughout the company's organization. The implementation of risk management is carried out throughout the corporate environment because the risk is inherent in each department in the company and can affect the strategy and performance of that department, which can impact the company's overall performance (Karanja, 2017). Five components in COSO ERM are interrelated, as shown in Figure 1 below:

Figure 1. COSO ERM Framework

Risks that may affect the achievement of business strategies and objectives need to be identified and assessed. Risks are prioritized by severity and still fall into the context of risk appetite (Saeidi et al., 2023). In this framework, management looks at the risk portfolio based on the number of risks that have been identified and assumed and determines the risk response to be taken. All results of this process are reported to the board of directors.

The performance component has five principles in determining risk management, namely:

1. Risk identification: In this principle, the company identifies risks that can affect the company's performance.

2. Risk analysis or evaluation: In this principle, the company assesses the probability and impact of risk.

3. Risk priority: In this principle, the company prioritizes risks to select responses to risks.

4. Risk response: In this principle, the company identifies and chooses a response to risks that have been previously analyzed.

5. Risk monitoring: In this principle, the company develops and evaluates the risk portfolio that has been carried out.

The performance process must cover the entire company and involve all parties at all levels and units without any restrictions, whether the company has a small or large scale or geographical factors (Moeller, 2011; Población García, 2018).

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

Risk Identification

The board of directors and management will analyze internal business, the environment outside the company, the company's business processes, the control system implemented, and all areas that could be a potential risk to the company(Santos et al., 2023). The risk identification process is to know what risks have an impact on the company to reach the goal, starting from the risks inherent in the individual as well as risks inherent in the company, and these risks have a nature of the emergency or experiencing change (Hock et al., 2019; Zain, 2022). The identification process requires several approaches to viewing potential risks in each area of the company, and within a specific time, risk identification can be made. The effective way is to start by starting risk identification with the management section executive, who will assess the risk outline, and then next more detailed risk identification at the bottom (e.g., for example, management executive prioritizes room scope about effectiveness customer on space the exact scope of IT division just prioritizing from a customer data security perspective and the marketing division is prioritized at the level sale customer). So, the executive function determines risk priorities globally, and operational managers will focus on risk in detail in each part (Moeller, 2011; Pamungkas, 2019).

There are several techniques for identifying risks, including:

1. The brainstorming method is carried out by meeting employees, management, and directors who gather to discuss the risks and develop solutions to these problems. This method has the advantage of finding the risks faced by the company in general; a group will be formed with members who already have experience with operational activities per respective division, and a moderator is needed who can direct the problems faced and decisions taken can be made by consensus or based on voting (Tang & Karim, 2019).

2. Interviews and independent assessments involve an interview process with the management of the relevant department to find existing problems (Kraus et al., 2023). It can then be continued with a joint discussion process in the risk identification.

3. Based on previous incident data, this method is carried out by collecting all details of incidents experienced by the company or similar companies. With this method, the company can find out what mistakes have been made and the impact that occurred because of these mistakes (Haggenmüller et al., 2023; Soltanizadeh et al., 2016).

4. SWOT (strengths, weaknesses, opportunities, and threats) analysis method identifies risks based on strengths, weaknesses, opportunities, and threats (Helms & Nixon, 2010).

5. Risk questionnaires and surveys: This method identifies risks by sending several questions regarding certain risks, both internal and external risks. The information can be in satisfaction surveys, customer comments, or exit interviews with resigning employees. The questionnaire is a simple approach distributed independently to

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

parties with the knowledge or experience to assess each identified risk. From the questionnaire results, a risk analysis can be made based on the level of impact and chance of a risk occurring (Chairani & Siregar, 2021).

6. Scenario analysis prioritizes managers determining or simulating what risks could occur and impact the company (Haggenmüller et al., 2023).

Every company cannot find or plan for every type of risk. However, companies are obliged to continuously analyze the various potential risks that the company may face (Ramadhan et al., 2020).

Risk Analysis and Evaluation

Risk assessment has the objective of assessing the risks that have been identified based on the level of intensity of the risk (likelihood) and the magnitude of the impact of the risk (impact); the impact of the risk can be negative or positive (Gleim Publications, 2021). Company risk is assessed at various levels of the company and linked to the company's strategy and goals; then, the impact of risk can vary at all levels. The risk assessment process can use two methods, namely:

In a qualitative method, where the risk assessment process is based on qualitative or subjective descriptions rather than numerical or statistical data, sufficient information is needed to develop a risk assessment (Deloitte & Touche LLP et al., 2012; Popov et al., 2016). Qualitative method assessments have less diverse/limited assessments because judgments are subjective (e.g., low, medium, and high) when assessing an existing risk, as shown in Figure 2 below.

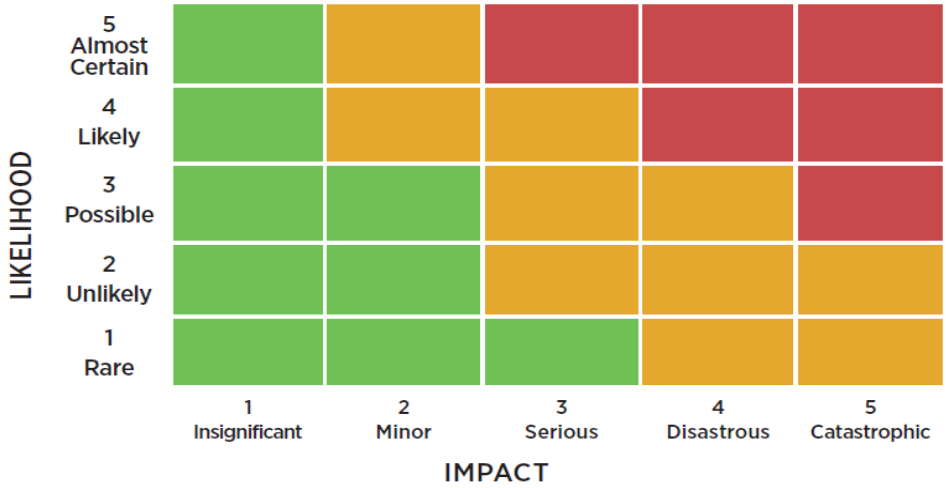

Figure 2. Risk Assessment Map

Risk Priority

After the risks have been identified and assessed, management is required to rank the risks that have the most significant impact and opportunities, as shown in Table 1 below:

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Table 1. Risk Priority

A	B	C	D	E
Likelihood	Impact	Total Score (A x B)	Risk Assessment	Risk Rating
Almost Certain (5)	Catastrophic (5)	25	High	1
Likely (4)	Catastrophic (5)	20	High	2
Almost Certain (5)	Disastrous (4)	20	High	3
Likely (4)	Disastrous (4)	16	High	4
Possible (3)	Catastrophic (5)	15	High	5
Almost Certain (5)	serious (3)	15	High	6
Possible (3)	Disastrous (4)	12	Middle	7
Likely (4)	serious (3)	12	Middle	8
Unlikely (2)	Catastrophic (5)	10	Middle	9
Almost Certain (5)	Minors (2)	10	Middle	10
Possible (3)	serious (3)	9	Middle	11
Unlikely (2)	Disastrous (4)	8	Middle	12
Likely (4)	Minors (2)	8	Middle	13
Unlikely (2)	serious (3)	6	Middle	14
Possible (3)	Minors (2)	6	Middle	15
Rare (1)	Catastrophic (5)	5	Middle	16
Almost Certain (5)	Insignificant (1)	5	Middle	17
Rare (1)	Disastrous (4)	4	Low	18
Unlikely (2)	Minors (2)	4	Low	19
Likely (4)	Insignificant (1)	4	Low	20
Rare (1)	serious (3)	3	Low	21
Possible (3)	Insignificant (1)	3	Low	22
Rare (1)	Minors (2)	2	Low	23
Unlikely (2)	Insignificant (1)	2	Low	24
Rare (1)	Insignificant (1)	1	Low	25

Risk Response

Management will consider several factors to determine the response to risk. Some of these considerations are the level of risk that occurs, losses arising from risks that arise, and costs and benefits derived from the expected risks. Companies can choose four responses to risk, as shown in Figure 3 below:

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Figure 3. Risk Response Matrix

And this explanation for all of those risk responses:

1. Avoid or eliminate risks. This option can be taken if the probability of a risk is high and the resulting impact is also high.

2. Reducing or mitigating risk. In this option, management can accept the risk but is still looking for alternatives or solutions to reduce the impact of the risk (for example, management purchases software to optimize fraud prevention and detection functions in the company).

3. Transferring or sharing risks. In this option, management transfers the impact of risk losses to third parties (e.g., purchasing insurance policies for building fires, life insurance policies for employees, and so on).

4. Accept the risk or self-insuring. In this option, management can accept the risk that has been determined and believes the actual cost of the risk is still smaller than budgeted.

Risk Monitoring

Situations may change at any time, new risks may emerge, or risks that have been identified may have a more significant impact than expected. With such incidents, management must conduct regular inspections and monitoring activities and report current risk conditions to the board of directors. In addition to timely and consistent reporting, companies also need to use adequate office equipment and facilities to identify problems that may occur, such as installing fire alarms or smoke detectors to monitor the risk of fire occurring within the company's environment (Romanosky & Petrun Sayers, 2023). So, risk monitoring has the goal that the company can continue to operate effectively while taking into account the risks that will occur in the future (Moeller, 2011).

Previous Research

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

Nurlaela and Suhendi (2021) revealed that implementing COSO ERM at a tertiary institution can provide high awareness of the risks that employees will face at that tertiary institution. COSO ERM also benefits all employees to prepare themselves to face risks. Previously, employees at this university tended to need to prepare to face risks. The research results of Safitri and Rufaedah (2020) explain that companies implementing ERM can anticipate risks by producing a matrix company control to improve company control.

COSO ERM also has benefits in the field of internal control, such as the results of research produced by Soetedjo and Sugianto (2018), which revealed that internal auditors could improve their performance in the process of preventing fraud by conducting inspections and evaluating internal control systems based on potential risks that can occur in the company. Handoko (2019) has research shows that using COSO ERM can help companies identify weaknesses in the company's internal controls, and with COSO ERM, these risks can be anticipated by how companies implement SOPs. Adiputra Adiputra 2021who conducted the same thing, analyzed the use of COSO ERM for the internal control process in the company's inventory system. This study showed that the company had not implemented good risk management in the inventory system, so the internal control system also did not work effectively. Research by Mujennah and Wondabio (2010) explains that by implementing a good ERM, companies can improve effectiveness, especially in the internal control of the purchasing department at a company in Central Kalimantan.

Research Method

This research uses a qualitative approach with a case study method. This case study at PT. Agro, especially in the trading division, Case on the trading division has operational risks that can significantly impact the company's finances if not correctly anticipated. Therefore, it is necessary to carry out risk management to benefit the company's performance effectiveness and cost efficiency. The risk management applied to research is based on the Committee Of Sponsoring Organizations Of The Treadway Commission (COSO) Enterprise Risk Management (ERM). The implementation of COSO ERM is focused on the performance component. Namely, the company's directors and management view the risk portfolio based on the number of risks that have been identified, assumed to determine the risk response. On components performance, there are five principles, where the process is as follows:

1. Risk identification On the principle of risk identification, data is needed to identify what risks exist in the trading division by conducting interviews with the trading operations manager.

2. Risk analysis or evaluation, at the risk evaluation stage, is the process of distributing questionnaires to employees of PT. Agro, especially trading staff, to determine the degree of opportunity and impact of risk. Types of operational risks are derived from interviews with trading operations managers at the risk identification stage.

3. Risk priority: At the risk priority stage, a risk calculation will be carried out based on the level of opportunity for the risk to occur up to the resulting impact.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

4. Risk Response: At this stage, management and directors identify and select responses against the risks that have been previously analyzed.

5. Risk Monitoring: At this stage, management and directors develop and evaluate the existing risk portfolio.

After doing these five processes, the company can evaluate as well as conclude whether the company has successfully implemented COSO ERM for operational risk control.

Research Approach

The formulation of this research problem can only be answered using a naturalist paradigm approach. The naturalist or naturalist paradigm is the main idea of understanding human behavior according to the frame of reference of the behavior itself. It requires understanding and adapting to the social situations faced in research activities. Thus, research on the trading division can only be carried out at PT. Agro only because the problems of these trading divisions do not necessarily occur or can occur in other companies, the solution to this research problem cannot be generalized.

Research Subjects

This research has informants at the managerial level for the operational division of the trading team and finance. The selection of these subjects was based on the consideration that managers interact and face all company operational problems directly through the decision-making process to resolve these problems. The types and criteria of informants can be seen in Table 2.

Table 2. Informant Criteria

Position	Criteria
Finance Manager	Be aware of incidents/problems that occur.
	As the party who carries out the process of monitoring (controlling) the costs and expenditure of company funds
	Be more independent and objective in the problems that occur.
Trading Manager	Be aware of incidents/problems that occur.
	Feel the impact of the risks that occur.
	Get involved directly with the problem.
	Can make decisions according to their capacity
	Feel the impact of the risks that occur.
	Get involved directly with the problem.

Types and Sources

The data used in this research is qualitative, including standard operating procedures, job descriptions, implementation of activities in the field, and so on. Quantitative data

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

includes financial reports, billing invoices, purchase orders, inventory reports, Etc. Data was obtained from primary and secondary. Primary data was obtained from observations and interviews. Secondary data is obtained from financial report documents, inventory reports, purchase order reports, Etc.

Data Collection Instruments and Procedures

This research's instruments and data collection process was conducted using interviews, observations, and surveys.

1. **Interview**. The interview process conducted in this research aimed at directors and management of PT. Agro carries out the process of risk identification, risk analysis, risk prioritization, risk response, and risk monitoring. This research conducted interviews with PT's trading and finance managers. Agro is described in the interview questions with the following details:

Table 3 . Interview guidelines

Risk Management Stage	A list of questions
Risk Identification	Can you describe what operational risks have occurred and could occur in the trading division?
	Are the staff concerned aware of this risk?
Risk Evaluation	How often can this risk occur?
	How significant is the impact if this risk occurs?
	Does this risk have an impact on other divisions?
	Do the staff concerned understand the impact of these risks?
Risk Prioritization	Which risks will be prioritized, from highest to lowest?
Risk Treatment	What actions will be taken on prioritized risks?
Risk Monitoring	How do we monitor these risks?

2. **Observation**. The observation activities carried out in this research aim to better understand the situation and conditions of operational activities in the trading division, such as observing raw materials to be purchased, determining the purchase price of raw materials, taking samples of raw materials, the process of recording raw material purchases, the process of selling raw materials to customers to create invoices, tax invoices and travel documents/handover of goods.

3. **Survey**. The survey uses an instrument called a questionnaire. The questionnaire used in this research aims to determine the level of possibility of risk occurring and the impact of the risks that have been identified. The method used is that the Trading division staff selects/checks the column in the range of numbers 1 to 5 in the probability column and selects/checks the column in the range 1 to 4 in the impact column. The higher the value chosen, the higher the possibility of risk or impact. Risks, as seen in Figure 4.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

OPERATIONAL RISKS										
Risk Findings	Likelihood					Impact				
	Rare	Unlikely	Possible	Likely	Almost Certain	Insignificant	Minor	Serious	Disastrous	Catastrophic
	1	2	3	4	5	1	2	3	4	5
Risk 1										
Risk 2										
Risk 3										

Figure 4. Risk Assessment Questionnaire

Data Analysis Technique

The process of data analysis techniques carried out in this research is guided by the statement by Miles and Huberman in Sugiyono (2010:338), which consists of 4 stages, namely:

1. Data collection, where this process collects data from the field by conducting interviews, surveys, observations, and documentation.

2. Data reduction, where the data reduction process means summarising, taking the main points, focusing on the critical things, looking for themes and patterns, removing unnecessary ones, and organizing the data in one way so that the conclusions can be explained and verified.

3. Data presentation, where the data presentation process is a collection of information that is reported and explained in writing. The data presented in this research summarises the interviews, observations, and questionnaire results after the data collection and processing process compared with the existing theoretical basis.

4. Conclusions are drawn at this stage based on the data reduction results, which is the answer to the problems discussed in the research.

The series of data analysis can be seen in Figure 5 below:

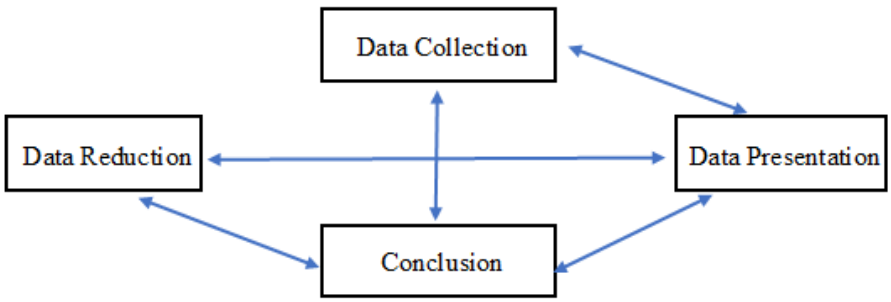

Figure 5. Data Analysis

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Data Validity / Validity Criteria

Data validity or data validity criteria must meet the following criteria:

1. Internal validity. Internal validity can be obtained if researchers conclude the occurring problems or events. The process carried out in internal validity is as follows:

- Triangulation. This research uses source triangulation, namely collecting and searching for the truth of certain information through various sources. This research conducted interviews by asking questions to certain parties with an essential role and who is responsible for PT. Agro's operational activities, namely at the managerial level for the trading division, financial managers, and staff trading team. It was done to obtain accurate interview results in implementing COSO ERM at PT. Agro, so that valid data and information will be obtained from different sources.

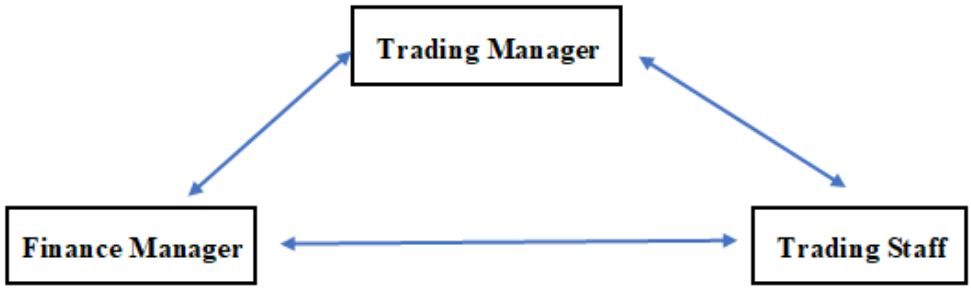

Figure 6. Triangulation of Three Data Sources

- Confirmability. Testing for certainty can be done by seeking agreement from several people. In this research, apart from determining the risks identified and assessed using the interview method, it is compared with the results of a survey given to trading division employees. It is done to provide a more accurate assessment between assessments carried out in the managerial line and employees who deal directly with these risks.

2. External validity

External validity results from the sustainability of research findings that can be generalized beyond the case studies used in this research to form a unique interpretation of an event or incident. This research uses the COSO ERM theory, which has had quite a lot of research using this theory, and if PT. As in previous studies, Agro has successfully implemented COSO ERM-based risk management in the trading division to obtain validity.

3. Reliability

Reliability aims to gain confidence that this research can be replicated or repeat the process by following data collection procedures, applying triangulation, and data analysis to minimize errors and bias in research (Yin, 2021, p. 45). The results of this research can

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

be used as material for further research on the same topic, namely examining the implementation of COSO ERM in each company's division.

RESULTS AND DISCUSSION

Data Collection Process

In this study, the data collection process used the interview method, and the informants interviewed were trading managers responsible for the day-to-day operations of the trading division to carry out the process of buying and selling raw materials. Interviewing the trading manager is carried out to determine what types of risks can affect the division's performance. Determining these risks is included in the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management (ERM) performance component of the risk identification section using qualitative methods. Then, the results of the risk identification are followed by carrying out a risk analysis or evaluation by assessing the probability of the occurrence of the risk and the resulting impact. For the interview results to be acceptable, a questionnaire was distributed to staff and supervisors to assess the level of risk occurrence and the resulting impact based on the results of risk identification from the interview process.

Risk Identification

The risk identification process in COSO ERM aims to identify risks, followed by risk analysis to the risk response process. The first process is identifying the trading division's operational risk by interviewing the manager of the trading operational division. From the results of the interview, nine risks were obtained. The results of risk identification and an explanation of operational risks carried out by the trading operations manager can be seen in Table 4 below.

Table 4. Operational Risk Identification

Index	Operation Risk	Risk Explanation
O1	The trading team needed to appropriately and correctly check the quality of raw materials according to the specified SOP.	The trading team did not carry out a Standard Operating Procedure (SOP) where every time they purchased goods, they were required to take samples of the goods to be purchased and then send them to the laboratory so that the results of the quality of the goods to be purchased were found according to the specified standards or not.
O2	The trading team should have carried out a careful and thorough physical examination of the items purchased.	The trading team did not conduct a thorough physical inspection of the goods, so purchases of goods, including the existing waste, could occur.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Index	Operation Risk	Risk Explanation
O3	The lack of information owned by the trading team regarding the quantity and price of commodity goods	The trading team often asked for the price of raw goods from farmers, but no goods purchase transactions occurred. So, the farmers are only asked for price information; this ultimately makes the farmer partners lazy or reluctant with the trading team because they feel they are only being used for price information without realizing the purchase of goods.
O4	The trading team's communication with suppliers/farmer partners needs to be improved.	The trading team does not routinely make intensive visits to partner farmers, so communication is mostly done by telephone, even though it is hoped that regular visits can improve communication and better relations with farmer partners.
O5	The administrative process of purchasing raw materials is quite long	Every time a purchase occurs, farmer partners are asked to fill out non-PKP statement forms, partner registration forms, and commitment forms, not to give bribes/gratifications, etc. After that, the document is submitted to the administration to be registered with the program, after which a Purchase Order can be made.
O6	The trading team can purchase raw materials without making PR first	The trading team never makes a Purchase Requisition (PR) in existing programs whenever they buy goods.
O7	Making a PO is done after the raw material purchase transaction occurs	The trading team has never made a Purchase Order (PO) before a purchase transaction.
O8	The company needs to gain knowledge of trading staff regarding commodity goods or raw materials.	There are still trading staff who need to gain knowledge about existing raw materials. For example, the trading staff was assigned to look for dry cloves, but because of the lack of knowledge and experience in this field, the staff did not know the difference between wet cloves and dry cloves.
O9	The condition of the warehouse for storing goods needs to be cleaner or in better condition.	The trading team does not carry out routine maintenance of the warehouse; it can cause damage to buildings and the cleanliness that needs to be maintained.

The results of the identification of operational risks have been confirmed to the finance manager to ensure whether the results of the identification of risks are following events that have occurred or events that are of concern to management, and the results of the confirmation state that the results of identification of operational and financial risks are following reality and company management concern.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

The results of the risk identification are still very subjective because risk identification is based on the experiences and events experienced by each of these managers. To make the risk identification process more diverse, company management can use several methods as follows:

1. Joint discussion, in this process, the entire management of PT. Agro can gather together to discuss and discuss risk management, starting from identifying any problems that occur within the company, the latest issues regarding the company's operational activities, what risks may arise in the future, and how big these risks will impact the company. In this process, it is also expected that the existing managers provide suggestions and solutions to deal with the risks that have been identified. This process can create synergy for each division in dealing with company risks.

2. Using a SWOT analysis (strengths, weaknesses, opportunities, and threats). It is a qualitative method of identifying strengths, weaknesses, opportunities, and threats owned by the company. In this section, it is expected that each company's management will analyze the strengths and weaknesses of the organization, such as organizational structure, financial resources, employee competence, corporate culture, and so on. In addition, management also analyses opportunities and threats from outside the company, such as political conditions, socio-cultural and technological developments of competitors, or innovations made by competitors.

3. Conduct risk surveys for company employees. This method performs risk identification by distributing several questions related to specific risks to employees of PT. Agro. From the survey results, a risk analysis can be carried out based on the responses and responses from employees who have answered the survey.

Risk Analysis and Evaluation

After carrying out the risk identification process, the following process is the operational risk analysis and evaluation process carried out by the trading manager's assessment of the level of risk occurrence and the impacts arising from the risk identification results, described in Table 4. The trading division risk analysis and evaluation results can be seen in Table 5, and the risk map in Figure 7.

Table 5. Trading Division Risk Analysis and Evaluation Results (Trading Manager)

Index	Trading Division Risk Types	A	B	C (A x B)
		Likelihood	Impact	Risk Score
Operational Risk				
O1	The trading team did not properly and correctly check the quality of raw materials according to the specified SOP	4	5	20
O2	The trading team should have carried out a careful and thorough physical examination of the items purchased.	3	5	15

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Index	Trading Division Risk Types	A	B	C (A x B)
		Likelihood	Impact	Risk Score
O3	The lack of information owned by the trading team regarding the quantity and price of commodity goods	4	3	12
O4	The trading team's communication with suppliers/farmer partners is not effective	2	3	6
O5	The administrative process of purchasing raw materials is quite long	3	3	9
O6	The trading team can purchase raw materials without making PR first	4	2	8
O7	Making a PO is done after the raw material purchase transaction occurs	4	3	12
O8	The company needs to gain knowledge of trading staff regarding commodity goods or raw materials.	2	5	10
O9	The condition of the warehouse for storing goods is not clean or in damaged condition	2	4	8

Source: Interview results from Trading Manager, June 2023

LIKELIHOOD	IMPACT				
	Insignificant (1)	Minor (2)	Serious (3)	Disastrous (4)	Catastrophic (5)
Almost Certain (5)					
Likely (4)		O6	O3, O7		O1
Possible (3)			O5		O2
Unlikely (2)			O4	O9	O8
Rare (1)					

Figure 7. Trading Division Risk Map (Trading Manager)

Apart from that, to ensure whether trading team members understand the risks that the trading manager has identified, a survey was conducted using a questionnaire Figure 4 where trading division staff and supervisors assessed the level of risk occurrence and the impact of the risks that the trading manager had identified. Survey results from 5 respondents (1 supervisor and four staff) can be seen in Table 6 and the risk map in Figure 8.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Table 6. Trading Division Risk Analysis and Evaluation Results (Survey Result)

Operational Risk													
Risk Index	Likelihood (A)					Impact (B)					Average Calculation		Risk Score
	Respondents					Respondents					Likelihood	Impact	
	1	2	3	4	5	1	2	3	4	5	(C = A ÷ 5)	(D = B ÷ 5)	(C x D)
O1	3	4	3	4	4	4	4	5	4	5	4	4	16
O2	3	3	2	3	3	4	4	5	4	5	3	4	12
O3	5	5	4	4	5	2	3	4	3	2	5	3	15
O4	2	2	1	2	2	3	3	5	4	4	2	4	8
O5	4	4	5	4	3	2	3	2	2	4	4	3	12
O6	4	4	4	5	4	2	2	3	2	2	4	2	8
O7	5	4	4	4	4	2	2	2	3	2	4	2	8
O8	2	3	2	3	3	4	4	4	4	3	3	4	12
O9	1	2	3	3	2	5	5	4	5	3	2	4	8

LIKELIHOOD	**IMPACT**				
	Insignificant (1)	**Minor (2)**	**Serious (3)**	**Disastrous (4)**	**Catastrophic (5)**
Almost Certain (5)			O3		
Likely (4)		O6, O7	O5	O1	
Possible (3)				O2, O8	
Unlikely (2)				O4, O9	
Rare (1)					

Figure 8. Trading Division Risk Map (Survey Result)

Then, the final validation is based on the assessment results of the risk occurrence level and its impact carried out by the finance manager as the fourth informant. The results of this assessment can be seen in Table 7 and the risk map in Figure 9.

Table 7. Trading Division Risk Analysis and Evaluation Results (Finance Manager)

Index	Trading Division Risk Types	A	B	C (A x B)
		Likelihood	Impact	Risk Score
Operational Risk				
O1	*the trading* team did not check the quality of raw materials properly and correctly according to the specified SOP	4	4	16
O2	*the trading* team needs to carry out a careful and thorough physical inspection of the goods purchased.	5	5	25
O3	*the trading* team has minimal information regarding the quantity and price of commodities	4	3	12
O4	*The trading* team's communication with suppliers/farmer partners is ineffective	1	4	4

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Index	Trading Division Risk Types	A	B	C (A x B)
		Likelihood	Impact	Risk Score
O5	The administrative process for purchasing raw materials is quite long	4	2	8
O6	*the trading* team can purchase raw materials without doing homework first	5	2	10
O7	PO creation is carried out after a raw material purchase transaction occurs	4	4	16
O8	Limited knowledge of *trading staff* regarding commodity goods or raw materials needed by the company.	2	5	10
O9	The condition of the warehouse where goods are stored is unclean or in a damaged condition	2	5	10

LIKELIHOOD	IMPACT				
	Insignificant (1)	Minor (2)	Serious (3)	Disastrous (4)	Catastrophic (5)
Almost Certain (5)		O6			O2
Likely (4)		O5	O3	O1, O7	
Possible (3)					
Unlikely (2)					O8, O9
Rare (1)				O4	

Figure 9. Trading Division Risk Map (Finance Manager)

The results of the risk assessment that has been carried out using the survey are compared with the results of the risk assessment of the financial manager and also the trading operations manager himself so that the results of the risk assessment comparison will be obtained, which can be seen in Table 8

Table 8. Risk Comparison Between Trading Manager, Finance Manager, and Survey Results

Index	Trading Manager		Finance Manager		Staff Trading Survey	
	Score	Assessment	Score	Assessment	Score	Assessment
O1	20	High	16	High	16	High
O2	15	High	25	High	12	Middle
O3	12	Middle	12	Middle	15	High
O4	6	Middle	4	Middle	8	Middle
O5	9	Middle	8	Middle	12	Middle
O6	8	Middle	10	Middle	8	Middle
O7	12	Middle	16	High	8	Middle
O8	10	Middle	10	Middle	12	Middle
O9	8	Middle	10	Middle	8	Middle

From the results of this comparison, the risk assessment carried out by the trading manager is similar to the finance managers' assessment and survey results. The following

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

conclusion is that the trading division staff has a relatively good understanding of the risks that their managers have identified.

Risk Priority

After all operational and financial risks have been carried out through risk identification to risk assessment, the next step is to determine the ranking of risks, starting from the risk with the highest risk value to the risk with the smallest value.

Table 9. Risk Rank or Risk Priority

Risk Rating	Risk Index	Risk Score	Risk Assessment
1	O1	20	High
2	O2	15	High
3	O3	12	Middle
4	O7	12	Middle
5	O8	10	Middle
6	O5	9	Middle
7	O6	8	Middle
8	O9	8	Middle
9	O4	6	Middle

From the recapitulation results, out of 9 operational risks, there are two risks in the high category and 7 in the moderate category. In the trading division, there is no risk in the low category; this shows a relatively high risk for the company regarding its operational activities.

Risk Response

In the next stage, after prioritizing risks, the management team will determine the actions or responses to be taken to overcome these risks. Overall, the trading manager chooses actions by reducing risk (reducing risk) in response to the overall operational and financial risks, where the details are shown in Table 10 below.

Table 10. Risk Response for Trading Operation Risks

Risk Index	Risk Assessment	Risk Response
O1	High	A clear SOP will be made regarding the procedure for inspecting goods
		Provide training to the trading team regularly.
		Providing a punishment system such as issuing warning letters will impact cutting bonuses and reducing salaries so that trading staff is expected to be more careful in carrying out their work.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Risk Index	Risk Assessment	Risk Response
O2	High	Will make a more detailed and precise SOP regarding the procedure for inspecting goods from the initial stage to the process of purchasing goods
		Providing a punishment system such as giving warning letters will impact cutting bonuses and reducing salaries.
O3	Medium	Conduct intensive communication and outreach to partner farmers. The trading team is obliged to make a list of regular visits.
O7	Medium	Make clear SOPs regarding the procedure for purchasing goods, including the PO-making process that the trading team must carry out.
O8	Medium	Providing periodic training to the trading team so that they can have sufficient knowledge and insight
		Ensuring prospective employees have sufficient knowledge during the hiring process for new employees
O5	Medium	Conduct intensive communication and outreach to partners or suppliers so that they understand the procedures that the trading team must carry out.
O6	Medium	Make clear SOPs regarding the procedure for purchasing goods, including the process of making PR that the trading team must carry out.
O9	Medium	Make a routine schedule for periodic maintenance of building assets
O4	Medium	Make a schedule of visits to partner farmers or suppliers and make reports on the results of these visits.

The risk treatment process carried out by the trading division is quite good, in the sense that the trading operational manager has good attention and response to existing risks, but requires a strong commitment from all members of the trading team and also managers so that risk management can run effectively so that achieved the expected goals.

Risk Monitoring

The last part of the risk management process is the risk monitoring process, in which the company's management is expected to supervise the response or treatment of all risks that have been determined together. In addition to monitoring these risks, management must pay attention to the level of risk, whether the level of risk has decreased, increased, or remained constant.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649
www.ijmae.com

Table 11. Risk Monitoring for Trading Operation Risks

Risk Index	Monitoring Process
High Risk	
O1	By comparing sales reports regularly, because in this sales report, you can see how the trading team's sales activities are progressing. If the number of sales decreased, then it can be asked why. Is it because the quality of the goods is not good? Alternatively, monitoring can be carried out from information on how much the company has lost potential buyers. In addition, it can be monitored through the Bad Stock report; if there is an increase in insufficient stock, it is feared that an error has occurred in purchasing the type of goods or the quality of the goods is poor.
O2	By comparing sales reports regularly, because in this sales report, you can see how the trading team's sales activities are progressing. If the number of sales decreased, then it can be asked why. Is it because the quality of the goods is not good? Alternatively, monitoring can be carried out from information on how much the company has lost potential buyers. In addition, it can be monitored through the Bad Stock report; if there is an increase in insufficient stock, it is feared that an error has occurred in purchasing the type of goods or the quality of the goods is poor.
Medium Risk	
O3	It can be monitored when the trading manager approves the purchase of goods. If the quoted price significantly differs from the information previously provided, then the trading manager can question the difference to the trading staff.
O4	The trading manager can request information from partner farmers or suppliers on whether the trading staff has a good communication process.
O5	By looking at the completeness of the registration process for partner farmers or new suppliers, if the registration process is carried out with complete documents, it can be considered that the risk control process has been carried out effectively.
O6	This can be monitored through the verification process of the finance division; if PR and PO do not accompany payment invoices to farmer partners or suppliers, the payment can be postponed.
O7	This can be monitored through the verification process of the finance division; if PR and PO do not accompany payment invoices to farmer partners or suppliers, the payment can be postponed.
O8	It can be monitored through bad stock reports; if there is an increase in the number of lousy stocks, then it is feared that an error has occurred in purchasing the type of goods or the quality of the goods is poor.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

O9	Looking at the damaged goods inventory report, the warehouse is expected to be in excellent and clean condition if the number of damaged goods is negligible. Alternatively, by being able to monitor through cost analysis, if there is a large amount of repair costs incurred, it can be questioned whether the trading division has carried out routine checks on warehouse conditions.

The trading division cannot only carry out the monitoring process, so supervision from the finance division is also needed. The division is essential in identifying, analyzing, and evaluating all financial transactions within the company because all documents will lead to the finance department. Thus, the trading division has carried out all stages in COSO ERM for the performance component, and it is hoped that PT. Agro can continue the risk management process not only for the trading division but can be applied as a whole to the company.

Conclusion

PT. Agro has a trading division that has an essential role in the company's operational activities, but the trading division also has relatively significant operational risks. From the results of data analysis and previous discussions, the trading division has carried out a risk management process based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management (ERM), especially on the performance component.

The trading division has nine operational risks, of which nine are 2 in the high category and 7 in the medium category. The trading division has the most risk because it carries out many activities, starting from taking samples, observing and inspecting goods, conducting negotiations, monitoring the price of goods, and so on. An example of an operational activity in the trading division that can have a high impact is purchasing materials whose quality does not comply with standards because purchasing materials that are not suitable will hinder the process of reselling the goods to customers because the quality is not good, which will result in poor inventory turnover. And detrimental to company finances.

The implementation of risk management based on COSO ERM, which the trading division has carried out, has provided several benefits for the company, including:

1. Companies can utilize or allocate resources better, for example, by identifying risks to avoid purchasing low-quality materials, which results in hampered inventory turnover.

2. Carrying out better cost control, such as identifying risks in warehouse maintenance schedules for raw materials, by carrying out routine warehouse maintenance, damage to raw materials can be avoided and does not become a cost to the company.

3. Companies can carry out more effective strategic planning; for example, by knowing the risk of fluctuating commodity prices, the company can determine its next strategic plan, whether to wait for prices to stabilize or buy and sell other commodities.

International Journal of Management, Accounting and Economics
Volume 10, Issue 10, October 2023
ISSN 2383-2126 (Online)
DOI: https://doi.org/ 10.5281/zenodo.10437649

4. Companies can be better prepared for surprises or undesirable events; by implementing risk management, the company will continue to monitor both risks that have been identified and new risks that may arise in the future.

5. There will be less disruption to operational activities because, after the risk identification process, the company will also assess and respond to these risks, which is expected to reduce the level of existing risks so that the company's goals can be achieved well.

6. Provides confidence for employees because by implementing COSO ERM risk management, employees will better understand risks and be better prepared to face existing risks.

Limitations

The research can provide benefits for companies to face the operational risks that are being or will be experienced. The risk management process using COSO ERM emphasizes the risk identification and risk assessment process carried out in previous research and prioritizing risks so that the company will focus more on activities with significant/high risks than management responses. Alternatively, determining what action will be taken regarding the risk to the monitoring and reporting process.

The research used qualitative methods and primary data from interviews and survey results. Limitations in this study include subjectivity in trading managers to financial managers who provide high enough risk assessments so that the risk assessment results tend to be in the medium-risk and high-risk categories. This risk assessment is based on experience and personal benchmarks, so this assessment cannot become a standard. The following limitation is that the research was only conducted at PT. Agro, in which all operational and financial activities only occur in that company. Therefore, data analysis to suggestions for improvement can only be used at PT. Agro only and cannot be generalized to all other companies.

Suggestion

Based on the research process that has been carried out, the academic advice that can be given is that apart from using qualitative methods, you can use quantitative methods in the risk management process to carry out a risk identification process based on data or financial reports. Using quantitative methods, the risk identification and assessment process will use monetary units to make the results more measurable. One quantitative method used in risk identification and assessment is cash flow analysis value at risk (VaR) analysis.

Meanwhile, practical advice that can be given is to reduce the bias of interview results when carrying out the risk identification and risk assessment process; you can use other triangulation methods, such as theoretical triangulation, method triangulation, and so on.

References

Evaluasi Pengendalian Internal Sistem Persediaan Pada CV Sinar Maju Semarang Menggunakan Metode COSO Enterprise Risk Management, (2021).

Anderson, E. J. (2013). *Business Risk Management: Models and Analysis* (1st ed.). Wiley.

Chairani, C., & Siregar, S. V. (2021). The effect of enterprise risk management on financial performance and firm value: the role of environmental, social and governance performance. *Meditari Accountancy Research*, *29*(3), 647–670. https://doi.org/10.1108/MEDAR-09-2019-0549

Deloitte & Touche LLP, Curtis, P., & Carey, M. (2012). *Risk Assesment In Practice*.

Gleim Publications. (2021). *Study Unit Four Risk Management*.

Haggenmüller, S., Oehlschläger, P., Herbst, U., & Voeth, M. (2023). Time for change? Scenario analysis on buyer–seller negotiations. *Journal of Business & Industrial Marketing*, *38*(5), 1215–1242. https://doi.org/10.1108/JBIM-11-2021-0511

Handoko, B. L., Septianto, D., & Alyssa, A. (2019). Aplikasi Penggunaan Enterprise Risk Management (ERM) Integrated Framework Coso Untuk Mendeteksi Risiko Kecurangan Pada Transaksi Tidak Biasa Unit Bisnis Pt. Doremi Pizza Indonesia [Application of Integrated Enterprise Risk Management (ERM) COSO Framework to Detect Fraud Risk in Unusual Transactions at PT. Doremi Pizza, Indonesia]. *DeReMa (Development Research of Management): Jurnal Manajemen*, *14*(1), 134. https://doi.org/10.19166/derema.v14i1.1181

Helms, M. M., & Nixon, J. (2010). Exploring SWOT analysis – where are we now? *Journal of Strategy and Management*, *3*(3), 215–251. https://doi.org/10.1108/17554251011064837

Hock, B., Burch, C., Hock, K., & Kaluhiokalani, K. (2019). *CIA Part I Essentials of Internal Auditing*.

Hurley, P. J., Mayhew, B. W., & Obermire, K. M. (2019). Realigning Auditors' Accountability: Experimental Evidence. *The Accounting Review*, *94*(3), 233–250. https://doi.org/10.2308/accr-52224

Karanja, E. (2017). Does the hiring of chief risk officers align with the COSO/ISO enterprise risk management frameworks? *International Journal of Accounting & Information Management*, *25*(3), 274–295. https://doi.org/10.1108/IJAIM-04-2016-0037

Kraus, P., Stokes, P., Moore, N., Ashta, A., & Britzelmaier, B. J. (2023). An elite perspective on interviewing entrepreneurs – methodological considerations for the entrepreneurship field. *Journal of Small Business and Enterprise Development*, *30*(5), 857–879. https://doi.org/10.1108/JSBED-12-2022-0492

L, M., & WONDABIO, S. (2010). Analisis Sistem Pengendalian Internal dan Implementasi Manajemen Risiko pada Proses Pengadaan Barang dan Jasa (E-Procurement) Berdasarkan Keputusan Direksi Nomor 305 Tahun 2010 (Studi Kasus pada PT XYZ (Persero) Wilayah Kalimantan Selatan Kalimantan Tengah). *Jurnal Ilmiah Bisnis Dan Keuangan*, *8*(1).

Moeller, R. (2011). *COSO Enterprise Risk Management: Establishing Effective Governance, Risk, and Compliance Processes, 2nd Edition* (2nd ed.).

Mola, T. (2021, April 27). *Inilah Tiga Akar Masalah Asuransi Jiwasraya*. Bisnis.Com. https://finansial.bisnis.com/read/20210427/215/1386915/inilah-tiga-akar-masalah-asuransi-jiwasraya

Musallam, S. R. M. (2023). Board of directors and financial performance: the role of risk management in Palestinian-listed companies. *Management & Sustainability: An Arab Review*. https://doi.org/10.1108/MSAR-06-2023-0030

Nurlaela, R., & Suhendi, S. (2021). Evaluasi Manajemen Risiko Tata Kelola TI berbasis COSO ERM Intergrated Framework pada Perguruan Tinggi XYZ. *Jurnal Informatika Terpadu*, *7*(1), 15–20. https://doi.org/10.54914/jit.v7i1.316

Pamungkas, A. (2019). Pengaruh Penerapan Enterprise Risk Management (COSO) Terhadap Nilai Perusahaan:Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di BEI. *Jurnal Akuntansi Maranatha*, *11*(1), 12–21. https://doi.org/10.28932/jam.v11i1.1539

Población García, F. J. (2018). *Financial Risk Management: Identification, Measurement and Management*.

Popov, G., Lyon, B. K., & Hollcroft, B. (2016). *RISK ASSESSMENT A Practical Guide to Assessing Operational Risks* (1st ed.). Wiley.

Pritchard PMP PMI-RMP EVP, C. L. (2014). *Risk Management: Concepts and Guidance, Fifth Edition* (5th ed.). Auerbach Publications.

Ramadhan, D. L., Febriansyah, R., & Dewi, R. S. (2020). Analisis Manajemen Risiko Menggunakan ISO 31000 pada Smart Canteen SMA XYZ. *JURIKOM (Jurnal Riset Komputer)*, *7*(1), 91. https://doi.org/10.30865/jurikom.v7i1.1791

Romanosky, S., & Petrun Sayers, E. L. (2023). Enterprise risk management: how do firms integrate cyber risk? *Management Research Review*. https://doi.org/10.1108/MRR-10-2021-0774

Saeidi, P., Saeidi, S. P., Saeidi, S. P., Galarraga Carvajal, M., Villacrés Endara, H., & Armijos, L. (2023). Effect of enterprise risk management on firms' outcomes with the moderating effect of knowledge management. *Foresight*. https://doi.org/10.1108/FS-12-2022-0188

Safitri, S. A., & Rufaedah, Y. (2020). Perancangan Enterprise Risk Management pada Perusahaan Peternakan (Studi Kasus pada PT Aretha Nusantara Farm) . *Prosiding 11th Industrial Research Workshop and National Seminar (IRWNS) , 11*.

Santos, R. F., Oliva, F. L., Grisi, C. C. de H. e, Kotabe, M., Del Giudice, M., & Papa, A. (2023). Identification and analysis of enterprise risks in the open product innovation: the case of Volkswagen Brazil. *Management Decision*. https://doi.org/10.1108/MD-06-2022-0799

Soetedjo, S., & Sugianto, A. (2018). Penerapan COSO ERM Integrated Framework Dalam Mendukung Audit Forensik Untuk Menanggulangi Tindakan Kecurangan. *JOURNAL OF APPLIED MANAGERIAL ACCOUNTING*, *2*(2), 262–274. https://doi.org/10.30871/jama.v2i2.944

Soltanizadeh, S., Abdul Rasid, S. Z., Mottaghi Golshan, N., & Wan Ismail, W. K. (2016). Business strategy, enterprise risk management and organizational performance. *Management Research Review*, *39*(9), 1016–1033. https://doi.org/10.1108/MRR-05-2015-0107

Sukirno, S. (2010). *Makroekonomi. Teori Pengantar* (3rd ed.). PT. Raja Grasindo Persada.

Tang, J., & Karim, K. E. (2019). Financial fraud detection and big data analytics – implications on auditors' use of fraud brainstorming session. *Managerial Auditing Journal*, *34*(3), 324–337. https://doi.org/10.1108/MAJ-01-2018-176

Verbano, C., & Venturini, K. (2013). Managing Risks in SMEs: A Literature Review and Research Agenda. *Journal of Technology Management & Innovation*, *8*(3), 33–34. https://doi.org/10.4067/S0718-27242013000400017

Zain, M. (2022). *Study Book CIA Part 1*.

HOW TO CITE THIS ARTICLE

Yuwono, M. A., & Rachmawati, D. (2023). The Process of Controlling and Monitoring Operational Risk Using COSO ERM at PT. Agro. *International Journal of Management, Accounting and Economics*, *10*(10), 933-860.

DOI: https://doi.org/ 10.5281/zenodo.10437649

URL: https://www.ijmae.com/article_184176.html