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Integration of ISO 9001 and internal control systems for commodity trading companies

**Bachelor Project submitted for the degree of
Bachelor of Science HES in International Business Management**

by

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Executive Summary

Commodity trading companies operate in a sector heavily regulated by many standards and laws. To respond to these requirements, companies often implement various systems. Maintaining and updating them is not an easy task. Most commodity trading companies must have an internal control system in place and many of them are ISO 9001 certified. To date, most companies manage these systems separately while they have a lot in common.

This research explores the potential areas of integration between an ISO 9001 quality management system and an internal control system for commodity trading companies. It describes the elements that companies implement to respond to the different requirements of ISO 9001 and internal control. A comparative analysis is presented to outline the tasks that are common for both systems. Even though many aspects are common, significant differences have been discovered on whether or not to integrate the systems, depending on each company's specific activities, size, and goal.

The primary focus of large commodity trading companies is not inherently tied to quality management systems. Their focus is more related to ensuring robust internal controls and integrity of financial flows. Given the complex systems involved in this kind of firm, keeping systems partially integrated but well-coordinated would be more effective than full integration. The research describes which aspects should be managed on a common approach. Different examples of the industry are presented to support the findings, making this research as practical as possible.

As for companies where quality and compliance are tightly linked, an ISO 9001 and internal control integrated management system could streamline operations, improve efficiency, and reduce management costs. It mainly concerns smaller commodity trading companies, where full integration should be considered. In that case, using specific tools to support the integration could be even more beneficial.

Finally, it explores the costs associated with such an integration compared to the benefits and increase in efficiency it would provide. Many hours could be saved yearly on specific tasks. The study details the different challenges associated with non-integration as well.

Overall, this report provides practical insights and recommendations for commodity trading companies aiming to optimize their management systems and enhance their operational efficiency.

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1. Introduction

Commodity trading companies deal with a substantial number of transactions. They operate in a sector heavily regulated by many standards and laws. To respond to these requirements, companies often implement various systems. Maintaining and updating them is not an easy task. Most commodity trading companies must have an internal control system in place and many of them are ISO 9001 certified. To date, it seems that all companies manage these systems separately while they have a lot in common.

An internal control system ensures reliable reporting (primarily financial reporting but also extends to operational and compliance-related aspects). As for ISO 9001, the primary objective of the standard is to ensure consistency in product or service quality. Even though they have different goals, internal control, and ISO 9001 systems share a lot in common. Both systems separately address different aspects of business efficiency and risk management. For instance, they have the following requirements in common: process identification, documentation of processes, risk management, management responsibility and oversight, continuous improvement, and incident management.

By addressing all these aspects separately, companies are not able to streamline their processes. Many redundancies would occur, and overall efficiency and effectiveness are not optimized. This can be confusing and stressful for collaborators. They would deal with the complexities of both systems, often doing the same kind of work twice. This situation not only wastes time and money but also creates a frustrating experience for everyone involved.

The objective of this study is to identify effective methods for integrating an ISO 9001 system with the internal control system of commodity trading companies. The first part of this study lies in identifying the main ideas behind quality management and internal control systems and their similarities. This preliminary analysis constitutes a reliable theoretical basis for a more in depth-analysis. To uncover ways these systems can better complement each other and avoid redundancies, discussions with different professionals have been conducted to learn from their experiences. The objective is to analyze how their ISO 9001 and internal control systems work and how they are managed. An assessment will be performed on how combining these two systems can reduce the amount of time spent on managing them separately (and associated cost reductions) and lead to increased organizational efficiency and enhanced risk management. Evaluating how these systems can be effectively combined will provide valuable insights

to commodity trading companies to optimize their processes and overall organization. Practical recommendations for an integrated approach will be identified as well.

Combining the ISO 9001 and internal control systems would probably make the work easier for everyone. It would also allow managers to better understand the systems' requirements to get the best out of it. For instance, merging the rules for documenting processes and managing risks would simplify the working methods. They would be able to focus on what is most important for their specific needs as commodity trading companies. With this method, time would eventually be saved, and organizational efficiency probably increased.

The main question of this research is then the following:

How could commodity trading companies combine their ISO 9001 system with their internal control system to reduce costs and increase organizational efficiency?

The secondary questions here below will also be answered through this investigation:

- What are the similarities between ISO 9001 and internal control requirements?
- What are the similarities in the ways these two systems are managed?
- To what extent can these two systems be combined?
- Would it reduce costs and increase organizational efficiency to combine them?

2. Literature review

ISO 9001 and internal control requirements share a lot in common, even though they have different goals. Both systems separately address different aspects of business efficiency and risk management. In this chapter, the basis for understanding these two systems will be presented, as well as their requirements and the benefits they bring to companies that have implemented them. To better understand how these systems could work together, a comparative analysis of these requirements will be conducted to see how they could work together as an Integrated Management System.

2.1 Integrated Management System

As mentioned previously in the report, commodity trading companies need to comply with various legal requirements. They often implement many management systems in parallel in response to that. On top of that, these systems are often implemented using different software applications.

For instance, a company would manage its legal requirements linked to Human Resources using software dedicated to that (payroll, tracking working hours, ensuring holidays are taken, etc.). Additionally, the company would manage its Environmental Management System (ISO 14001) using completely different software to track its environmental impact and ensure compliance with applicable laws and regulations.

In some cases, it is indeed necessary to implement different systems when they are different in approach and structure. In other cases, the systems' approaches and requirements are similar and systems could be combined in an Integrated Management System (IMS). An IMS would combine various management systems (for instance quality, environment, health and safety, anti-bribery, fraud, information security, asset management, etc.) into a single, comprehensive, and harmonized management system.

Having an Integrated Management System approach can benefit the organization in many different ways: optimized processes, reduced management costs, fewer redundancies, more consistency, and improved performance (Integrated Standards 2023).

By looking at commodity trading companies' reports, we can see that systems usually integrated are Quality, Health & Safety, and Environment. This system is usually referred to as QHSE (or HSE, when quality is excluded).

By taking as an example an Environmental Social and Governance report of Vitol (Vitol 2023), it is evident that the company integrates environmental and social (health and security, human rights as well as communities' concerns) aspects. The same integration has been identified for various other companies. Integrating these aspects makes sense as environmental and social issues are often interconnected. For instance, labor practices can affect a company's environmental footprint, and pollution can have detrimental effects on communities. Through the integration of these elements, Vitol can formulate a more comprehensive strategy for sustainability. An integrated system can streamline compliance efforts and ensure adherence to relevant regulations. Other companies with the same approach are Glencore (Glencore 2022) and Trafigura (Trafigura 2022). Many elements of internal controls can be found in ESG reports. Information related to risk management practices, governance structure, compliance, and even controls linked to operational, environmental, and social impacts can typically be found on these reports as well.

These examples show that it is quite common for commodity trading companies to integrate some of their management systems to benefit from the advantages of this strategic decision. In the next sections of this report, a comparison of ISO 9001 and internal control requirements will be presented. Many similarities come out between these two systems. A more unified approach and a more efficient management system could result from integrating these two systems as well. The following sections will focus on these aspects.

2.2 Internal control

2.2.1 What is an internal control system?

Internal control systems (ICS) are processes put in place by an organization's management and board. In a broad sense, they involve all elements implemented to control the different risks faced by an organization. They can include for instance physical controls (safes, access, etc.), implementation of policies and procedures, reconciliations, audit and transaction and activity reviews (PARADES 2023). It is an indispensable component of good corporate governance, in any type of company.

Internal controls help companies to meet their financial, operational, strategic, and compliance objectives. They mainly focus on accurate financial reporting and compliance with laws and regulations, but also on ensuring operational efficiency. They play a key role in safeguarding assets, preventing fraud, reducing errors, ensuring the integrity of financial information, and building a trustworthy reputation.

In Switzerland, many companies must have an internal control system in place. The main industries concerned are banking, insurance, commodity trading, financial services as well as healthcare and pharmaceuticals. It is usually due to their high regulatory scrutiny for ensuring financial stability and protecting consumer interests. Different laws are in place to ensure that these companies have an internal control system in place, such as The Swiss Code of Obligations (Fedlex 1911) and the Federal Act on Financial Institutions in Switzerland. It requires commodity trading companies to implement an appropriately defined risk management system and an effective internal control structure. These elements will then be audited by an independent entity.

Commodity trading companies deal with a high volume of transactions and significant financial risks are involved. Internal controls are therefore vital in detecting and preventing fraud, managing risks (from market risks to environmental ones), protecting assets, and ensuring regulatory compliance. In this industry, even small mistakes (such as an error in a document) could represent millions of dollars lost. Developing an efficient internal control system is thus crucial to ensure their sustainability.

2.2.2 The COSO framework

The Committee of Sponsoring Organizations (COSO) has developed a framework designed to integrate internal controls into business processes (COSO 2022). This framework aims at designing, implementing, and evaluating the effectiveness of an organization's internal control system. It is the most widely recognized and applied framework among companies in the world, including those in the commodity trading industry (Risk Optics 2020). It helps organizations to manage risks and achieve objectives across various categories, including operations, reporting, and compliance. Organizations use the framework as a basis as it provides valuable foundations for internal control systems. It will still need to be tailored so that it suits the specific environment, needs, and unique risks associated with the activities of commodity trading companies.

According to the executive summary of this COSO framework (COSO 2013), it is composed of five key components. Each one has a specific purpose to ensure an effective system is built, as explained below:

- **Control environment:** It is essentially the groundwork of the organization's internal control. It requires a strong ethical structure, board oversight, clear roles and responsibilities, competent staff, and accountability. It plays a critical role in ensuring the accountability, integrity, and effectiveness of the overall internal control system.

- **Risk assessment:** It requires identifying and evaluating the various risks that the organization could face and that could compromise the achievement of its objectives related to operations, reporting, and compliance. Risk assessment is an iterative process and requires the company to adapt the internal controls as the environment might change over time.
- **Control activities:** It requires the implementation of controls to address risks and achieve objectives. It consists of various policies and procedures executed at various stages of business processes. All levels of the organization are concerned. Segregation of duties is built, or suitable alternatives must be implemented.
- **Information and communication:** It requires the organization to gather and exchange information that is critical to internal control within an organization and with external parties. Internal communication ensures that everyone receives information from top management on control responsibility, understands it, and takes it seriously. As for external communication, it addresses the exchange of information with relevant stakeholders to respond to their requirements and expectations.
- **Monitoring:** It requires regular assessment of control and communication effectiveness. The findings of these evaluations are communicated to management and oversight bodies and will trigger adjustments to the business processes.

These five aspects of the COSO framework offer a structured and systematic approach to internal control. As mentioned, commodity trading companies need to incorporate industry-specific considerations and best practices into their internal control systems for them to be useful.

2.2.3 Key internal controls in commodity trading companies

The Swiss Trading & Shipping Association published guidelines that aim to facilitate responsible practices and integrity throughout the value chain of commodity trading companies (Swiss Trading & Shipping Association 2019). These guidelines can be interpreted as key internal controls or best practices to implement in the company to reduce the risks of money laundering, terrorist financing, and corruption. Here are the main key takeaways of the document:

- Conduct due diligence at every step and check for risk indicators (for your customers, transactions, and material involved)
- Implement a strong KYC (Know Your Counterparty) process
- Keep records

- Have clear procedures in place (know how to act, especially in case of suspicions)
- Train your staff and monitor your processes and procedures
- Implement systematic reviews and test for control effectiveness
- Make improvements as necessary

After having analyzed various commodity trading companies' reports, the main internal controls (mainly policies and procedures) described were mostly on the same topics (fraud in general). The following examples are based on the report of Socar (Socar 2023), Trafigura (Trafigura 2024), Glencore (Glencore 2023), and Lloyd's Register (Lloyd's 2022):

- Due diligence
- Anti-trust and competition law
- Anti-bribery and corruption
- Anti-money laundering
- Code of conduct
- Conflict of interest
- Screening (vessels, sanctions...)
- KYC (systemic counterparty screening)
- Whistle-blower mechanism
- Fraud
- Gift and entertainment
- Third-party payments
- Market conduct (yearly external benchmark)

On top of that, they mention regular training for staff on these aspects as well as regular guidance as new laws and regulations are implemented, and policies updated. Some of these examples will be referred to later in this report.

2.3 ISO 9001 standard

According to the International Organization for Standards (ISO), the ISO 9001 standard is the most widely used quality management standard in the world (ISO 2015). The standard is recognized worldwide for helping companies improve their performance, meet customer expectations, and demonstrate their commitment to quality (ISO 2015).

Being ISO 9001 certified means the company adheres to a set of quality standards designed to ensure consistent delivery of products/services that meet customer and regulatory requirements.

The large number of players in the commodity trading sector makes it very competitive and high-quality standards are expected (at every level). Commodity trading companies are also subject to many different standards with high scrutiny that makes operations even more complex. Every lapse can lead to significant financial losses or reputational damage. Quality management is therefore crucial for commodity trading companies.

ISO 9001 allows companies to bridge the gap between the complex challenges they face and the pursuit of operational excellence. The standard provides a structured framework to enhance the Quality Management System (QMS) effectively. The main requirements of the ISO 9001 are the following (Standards Store 2022):

- **Context of the organization:** Understand internal and external issues, and expectations of interested parties and define the scope of your QMS (identify your key processes for the QMS).
- **Leadership:** Demonstrate leadership commitment, implement a quality policy, and define clear roles and responsibilities.
- **Planning:** Address risks and opportunities, set quality objectives, and plan changes.
- **Support:** Provide needed resources, ensure competence, raise awareness, and manage documented information.
- **Operation:** Plan and control, define requirements for products and services, design, control of external providers, and control of nonconforming outputs.
- **Performance evaluation:** Monitor, measure, analyze, evaluate, and audit the different processes and conduct an annual management review.
- **Continuous improvement:** Identify nonconformity and corrective actions, and continuously improve the QMS.

All these requirements need to be documented and reviewed regularly as the company evolves. They can be summarized in the following figure, illustrating their position on the Deming Wheel.

Figure 1 - ISO 9001 requirements on the Deming Wheel (Standard Store 2022)



Many of the biggest players in this industry are ISO 9001 certified (at least for part of their operations). Trafigura (Trafigura 2020), Glencore (Glencore 2020), BP (British Petroleum 2023) or even MSC (Mediterranean Shipping Company 2023) are examples. This certification is valued, and it shows the standard's importance in this industry.

As an example, a commodity trading company named Synergy Commodities mentioned the benefits of its ISO 9001 certification on its website. It highlights improved organizational efficiency, enhanced level of quality, better process control, deeper understanding of their business and sales growth. (Synergy Commodities 2022). On top of that, it has improved the company image by placing it in a distinguished group recognized for maintaining high standards.

Even though many benefits come out of this certification, implementing it and maintaining the Quality Management Systems is often challenging. As with almost any management system, it requires collaboration across different teams. Additionally, the ISO 9001 standard is designed to be flexible and applicable to any organization (any size and any products/services offered). For the QMS to be useful and beneficial, it needs to be designed in a way that suits the unique processes, culture, and objectives of the organization. It also needs to be adapted and updated as the company evolves and changes its practices.

As for the typical processes certified in commodity trading companies, I was not able to find this information online. However, some answers to this will be included in the discussion section of the report.

2.4 Similarities between internal control and ISO 9001

As mentioned in the introduction of this report, internal control, and ISO 9001 systems have many elements in common. After having described the two systems and their main requirements, this section focuses on assessing their similarities.

Optimiso Group SA, a company specializing in internal organization and management systems identified five main similarities between these two systems (Optimiso Group 2022):

- List of processes
- Risk identification
- Description of internal documentation
- Internal audits
- Continuous improvement

First of all, both systems have an approach based on processes. It means that the basis of both systems starts with identifying the relevant processes. Based on these processes, risks are identified and can be assessed voluntarily. There is a difference in the scope; the quality approach covers operational risks and compliance with laws whereas Internal control primarily covers reporting risks, but can be extended to compliance with laws, operations, and strategy. The risk management approach should also be common so that the chosen strategy is coherent: avoiding risks, reducing them, transferring them, or accepting them.

On top of that, both systems require the description of internal documentation. This includes procedures, policies, distribution of responsibilities, risks, control measures, and so on.

To continue with the similarities, in both Quality Management and Internal control frameworks internal audits are conducted. Even though the approach is similar (in terms of interview and audit report), the purpose is different. For quality audits, the objective is to identify potential areas for improvement and current malfunctions in the audited process. For control audit, it aims at verifying the control in place (if they are done regularly and their results for instance).

Finally, ISO 9001 and Internal Control systems are both based on the principle of continuous improvement. For the first one, non-conformities, incidents, and suggestions for improvement must be collected and implemented to improve the operations of the

company. The second one works on the same principle, but it is more risk-related; improvement projects are identified to reduce risk.

Based on these similarities, we can already identify the two main benefits of the integration of the two systems have been identified:

- Description of the organization is harmonized (in terms of types of documents used, referencing, no duplications, continuous improvement management, etc.)
- Facilitate the adherence of employees as they perceive a single system in place.

A more in-depth analysis of the elements a company put in place to comply with both ISO 9001 and internal control has been performed. Many other aspects are common to both systems. The table below shows a comparison of what companies usually implement or describe to respond to internal control and/or ISO 9001 system (it does not necessarily correspond to the requirements as such):

| | Internal Control | ISO 9001 |
|---|------------------|----------|
| Analysis of the context of the firm | no | yes |
| Identification of interested parties | no | yes |
| Process identification | yes | yes |
| Risk identification | yes | yes |
| Risk evaluation | yes | yes |
| Risk monitoring (mitigation measures) | yes | no |
| Communication | yes | yes |
| Compliance with laws and regulations | yes | yes |
| Segregation of duties | yes | no |
| Distribution of responsibilities | yes | yes |
| Internal documentation (procedures, policies) | yes | yes |
| Continuous improvement | yes | yes |
| Internal audit | yes | yes |
| Controls follow up | yes | no |

| | | |
|---------------------------------------|-----|-----|
| Implementation and measurement of KPI | yes | yes |
| Skills identifications | no | yes |
| Control of external providers | yes | yes |
| Customer satisfaction evaluation | no | yes |
| Training and awareness | yes | yes |
| Management review | no | yes |
| External audit | yes | yes |

The table above shows that a large majority of these elements are common to both systems. It would then be interesting to see if companies have a common approach in addressing the different aspects. For instance, they could have a common procedure for incident management, the same risk identification and evaluation method, or even a centralized skills management process. This would reduce redundancies and ensure a cohesive approach.

2.5 Conclusion

It is common for commodity trading companies to integrate some of their management systems. The most common example is the integration of environmental and social aspects. Such an integration has various benefits for the companies.

As for ISO 9001 and internal control systems, they indeed have many similarities. It suggests that such an integration could be beneficial as well. Both systems share key elements such as a focus on process orientation, risk management, continuous improvement, detailed documentation, and audits. These overlaps suggest that a unified management approach could improve performance by reducing redundancies and offering an overall more cohesive system.

3. Methods

In this section, the research design and data collection methods used to conduct the study will be described and explained.

The first step of the research was to define and identify the similarities between an internal control and ISO 9001 system (see section 2.4). After having identified them, the idea was to understand how the two systems are managed and organized in commodity trading companies. It would provide valuable data to analyze to which extent they could be integrated and help in identifying an approach for integration.

To assess the feasibility of this integration, different people from the commodity trading industry were approached. This includes risk managers, internal control officers, quality managers, and internal auditors. The objective was to discuss with them to see how they manage their ISO 9001 and internal control systems. It was crucial for completing this research and understanding the specific needs of commodity trading companies. It would also help in identifying which aspects of both systems could be combined to increase organizational efficiency and reduce redundancies.

Difficulties were encountered in getting a formal interview with someone directly involved in the industry. However, various informal discussions were engaged with various professionals, including a middle office manager and an internal control officer. The insights gained from these conversations are highly informative and have provided a significant understanding of the subject matter. These elements will be duly incorporated into the discussion section of this report to enrich this analysis.

The other type of people approached were management consultants. These profiles are specialized in ISO certifications, internal control systems, and internal organization in a broad sense. They are highly relevant to my research as they bring a macro-level perspective informed by their experience across various organizations and industries. Gaining their expertise regarding the best practices, challenges, and innovative solutions in implementing and managing quality management systems and internal controls is invaluable.

The first interviewee was a management consultant. This person has worked for many years in different multinational companies and has a good understanding of how management systems work in this type of firm. The idea of this interview was to assess how the different management systems are managed in big companies, with a focus on quality management systems. The objective was to get real examples based on her

experience and her feedback on these management strategies and see if there is a current integration that is occurring or not.

As for the second interviewee, he is a senior consultant specializing in internal control systems. Before becoming an independent consultant, he had put in place the internal control of a large multinational, renowned worldwide. He has implemented the internal control framework in over 250 legal entities of this company and ensured its functioning for almost 20 years. This interview is highly relevant as it allowed for an in-depth understanding of how internal control systems are usually designed in large companies with subsidiaries all over the world. Based on his experience, this is usually the same organization as other large companies, just as with many commodity trading companies.

Additionally, many discussions were held with a consultant who uses a software solution to integrate the different management systems of his clients. Companies can manage different ISO systems, as well as their internal control on the same platform. He has seen many integrated management systems which provide invaluable practical insights for this research. His experiences illustrate the potential efficiencies and challenges of integrating management systems in commodity trading companies. It also highlights how technology can effectively support or complicate these processes. This real-world perspective enriches the theoretical discussions in this research by demonstrating practical applications and outcomes.

Finally, the last part of my research question remains to be addressed. It concerns the potential gains in efficiency and cost savings that such an integration would represent. Most gains in efficiency have been identified in the different interviews and discussions with professionals. As for the cost savings, they are assessed in terms of hours spent managing the two systems separately compared to the time saved in managing them together. As seen previously, some tasks are common to both systems. We will see how much time could be saved and on which tasks, so that companies can convert it to an amount of money if needed. The estimated time has been discussed with a consultant. These are tasks the company is used to doing, so she knows exactly how much time it should take.

4. Results

In this section of the report, the results and key findings of the different interviews conducted are highlighted. Specific information on how internal control systems are structured in commodity trading firms will be provided as well.

4.1 Integrated Management Systems and ISO 9001

In the first interview with a management consultant (see Appendix 1), the focus was on understanding how management systems work in large organizations and if some have integrated their quality management system with their internal control system. The consultant revealed that she had not encountered any companies that had integrated their ISO 9001 and internal control systems yet. She noted that companies often operate with multiple and disparate systems usually due to the need for automation of certain activities and compliance with evolving legal requirements. This proliferation of systems, according to her, results from organizational growth and the continuous emergence of new compliance demands. All of that leads companies to add systems incrementally rather than integrating them into existing ones.

The consultant highlighted the complexity and redundancy within companies' multiple system frameworks. She pointed out that managing these systems separately involves significant time and costs. However, companies still seem to perceive it as less daunting than the process of reviewing, consolidating, and integrating existing systems. This approach results in a somewhat disorganized expansion, with numerous parallel systems operating within a single organization. When companies need to comply with a new regulation, the process is usually the same regarding the implementation of the control framework. Based on the existing processes of the company, risks are identified, and control activities are developed.

However, the consultant strongly advocated for the potential benefits of unifying these systems into a single and interconnected framework. Integrating different systems, despite their complexity, could significantly streamline operations and enhance organizational efficiency.

When discussing the implementation of ISO 9001 certification for her clients, she mentioned that quality management systems are commonly integrated into companies' existing Electronic Document Management (EDM) applications, such as SharePoint. For ISO 9001, many companies choose not to integrate the system in a specialized or

integrated software solution. The consultant also shared that many companies implement Key Quality Controls (KQC) in their quality management systems.

Additionally, the consultant touched upon the broader trend of Integrated Management Systems in large organizations, where the ISO 9001 system is often combined with environmental aspects (ISO 14001) and Business Continuity Planning (BCP), typically managed on platforms like SharePoint as well.

4.2 Internal control systems in large companies

The second interview (see Appendix 2) was more focused on internal control systems. When the interviewee began his role in the company, reporting on internal controls was nearly non-existent. Some internal controls existed, but top management didn't need to certify their accuracy. At the beginning of the year 2000, different scandals happened, such as with Enron. It was a massive accounting fraud that led to the bankruptcy of the company. Top management had hidden much information and then said they were not aware of the situation. Following that, the Sarbanes-Oxley Act (SOX) was implemented in the United States as a federal law to increase transparency and accountability of top management regarding these aspects. Many other regulations in that sense have been implemented around the world, having a direct impact on the governance and internal controls of businesses, including their subsidiaries in Switzerland.

At that time, the interviewee was mandated to implement a robust internal control system for the multinational he was working for. It included implementing new controls where needed, ensuring effective and reliable reporting, and testing these controls. The company developed a comprehensive risk and control matrix, covering all business processes from end to end. Controls were set at every level, from suppliers' selection to invoice payment for instance. This matrix was standardized across the company's global operations (meaning that all subsidiaries had the same list of risks and controls to perform). Some local adaptations were still necessary as operational practices or technological tools used differed. Regarding reporting and oversight, results of controls and risks were regularly reported to the headquarters, which will then present them to the board every quarter. This includes updates on internal and external audit findings and compliance issues for instance.

On top of the quarterly reporting, the interviewee mentioned the added value of having an annual workshop on internal control. These workshops have several purposes. The first one is to ensure that all subsidiaries are aligned with the company's internal control system and to communicate updates and changes in processes. This standardization is

important for maintaining consistent control measures across the company. It can be seen as training sessions as well, as these workshops are used to educate subsidiary managers about best practices in risk and control management. It also clarifies the expectations from headquarters and shares on challenges encountered in the different offices. It also aims at strengthening the relationship between the various local subsidiaries and headquarters internal control teams. This relational aspect is crucial for open communication and trust, which in turn would enhance the quality and accuracy of reporting.

The company he worked for was not certified under the ISO 9001 standard but still had many quality control measures in place. Most of them were followed, tested, and managed by the operational teams. Some of these controls were still present in the risk and control matrix managed by the internal control team. It was decided to keep them separate and under the responsibility of the operations as it was easier to manage. The interviewee mentioned that integrating quality controls with existing internal controls would be feasible, but complex. It would also require significant time and potentially additional costs even though it would improve oversight and efficiency in the long run. If we put in parallel all the IT controls, for instance, they were included in the risk and control matrix of the headquarters.

As for the potential integration of an ISO 9001 quality management system with internal controls, the interviewee has a clear opinion on that. According to him, it depends highly on the tool that will be used for such an integration. Flexible tools like Excel are preferred for large and multinational companies as they allow for adaptability and are easy to tailor. On top of that, this kind of tool does not require high costs in terms of license. During his time in the company, they have not found a tool that allows them to do exactly what they need. This is the reason why many large companies tend to develop their tool internally. However, for small and medium-sized companies, using a tool for integrating the systems would be beneficial and cost-effective. He believes the key is to design a system that remains simple and intuitive.

4.3 Internal control system structure in commodity trading firms

In commodity trading companies, there are also internal controls implemented in almost every department and at all levels. On Socar's website (Socar 2024), there is a section showing how risk control and governance are set up.

Figure 2 - Risk Control Set-up (Socar 2024)



It shows that the internal control is organized by department. Each department seems to be responsible for its risks and controls as they have the best expertise on the topic. These are the teams that perform the first controls. The teams in the middle are probably composed of “Global Head of” positions. They act as the link between top management and operational teams. For instance, by transmitting the information from top management to the operations and supervising the controls performed by the different departments. Finally, it indicates that the highest level of management has oversight responsibilities for the internal controls implemented across the company. It underscores the importance of governance and the role of top executives in ensuring that controls are performed and that they can be held accountable.

It is interesting to notice that there is an internal control department that is placed at the same level as the others. The company could analyze the benefits of including this team in the middle section so that they have a complete view of all risks and controls of the company. This is what has been described in my second interview. The different subsidiaries were reporting to the internal control team at headquarters. This team would then present the control follow-up to the top management.

After this overview of the internal control and global reporting structure, it is also useful to consider how specific departments handle their internal controls and reporting. A department that has many internal controls in place is the middle office department. The department is highly important in ensuring transparency in its market risk exposures and financial performance and in mitigating the risk of financial losses and wrong reporting. The opportunity to ask a Middle Office Manager how the reporting process was organized in his department was seized. As with many commodity trading companies, the front, middle, and back-office departments are organized by product. He gave me an example of internal controls done to mitigate the market risk. His teams in Geneva were first reporting to him (on risk exposure based on the position taken by the front office).

After reviewing it to ensure conformity with the company risk framework and integrity of the data, a consolidated report would go to the Global Manager of the product, at the headquarters. The company he works for is significantly smaller than Socar, yet it still maintains a substantial size. It shows overall the same pattern as described in the Socar example.

For smaller commodity trading companies, the internal control setup is quite different. As mentioned previously, a discussion has been conducted with a person in charge of internal control in a small trading firm. The company has about 40 employees split between Geneva and another office abroad. The main activity of the company is gas transportation, and it owns dozens of vessels. Their internal control system was set up not even two years ago, although the company has been operating for many years. There are two reasons why they have implemented an ICS. The first one is because there were many errors made every day. The second one is because banks are more and more demanding. Performing various controls and carefully managing the risks are part of their requirements. Even small commodity trading companies must adapt.

Today, all controls are performed by email. The internal control manager sends the control (a set of questions that must be answered) to operators and other employees. Once the controls are performed, answers are sent back by email. Hundreds of emails are received every day. To manage all the risks and controls of the company (from operations to finance for instance), the internal control manager uses an Excel matrix. When the ICS was implemented, the company identified its processes and described procedures as well. These same risks and controls present in the matrix are also mentioned in specific procedural steps. As for incidents, they are also managed by email. Anyone that needs to report one will send it to the internal control manager who will then redirect it to the person that will handle it. A full report on the ICS is done once a year to the board. The company is now looking for a tool to digitalize its internal control and gather all information on a single platform.

5. Discussion

5.1 Challenges with ICS

Based on the different interviews and discussions, different challenges related to internal control can already be identified.

Without an appropriate platform to manage their internal control system, information is everywhere. Consider the situation described by the internal control manager. There are some elements in a matrix, others in emails and procedures, and documents on the EDM. It is nearly impossible to have a clear view of all processes and to manage them efficiently in terms of internal control. Before setting up their ICS, there were no formal and written procedures. If they only implemented it two years ago, it probably means that other small commodity trading companies don't have this documented as well. This absence of documentation represents various challenges. Without written procedures, processes can vary significantly between individuals. It leads to inconsistencies in how tasks are performed, making it difficult to maintain consistent quality. No one knows what they have to do and how to do it autonomously. The risks of errors are higher as well. On top of that, there is no transfer of knowledge so companies are dependent on key individuals that know what to do. Some of these situations have been described by the internal control manager as well.

For the risks and controls, they are present in the matrix and the procedures. It means that when a control is modified, both the matrix and the procedures must be updated. It is time-consuming to make sure that everything is up-to-date and coherent. Having a tool where all these elements are gathered would facilitate the management of all this information.

Another challenge pointed out by one of the consultants interviewed is related to the integrity of the information reported. It is challenging for the internal control manager to ensure that the information they receive is accurate, coherent, and reliable. All the different teams or offices need to be aligned with the overall company's internal control system. People do not like to perform controls and even less like having to report on their results. They already have many other tasks to do. Ensuring that everyone in the company understands the necessity of completing these controls and following procedures is crucial. Ensuring that they understand the necessity of completing them and what is expected from them will result in accurate and high-quality reporting. Building a strong relationship between the internal control team and the other offices to ensure that is challenging. It requires various interpersonal skills. Recurrent communication is

needed to get to know different people and ensure they are willing to provide you with the information you need. This challenge also emerged from the discussion I had with the internal control manager. She mentioned that very often, she had to chase people to ensure they completed their controls (by sending emails asking them to complete the controls she had sent).

5.2 ISO 9001 in commodity trading companies

As mentioned at the beginning of the report, it is difficult to find out about the typical processes of commodity trading companies that are ISO 9001 certified. After various discussions with professionals, the conclusion is that the importance of the ISO 9001 certification varies significantly depending on their specific areas of operation.

For trading companies highly involved in downstream processes such as production and transformation of the commodity, ISO 9001 is highly relevant and important. This segment focuses on the transformation of raw materials into finished products, where consistent quality is crucial. Adhering to ISO 9001 standards in these processes ensures that quality aligns with safety, environmental, and regulatory requirements. It would also ensure that the product is compliant with the inspection process. These are essential for maintaining competitiveness and compliance in the market.

For the service-oriented aspects, such as shipping and logistics, the certification still holds value as well but serves a different purpose. It focuses on improving the efficiency and reliability of service delivery. The certification helps ensure efficient operational procedures and a high standard of customer service.

For larger commodity trading companies, where only part of their operations is certified, the certification is not as important to them. However, internal control is. This point will be described in detail in section 5.4 with more detail and clear examples.

To summarize, the ISO 9001 certification in the commodity trading industry is indispensable in the production-related downstream processes. It also plays a key role in service areas such as shipping by enhancing operational practices and customer service quality. However, for larger commodity trading companies, ISO 9001 is not a key area of focus.

5.3 Current integration

Almost every management system or other organizational framework inherently includes elements of internal control. By taking the example of ISO 9001, the consultant talked

about Key Quality Controls. Even though the standard does not specifically require the implementation of these controls, they are implemented as part of the operations. It is the same with the KPIs. They are a form of control to track performance, ensuring and controlling that the result is the one expected. The same idea for many of the procedures and policies implemented in the context of ISO 9001. They are elements that would mitigate some risks and are considered controls in the sense of internal control systems. They potentially mitigate different risks and would be integrated into the different management systems that are in place, increasing redundancies and effort when changes are incremented. An example is provided below illustrating how a supplier's selection procedures and control can mitigate different risks at the same time, one regarding quality and others directly related to internal control.

This idea of quality control has also been mentioned in the second interview. Some of these quality controls are part of the internal control system. It suggests that to a certain extent, there is already an integration between quality and internal control. Same for some of the mitigation measures that address both quality-related risks and internal control in a broad sense. For instance, the interviewee mentioned the example of supplier selection. There are specific controls and procedures in place to ensure two main elements. The first objective of having a supplier selection procedure in place is to ensure a fair selection. It usually defines how the bidding process should take place and on which criteria the supplier is selected. It prevents an unfair selection by choosing a supplier to which someone might be personally related or that pays bribes to be selected, for instance. The selection is then reviewed and approved based on different controls that take place. This first aspect is directly linked to internal control to ensure transparency and prevent unethical behavior, corruption, or even fraud. The second objective is to ensure that this supplier is reliable and provides products of good quality. If it is an unstable supplier that will frequently deliver your orders with delays or damage to the product, it will directly impact your operations (operational risks) and thus your quality. This is an example where internal controls and quality are interconnected.

As shown in these examples, there is a sort of integration between controls designed for the quality management system and the internal control systems. It seems that this integration is not done on purpose. There is no intention behind integrating them within the internal control system. This is a small integration that is working well, but for a full integration, things get much more complex.

5.4 Divergent opinions on integration

As one of the management consultants mentioned, management systems are typically managed on different applications or software. This setup can complicate a potential integration. In many cases, employees are only familiar with the specific management systems they are involved in and lack the broader perspective needed to integrate parts of other systems. This suggests that companies need to move away from a fragmented system architecture towards a more integrated approach, aiming to create a streamlined, and cohesive framework for management systems. Only top management typically has this comprehensive view and the authority to initiate such a change. In a mature company with multiple systems, the investment required to combine these different management systems can be substantial.

It seems extremely complex to fully integrate the quality management system into the internal control system in the context of a multinational company. Large organizations face greater challenges in aligning thousands of employees and processes across multiple locations. These factors are making a full integration more complex and less feasible. One of the interviewees highlighted the substantial resources required, especially in terms of financial investments, time, and system upgrades. Technological tools required to support a fully integrated system are usually too rigid or incompatible with existing systems (only in the context of large companies). Transitioning to new systems that can handle integrated controls and quality management tasks could be costly and disruptive, leading to resistance within the organization as well. On top of that, it would probably increase the workload on subsidiaries to comply with both quality and internal control standards. This reporting burden might divert focus from core operational activities and thus potentially affect operational efficiency.

To summarize the key points discussed here, the consultant believes integrating the two systems is too complicated in the context of multinational companies. If it is done at an early stage, when the company eventually expands, it will have a solid integrated management system in place. This approach is much easier to adapt as the company grows than implementing it later when the firm is already large.

The same topic was discussed with another consultant who has a different view on the subject. He believes that integration does not depend on the size of the company but rather on the nature of its activity or its corporate culture. For instance, trading companies, banks, or insurance companies' main concerns are not around quality management. What is most important for them is the financial flows and the integrity of those flows. In other words, having an effective internal control system is much more of

a focus than ISO 9001. If a company's internal controls do not meet regulations, they might be stopped from operating. On the other hand, if they were to lose their quality management certification, it would probably not have a significant impact on the company (unless this is a small commodity trading company whose primary activities are production or transformation for instance). However, for a company that manufactures a product for instance, quality management is highly important. Consider the example of an automotive component manufacturer that sells components to car makers. If they are no longer ISO 9001 certified, it would be nearly impossible for them to find car makers that would purchase their products. Commodity trading companies don't have the same dependency on the standard, even though it can vary as discussed previously. This is probably the reason why there is not much information about their ISO 9001 certification on their website (only a mention of it, nothing more). In comparison, risk management, internal controls, and governance in general usually have a dedicated page explaining their practices. This significant difference in priorities suggests that integrating ISO 9001 with their internal control system may not offer enough benefits to justify the investment and effort required for such integration in large companies. The consultant still mentioned that some elements should be common for both systems in any case. They will be described it in the next section.

In conclusion, the integration of ISO 9001 with internal control largely depends on the priorities and the nature of a company's activities. For large commodity trading companies that are involved in multiple activities, internal control is more crucial than their ISO 9001 certification (which only concerns some activities). In such contexts, the benefits of integration may not outweigh the costs and effort required. However, for smaller trading companies, where quality in their primary activities is almost as important as internal control, integration can be beneficial and should be considered.

5.5 Recommendations for integration

5.5.1 Using a software

As mentioned many times in this report, having an integrated software solution would facilitate the integration of different management systems together, especially for medium and small companies. The objective of this report was to assess the synergies between an ICS and ISO 9001 system. As the use of software has been mentioned many times and seems highly relevant, including a section focusing on integrated systems together seemed necessary.

There exist many software solutions specialized either in ISO or internal control systems. Only a few of them are designed to deal with both together. Among those that allow this integration, two of the most relevant ones have been chosen for a short analysis. These are BPA solutions (BPA solutions) and Optimiso Suite (Optimiso Group 2023).

Overall, the two systems are designed to document processes (policies, procedures, etc.), manage risks, follow action plans (improvement), track incidents, and ensure compliance. These types of software usually allow the implementation of specific access rights when data needs to be managed across different locations. It is particularly suitable for commodity trading companies having operations in different parts of the world. They still differ in some respects.

BPA solutions is mainly a tool for QHSE (Quality, Health, and Security, and Environment) and Risk Management. One of its strengths is its integration with Microsoft 365. It does not seem that the tool allows for control automation and reporting, which are important aspects of internal control. It is more about documenting the controls that directly perform them in the software. If this is the intention, then you can go with the BPA solutions software.

On the other hand, we have the Optimiso Suite software. It clearly positions itself in both ISO 9001 and internal controls (but is also suitable for any other ISO system). The software can also be used for describing internal organization in a broad sense and is highly customizable (job descriptions, responsibilities, process maps, organizational charts, document management, etc.). Unlike BPA solutions, Optimiso Suite allows for control automation. You are notified to perform your controls and reporting can be automated as well (the results of the controls can be automatically sent to managers). This feature allows for an internal control team to supervise the result of controls done by other subsidiaries. This is highly valuable and could reduce the reporting burden.

As mentioned by one of the interviewees, for a small or medium company, a software solution can facilitate the integration. It allows the implementation of a simple system. However, for larger organizations, these kinds of tools would not allow for enough customization for their specific needs. Unless you standardize everything, which is not always better.

5.5.2 Elements that should be integrated

As demonstrated up until now, there are similarities in the way quality management and internal control systems are managed. However, there are limitations in the way they can be integrated to benefit the company.

For a small commodity trading company, it is recommended to fully integrate the two systems, on a common platform. The experience shared by the internal control manager of having to deal with information in different places is not efficient. With a tool like Optimiso Suite, the list of processes, reference documents (procedures, policies, templates, etc.), risks, controls, and incidents should be integrated into the tool.

Having a common platform where everyone can access the documentation of the company will increase efficiency and reduce management costs. Whenever a risk or control is modified, the procedures and matrix are updated automatically. No need for internal control managers to spend time ensuring everything is coherent. No need to send controls by email and check they have been completed. The software does the work for you. Incidents and responsibilities can be managed on the platform as well. Before integrating the two systems, a review of both systems should be conducted to identify overlaps, gaps, and inconsistencies.

As discussed previously, a full integration is not recommended for large commodity trading companies. It is too complex and would require significant costs and effort compared to the benefits it would provide. However, there are still elements that should be managed commonly.

The first thing that should be common to the quality management and internal control system is the list of processes of the company. The processes or activities of the company are the foundation of any management system. On many occasions, people responsible for a management system will redefine the processes. This should not be the case. According to the consultants, a list of processes should exist so that the different management systems are coherent. When companies have very disparate systems, it prevents top management from having a unified view of the organization. This disintegration leads to inconsistencies in reporting. For instance, top managers receive reports having differences between a risk and control matrix issued by the internal control manager and one generated by the quality manager. This usually happens because the two departments do not have an identical list of processes. As a result, top management faces difficulties in making informed decisions due to receiving conflicting information from various departments. The different departments and subsidiaries should at least have common processes to prevent this situation.

As for risk management, companies should implement a common method to manage it. Without that, managers will compare risks that are not assessed on the same basis and the same issues described earlier will emerge. Regarding incident management, a

common procedure to handle nonconformities would be beneficial as well, because an incident can impact different processes involved in different management systems.

As for the quality controls, we could imagine having quality managers responsible for the ISO 9001 system in the different subsidiaries and requiring them to report on quality control to the internal control team. The internal auditor would audit the different processes certified as well as the quality controls. This could ensure a consistent approach across the ISO 9001 certified subsidiaries and leave other aspects of the standard out of internal control. At least, all control measures would be managed by the same team.

5.6 Cost savings and efficiency gains

This last section focuses on the cost savings that such an integration would represent. They are assessed in terms of hours spent managing the two systems separately compared to the time saved in managing them together. It corresponds to the time that can be saved in continuously managing them together, not directly relating to the integration costs. A recap of the main efficiency gains identified in the overall report is presented as well. These estimations are based on a small commodity trading company (around 40 employees).

Consider a real-life example to illustrate this point, such as the invoicing preparation procedure. The process is modified, and the procedure needs to be adapted. In a non-integrated situation, the procedure will probably be adapted twice as the systems don't communicate; once by the quality manager (for ISO 9001) and another time by the internal control manager. There are two procedures, the work is done twice, and collaborators don't know which procedure they should refer to. If the two systems were integrated, only one procedure would exist, and it would be modified only once. Based on this procedure, there are probably different improvements that could be identified and implemented. These improvements might be done once by the quality manager and another time by the internal control manager. There are plenty of examples that could be described to show how an integration could save time in managing these two systems.

The next table shows the time needed to manage the different tasks listed in the left column. It compares the time needed to complete each task in the context of internal control, ISO 9001, and if the systems were integrated. The last column shows the time that would be spared if the two systems were managed together (the difference between the total time used for internal control and ISO 9001 and the time if the systems were integrated).

| | Time spent for systems management per year | | | Time spared per year |
|--|--|----------|-------------------|----------------------|
| | Internal Control | ISO 9001 | Integrated system | |
| Annual review of risks | 12h | 8h | 10h | 10h |
| Continuous monitoring of controls | 384h | 12h | 284h | 12h |
| Communication | 2h | 0.5h | 2.5h | 0h |
| Continuous regulatory watch | 52h | 12h | 52h | 12h |
| Update of responsibilities | 4h | 16h | 16h | 4h |
| Internal documentation update (procedures, policies) | 52h | 52h | 52h | 52h |
| Ensuring continuous improvement | 20h | 20h | 24h | 16h |
| Periodic internal audits | 0h | 12h | 12h | 0h |
| Performance evaluation (KPI and KRI) | 36h | 36h | 72h | 0h |
| Control of external providers (including KYC) | 24h | 8h | 24h | 8h |
| Customer satisfaction evaluation | 0h | 12h | 12h | 0h |
| Management review | 0h | 16h | 16h | 0h |
| Training and awareness | 12h | 12h | 24h | 0h |
| Annual external audit | 16h | 8h | 24h | 0h |
| TOTAL | | | | 114h |

As described at the end of the table, up to 114 hours could be saved annually if the two systems were integrated. It corresponds to a bit more than 14 days per year (14.25 considering that 8 hours are worked per day).

Some tasks can easily be combined to save time and avoid the work being done twice. On other aspects, the content of the tasks is very different and cannot be done at once. For instance, the training and awareness of internal control will differ a lot from the one proposed for ISO 9001. In the first case, it could involve awareness regarding the KYC process or due diligence, to name some of them (it mainly corresponds to the examples provided in section 2.2.3 of this report). For ISO 9001, training and awareness focus on

consistency in the execution of processes or on meeting quality benchmarks for instance. They are different and cannot be combined.

While the amount of time spared in managing the two systems together is not very significant, the efficiency gains are to be considered. They play a key role in the whole company's dynamism. Many efficiency gains of such an integration have already been identified throughout the report. They are summarized below and a few more have been added based on consultants' experiences:

- **Centralized documentation:** stored in one place enhances accessibility and coherence. Employees would no longer need to search through different systems for the correct documents, improving efficiency and ensuring everyone is working from the same information. Processes are streamlined as well.
- **Faster documentation updates:** documentation updates, such as modifications to procedures, would only need to be done once. This prevents duplication of effort. This saves time and ensures that there is only one version of each document, reducing confusion and inconsistencies.
- **Coherent systems:** better understanding among employees, as they are trained and work in a single framework.
- **Enhanced risk management:** with a common method for risk management, the company ensures that all risks are assessed and managed on the same basis. This consistency helps prevent the confusion and inefficiencies that arise from comparing risks assessed using different criteria and methodologies.
- **Reduced reporting burden**, especially if software is used: automated controls and reporting reduce the need for manual tracking and follow-up. This ensures timely accurate and easier reporting.
- And finally... **about 14 days saved** per year for which your employees could work on something else!

6. Conclusion

To conclude this research on the potential integration of ISO 9001 and internal control systems for commodity trading companies, we can say that whether or not to integrate depends heavily on each company's specific activities, size, and goals. It should be based on a strategic evaluation of how quality management aligns with core business processes and risk management priorities.

The two systems have common aspects or requirements that need to be managed by the company. Key aspects include a process-based approach, identification of risks, description of internal organization as well as fostering a culture of continuous improvement. Some of the aspects identified are already integrated into the two systems, such as quality controls and a few procedures as well.

Given the insights shared by the consultant, the primary focus of large commodity trading companies is not inherently tied to quality management systems. Their focus is more related to ensuring robust internal controls and integrity of financial flows. Additionally, large firms usually operate several specialized systems tailored to specific needs, which makes integration technically challenging. In that case, only partial integration is recommended. Keeping systems separate but well-coordinated might be very effective. It includes having a unique list of processes, a common approach to risk management, and the same incident management process. In that case, using a specific tool is not necessarily recommended.

For companies where quality and compliance are tightly linked, a well-integrated management system could streamline operations, improve efficiency, and reduce management costs. It mainly concerns smaller commodity trading companies, where a full integration should be considered. In this case, the perceived benefits associated with integration are higher than the integration costs.

The important role of having software to support the integration of ISO 9001 and internal control systems emerged prominently throughout this research. A tool should be used to support the integration so that all elements of the two systems can be fully combined. By centralizing information on a single platform, a cohesive and unified system can be established. Selecting an appropriate tool is critical and has significant implications for the success of the integration process.

By combining the two systems, about 114 hours per year could be saved on systems management. As for the efficiency gains, they are numerous. These gains include a more

efficient documentation update process, a better understanding of the company's risks, and a coherent system understood by all.

Ultimately, the goal of integrating these systems is to ensure a coherent framework, offering a unified view of the company to top management. Ensuring an effective integration, requires significant management vision, coordination, and resource commitment. Each commodity trading company must evaluate its unique situation, including industry demands, operational scale, and corporate culture, to determine the most beneficial approach to system integration that supports its strategic objectives and operational needs.

References

- BPA SOLUTIONS, 2023. Innovative software for better quality. *BPA solutions* [online]. Retrieved from: <https://www.bpa-solutions.net> [accessed 18 May 2024].
- BRITISH PETROLEUM, 2023. About Us – What we do. *British Petroleum* [online]. Retrieved from: <https://www.bp.com/en/global/corporate/what-we-do/bp-worldwide/bp-in-greece.html> [accessed 5 October 2023].
- COSO, 2013. Internal Control – Integrated Framework – Executive Summary. COSO [online]. Retrieved from: https://www.coso.org/files/ugd/3059fc_1df7d5dd38074006bce8fdf621a942cf.pdf [accessed 15 March 2024].
- COSO, 2022. Internal Control – Integrated Framework. COSO [online]. Retrieved from: <https://www.coso.org/guidance-on-ic> [accessed 5 April 2024].
- FEDLEX, 1911. Federal Act on the Amendment of the Swiss Civil Code. *Fedlex* [online]. Retrieved from: https://www.fedlex.admin.ch/eli/cc/27/317_321_377/en [Accessed 27 February 2024].
- GLENCORE 2020. Management System Certificate. *Glencore* [online]. Retrieved from: <https://www.glencore.com/.rest/api/v1/documents/25e691b7575dc87e9693b600f69abe-d1/Glencore+Nikkelverk+AS+ISO+9001%2C+14001%2C+45001%2C+50001.pdf> [accessed 7 October 2023].
- GLENCORE, 2023. Ethics and Compliance Report 2022. *Glencore* [online]. Retrieved from: <https://www.glencore.com/.rest/api/v1/documents/static/57a5935e-4ba6-4a26-b03f-d3fb7a0b41df/GLEN-Ethics-and-Compliance-Report-2022.pdf> [accessed 6 April 2024].
- GLENCORE, 2023. Sustainability Report 2022. *Glencore* [online]. Retrieved from: https://www.glencore.com/.rest/api/v1/documents/static/63d21a4e-30f6-40ca-b0f6-00ec64a718cf/GLEN_2022_sustainability_report.pdf [accessed 5 April 2024].
- INTEGRATED STANDARDS, 2023. Benefits of an Integrated Management System. *Integrated Standards* [online]. Retrieved from: <https://integrated-standards.com/articles/ims-benefits/> [accessed 27 February 2024].
- ISO, 2015. ISO 9001:2015 Quality management systems – Requirements. *ISO* [online]. Retrieved from: <https://www.iso.org/standard/62085.html> [accessed 11 March 2024].
- LLOYD'S, 2022. Environmental, Social and Governance Report 2021. *Lloyd's* [online]. Retrieved from: https://assets.lloyds.com/media/8c362b67-e4a5-4876-927f-397c10491d72/Lloyds_ESG%202021_report_final.pdf [accessed 6 April 2024].
- MEDITERRANEAN SHIPPING COMPANY, 2023. Certifications. *Mediterranean Shipping Company* [online]. Retrieved from: <https://www.msc.com/en/sustainability/certifications> [accessed 7 October 2023].
- OPTIMISO GROUP, 2022. 5 similitudes entre ISO 9001 et le Contrôle interne. *Optimiso Group* [online]. Retrieved from: <https://optimiso-group.com/articles/5-similitudes-entre-iso-9001-et-systeme-de-contrôle-interne/> [accessed 5 April 2024].
- OPTIMISO GROUP 2023. Contrôle interne. *Optimiso Group* [online]. Retrieved from: <https://optimiso-group.com/logiciel/contrôle-interne/> [accessed 18 May 2024].
- PARADES, Rob, 2023. An overview of internal control. *Safety Culture* [online]. Retrieved from: <https://safetyculture.com/topics/internal-control/> [accessed 27 February 2024].

RISK OPTICS, 2020. What is an Internal Control Framework?. *Risk Optics* [online]. Retrieved from: <https://reciprocity.com/resources/what-is-an-internal-control-framework/> [accessed 15 March 2024].

SOCAR, 2023. About us – Compliance. *Socar* [online]. Retrieved from: <https://www.socartrading.com/about-us/compliance> [accessed 6 April 2024].

SOCAR, 2024. Compliance. *Socar* [online]. Retrieved from: <https://www.socartrading.com/about-us/compliance> [accessed 13 April 2024].

STANDARDS STORE, 2022. ISO 9001:2015 Requirements for a Quality Management System. *Standards Store* [online]. Retrieved from: <https://the9000store.com/iso-9001-2015-requirements/> [accessed 11 March 2024].

SWISS TRADING & SHIPPING ASSOCIATION, 2019. Guidelines on combatting Money Laundering, Terrorist Financing and Corruption in the Commodity Trading Sector. *Swiss Trading & Shipping Association* [online]. Retrieved from: https://assets-global.website-files.com/5f3bf619a5cafc3d5220627f/629731719a20440228a72a24_STSA%20Guidelines%20on%20combatting%20ML%20TF%20corruption%20in%20the%20Commodity%20Trading%20Industry.pdf [accessed 11 March 2024].

SYNERGY COMMODITIES, 2023. ISO Certification. *Synergy Commodities* [online]. Retrieved from: <https://synergy-commodities.com/iso-certification/> [accessed 5 April 2024].

TRAFIGURA, 2020. 2019 Responsibility report. *Trafigura* [online]. Retrieved from: https://www.trafigura.com/media/512k5rf4/2019_trafigura_responsibility_report.pdf [accessed 5 October 2023].

TRAFIGURA, 2023. Sustainability Report 2022. *Trafigura* [online]. Retrieved from: https://www.trafigura.com/media/balnq2z3/2022_trafigura_sustainability_report.pdf [accessed 5 April 2024].

TRAFIGURA, 2024. Sustainability Report 2023. *Trafigura* [online]. Retrieved from: <https://www.trafigura.com/media/1rrfvprh/2023-trafigura-2023-sustainability-report.pdf> [accessed 6 April 2024].

VITOL, 2023. Environmental, Social & Governance Report 2022. *Vitol* [online]. Retrieved from: https://www.vitol.com/wp-content/uploads/2023/03/ESG-Report-2022_digital-2.pdf [accessed 5 April 2024].

Use of Artificial Intelligence-assisted tools

In the context of this work, the author declares having used Artificial Intelligence-assisted tools for the following purposes:

- Improvements in form (spelling, syntax, reformulation, report structure)

Mention of AI tools used: Chat GPT.

Appendix 1: Interview 1

Have you seen companies integrating their ISO 9001 and Internal Control systems?

No, I have never seen that.

According to you, why don't they integrate these two systems?

Many companies start small and don't have any system in place. When they grow, they need to implement various standards. Some activities need to be automated so they would just go for the more adapted application to realize that. It is usually very complicated to manage all the different systems separately. Reviewing the existing systems would take a lot of time and money. Many companies just don't bother with doing that and keep growing in a very disorganized way, with a lot of parallel systems in place.

Do they use a common software for managing both systems and what would be the benefits of doing that?

No, they usually manage the different management systems with different applications or software. Some don't even have a dedicated application and are managed on SharePoint for instance. Having a common platform to manage all that could streamline the activities of the company and be highly beneficial, even though the process of combining the different systems is complex. Think it would increase organizational efficiency and reduce redundancies to integrate them.

Are the ISO 9001-certified processes usually also included in the scope of internal controls?

In big companies, internal controls are usually involved in almost every department and process. Audits are usually conducted at every level to identify risks and implement the necessary controls.

Have you seen other management systems that are integrated together?

Yes, it is very common for companies to integrate or manage together their ISO 9001 system, environmental standards (ISO 14001), and Business Continuity Planning. Based on her experience, this kind of integration usually happens on SharePoint.

You are currently implementing an ISO 9001 system in a large company, right?

Yes. We are implementing the system for one entity at the moment. The idea is to then deploy it to subsidiaries abroad as well, such as the holding company which is in Australia. We are building a control framework with clear objectives and Key Quality Control as well. It aims to check that that quality objectives are met.

Appendix 2: Interview 2

Tu gères le contrôle interne de l'entreprise au niveau du siège, c'est juste ?

Oui, exactement. On avait plus de 250 entités légales, réparti dans environ 160 pays. Quand j'ai commencé chez eux, il n'y avait pas vraiment de contrôle interne, ça n'existait pas vraiment. Au début des années 2000, il y a eu un énorme scandale au Etats-Unis avec Enron et ils ont mis en place la loi Sarbanes-Oxley, pour la faire simple. Donc c'est une réglementation pour les entreprises cotées en bourse. Le but c'est de certifier que les entreprises font leurs contrôles et que le management soit au courant de tous les risques et les brèches qu'il y a dans leur organisation. Parce qu'en fait dans l'affaire Enron, en réalité tout le management était au courant de ce qui était en train de se passer, mais ils ont dit qu'ils n'étaient pas au courant. La réglementation a changé cette approche et a forcé à ce que chacun teste ses contrôles. Donc une entreprise met en place des contrôles, elles les testent et en plus de cela, des auditeurs viennent et ils testent ce que toi tu as testé.

Est-ce que les contrôles couvrent tous les processus de l'entreprise ou c'est axé sur les contrôles « financiers » uniquement ?

Alors à la base il faut savoir qu'il n'y avait pas de matrice des risques et des contrôles. On a mis en place tout ce système de contrôle et ensuite on s'est dit qu'on ne pouvait pas avoir uniquement des contrôles, mais qu'on devait aussi définir les risques. En gros la raison pour laquelle on couvre ces contrôles. Et donc en fait, on a fait toute une matrice pour mettre en place tout ce qui était nécessaire de mettre en place. On a créé toutes les matrices de contrôle pour tous les processus de l'entreprise et à tous les niveaux. On est parti sur des processus début-fin, c'est-à-dire depuis la sélection des fournisseurs, quand tu achètes, jusqu'au moment où tu paies la facture. Donc c'est vraiment un approche end-to-end process.

Est-ce qu'une même liste de risques et contrôles étaient imposés par le siège à toutes les autres entités ou chacune mettait en place ces contrôles un peu comme elle voulait ?

Quand on a mis ça en place, c'est le siège qui a imposé les mêmes risques et contrôles aux différentes entités. Alors bien sûr il y avait des petites différences, les contrôles n'étaient pas tous effectués de la même manière. Certains utilisaient tel ou tel logiciel par exemple ou manière de travailler donc il fallait adapter, mais le résultat attendu et les grandes lignes directrices étaient les mêmes oui.

Par rapport à ce que tu as vu dans ta carrière, est-ce que les autres entreprises fonctionnent aussi de cette manière ou chaque entité est plus autonome au niveau de ces risques et contrôles ?

Si c'est des sociétés cotées en bourse et donc qui se font auditer très régulièrement, très probablement oui. Donc c'est le cas pour une certaines boîtes de commodity trading en tout cas. En fait, toute cette approche-là elle vient du fait que les auditeurs mettent aussi en place des approches standardiser car ils sont eux aussi contrôlés par la bourse Américaine par exemple.

Au niveau du reporting sur les résultats des contrôles par exemple, à quelle fréquence les différentes entités communiquent sur leurs risques et suivi des contrôles au siège ?

Donc chez nous et aussi pour toutes les sociétés cotées en bourse du coup, c'est la même chose. Tous les trois mois avant de publier les chiffres, on présentait au board où on en était par rapport aux risques et au suivi des contrôles. Ils voyaient tous les audits

qui ont été faits en interne, tous les testing qui étaient faits et ils savaient exactement où on se situait. On revoyait tous les audits internes, tous les findings qu'il y a eu et tous les cas de non-compliance. Ce que communiquerait n'importe quelle entreprise en fin d'année et bien nous on le faisait tous les trois mois, avant la publication des chiffres.

Qui supervise réellement la réalisation des contrôles ? Dans un premier temps au niveau des entités et ensuite au siège ?

Dans notre organisation, chaque filiale dispose de son propre contrôleur interne. Ces auditeurs internes mènent des audits régulièrement, et particulièrement lorsqu'il y a des changements dans les processus ou l'introduction de nouvelles pratiques. Ces contrôleurs locaux surveillent en continu les opérations de leur marché spécifique. Par exemple, prenons une filiale à Madrid ; le contrôleur interne local effectue des audits sur les modifications des processus ou les nouvelles méthodes de vente. Ensuite au niveau du groupe, on avait également une équipe d'audit interne qui se rend dans les différentes filiales pour réaliser des audits sur différents aspects, par exemple les achats, la consolidation des chiffres, ou la facturation. Cette équipe opère de manière indépendante et si elle identifie des problèmes, elle les rapporte au conseil d'administration. Et donc ces audits sont effectués généralement tous les trois mois, juste avant la publication des résultats financiers.

Sur la base de ton expérience, quels sont les pièges à éviter dans la gestion du contrôle interne et quelles recommandations tu ferais pour les éviter ?

Quand il y a une telle complexité avec énormément de filiale, le plus gros challenge c'est qu'elle te rapporte correctement les informations. Par exemple, l'une des approches qu'on avait mis en place, c'est que chaque année, on allait faire une formation dans toutes les régions. C'est-à-dire que chaque année, je préparais tous les changements et tout ce qu'on avait refait complètement. C'était au mois de février/mars, on partait et on voyageait à travers le monde pour pouvoir former toutes les filiales et expliquer les changements. Donc par exemple, on réunissait toutes les filiales d'Amérique latine dans un endroit et on faisait un workshop d'une semaine et on discutait tous les cas qui se sont passés. Aussi bien les challenges qu'ils avaient que les changements qu'il y avait sur les marchés dans la région et autres. De cette manière-là on les formait, mais surtout, ça permettait de créer une sorte de ce qu'on appelle le « command and control ». Si les affiliés ne te rapportent pas, s'ils n'ont pas confiance en toi et qu'ils ne travaillent pas avec toi, tu n'auras pas les informations nécessaires pour pouvoir faire correctement ton job au niveau du siège. Donc cette relation tu dois l'établir. Donc, ça veut dire que tu dois créer une relation avec eux et avoir une sorte d'aura qui te permettra de pouvoir aussi diriger ces gens indirectement. Parce qu'en réalité, ils ne te rapportent pas à toi directement, il y a souvent un management local entre deux aussi. Moi, j'avais 400 personnes qui rapportaient à moi, par exemple, indirectement. Ça faisait des années que j'étais dans la fonction, donc ça c'est super important. Quand les gens t'appellent, tu les connais. Tu sais qui ils sont, tu les as vus dans une réunion, t'as bu un verre une fois avec eux, t'as potentiellement passé une soirée avec eux. C'est super important.

Est-ce que l'entreprise a également des certifications ISO ? ISO 9001 pour la qualité par exemple ?

Non, pas du tout. Après, on produisait des documents de sustainability par exemple, mais on n'était pas certifié. Au niveau de la qualité, on avait un département qualité qui gérait tout ce qui était qualité produit. En tout cas ils avaient leurs procédures, règlement, KPIs et tout ça qu'ils avaient établis et qu'ils suivaient. Pour être qu'à ce niveau-là de la production ils étaient certifiés mais je n'en ai jamais entendu parler à mon niveau en tout cas.

Est-ce qu'à ce niveau-là il y avait aussi une sorte de contrôle interne en place alors ?

Pour revenir à ce que je disais avant, il y avait des contrôles à vraiment tous les niveaux, sur tous les processus. Donc au niveau du processus de production, oui j'avais aussi des contrôles. Donc on vérifiait que les procédures étaient correctement définies, qu'elles étaient suivies et qu'il n'y avait pas de souci. Et donc au niveau de la qualité, il y avait des auditeurs au niveau de la production et ils rapportaient aux opérations. Donc moi je prenais un input des opérations, eux ils me disaient que c'était sous contrôles ou pas par exemple. C'était un peu un self-assessment fait avec les auditeurs finalement. Donc à mon niveau, le contrôle que j'avais dans ma matrice, il était satisfait par leur input à eux de ce qu'ils avaient eux audité et regardé dans le détail. Mais je n'intégrais pas leur approche de qualité dans mon audit contrôle interne.

Tu as vu et mis en place pas mal de certification ISO 9001 aussi dans ta carrière, en plus du contrôle interne. Est-ce que ce serait possible selon dans un multinational comme celle-ci d'intégrer la qualité au contrôle interne ?

C'est faisable, mais la problématique c'est que, rien que quand moi j'ai quitté, on était à 1'100 contrôles selon les filiales. Donc au niveau des risques, on en avait peut-être 500-600 et on avait plus de 1100 contrôles avec les contrôles IT. Donc ça veut dire qu'une filiale qui avait beaucoup de processus, elle devait déjà mettre en place 1200 contrôles. Il faudrait donc ajouter à ça tous les contrôles qualité au niveau des usines et tout ça. Donc pour nous ça n'a jamais été intégré directement à nos matrices et de contrôle interne. Pour nous c'était plus simple de laisser ce qui était lié à la qualité au niveau de la prod, de pas s'en mêler et aussi confort pour le management. Même si comme j'ai dit, j'avais quand même quelques contrôles qualité dans ma matrice. Mais pour revenir à ta question, oui c'est faisable. La seule chose c'est que tu dois définir tes matrices en intégrant tous ces contrôles que tu as au niveau ISO. Tu devrais les intégrer directement dans les matrices de contrôle général pour qu'ils soient contrôlés. Typiquement, moi j'en avais des matrices, j'aurais pu, à la place d'avoir un seul contrôle, en mettre trois. Et dire que certains contrôles que je couvrais, couvraient aussi une partie d'ISO. Et en faisant ça, il faut aussi s'assurer que tout le monde rapporte bien à la même organisation, ce qui n'est pas toujours le cas.

Est-ce qu'il y aurait quand même un avantage à combiner tout ça ensemble dans un même système ou c'est très complexe pour trop peu de bénéfice au final ?

Oui, tout à fait. Bien sûr que y'aurait des avantages. Alors nous on avait des outils pour gérer ça. On avait décidé d'ouvrir des licences pour l'outil en question seulement au contrôle interne, parce que l'ouvrir sur toute la boîte, ça voulait dire qu'il fallait qu'on paye plusieurs millions. Donc après voilà ça dépend du budget aussi, mais à chaque fois que tu ouvres à quelqu'un en plus, à un département en plus, tu te retrouves à doubler, tripler tes licences, donc ça fait des coûts supplémentaires. Et on n'avait jamais le budget pour ce genre de trucs. Donc je dirai que ma réponse est oui, tu peux intégrer tous cela ensemble, il y a des avantages à le faire, mais les coûts sont énormes. Après il fait bien avoir en tête que, quand c'est une entreprise aussi grande, faire un projet d'intégration comme ça c'est un travail énorme. Rien qu'avec 500 employés, ça devient déjà super complexe et compliqué. Imagine-toi quand tu dois dealer avec 5000, 10000, 100000, 200000 personnes, la complexité pour mettre ça en place et puis surtout au niveau de la compréhension. Toi tu vas le comprendre d'une manière, mais il y a aussi la barrière de la langue, et la compréhension des différentes filiales qui ne comprennent pas pourquoi on fait telle ou telle chose. Donc il y a aussi plein d'autres choses qui vont entrer en considération. Aussi par exemple, les différences de niveau de maturité entre les Philippines et l'Allemagne, ce n'est pas la même chose.

Les processus et contrôles ils sont tous fait de la même manière dans les différentes filiales ?

Non, un même processus ne sera pas forcément réalisé de la même manière dans un pays et dans l'autre. Par exemple, d'un côté il est fait dans SAP, mais de l'autre côté, en amont et en aval, ça ne se fait pas de la même manière. Donc ça veut dire que tu ne peux pas juste dessiner toi le processus centralement et puis dire maintenant ça c'est le processus pour tout le monde, il y aura toujours des différences. Prenons l'exemple du contrôle des salaires. Aux Philippines, par exemple tu pourrais avoir des employés qui travaillent journalièrement ou à l'heure, tu ne vas pas les mettre dans SAP. Ca coute trop cher. Tu auras donc un système différent pour gérer ça que dans un autre pays ou tu as que des contrats fixes, qui eux seront gérés dans SAP potentiellement. Donc le contrôle que tu vas faire sera complètement différent dans un pays versus dans un autre pays. Donc en fait, tu auras une matrice des contrôles centralisées qui va dire que tu dois vérifier que les salaires sont correctement calculés. Mais la manière dont le contrôle va être effectué dépend du pays. Dans un cas sur SAP, dans un autre sur un système différent. Chaque filiale aura son contrôle et peut décider de comment elle le fait, pour autant que ça satisfait le contrôle central demandé par le siège. Donc cette intégration elle ne sera jamais parfaite. Il y aura toujours des différences, parce que tu travailles dans un monde avec des différences. Mais par contre, je pense que plus t'avances, plus tu peux intégrer le tout, mais ça prend énormément de temps. C'est-à-dire que ce n'est pas un projet que tu peux faire en une année, ce n'est pas un projet que tu fais en deux ans, ça prend trois ou cinq ans jusqu'à ce que tu arrives à avoir un modèle de maturité.

Si une entreprise souhaite combiner ces systèmes, tu conseilles d'utiliser un outil en particulier ?

Si tu as des outils assez flexibles, c'est faisable. Si tu n'as pas des outils flexibles, c'est compliqué. Par exemple avec de l'Excel, c'est faisable. Si tu as des outils, c'est complexe. Ça, c'est mon expérience. Parce que les outils sont assez rigides dans leurs emplois et ne te permettent jamais de faire exactement ce que tu veux. Tant qu'on avait un Excel et que les gens documentaient ça dans Excel, ça marchait très bien. Dès qu'on est passé sur un applicatif où il faut satisfaire des besoins spécifiques, ça commence à être beaucoup plus compliqué. A moins de tout standardiser. Mais c'est compliquer de standardiser dans les grandes entreprises. Il faut vraiment un système que tu puisses tailorer d'une manière simple, vraiment simple.

Donc pour une multinational, ça ne vaut pas forcément le coup, mais pour une plus petite structure oui, c'est bien ça ?

Exactement. Quand tu as des petites structures, tu arrives à le faire et puis tu arrives à faire des choses simples surtout. Et dans ce cas-là un outil peut être très utile et simplifier et alléger le travail.