ISO STANDARDS A POTENTIAL PATH FOR EMERGING MARKETS: AN INITIAL LITERATURE REVIEW

Edmund R. Lizarzaburu*, Julio Quispe Salquero**

Abstract

Nowadays, the companies and financial institutions from emerging markets are looking forward for more space in the international market. They have found several alternatives and one of them is to implement process and procedures in order to be more efficient and offer better conditions to the local and foreign customers. One of these alternatives is to implement internal standards not only following corporate governance policies but also, implementing international standards such as ISO norms. This paper seeks to show the evolution of initial ISOs most frequently used in the financial emerging markets.

Keywords: International Standards, ISO Standards

*School of Business, Esan University, Alonso de Molina 1652, Monterrico Chico, Surco, Lima, Peru
Email: elizarzaburu@esan.edu.pe
** School of Business, Esan University, Alonso de Molina 1652, Monterrico Chico, Surco, Lima, Peru
E-mail: jquispe@esan.edu.pe

1 Introduction

Actual debate revolves around the need to standardize processes in companies that provide services to financial sector entities. Many introduce different standards not only to provide adequate service, but also to build an image that will help them stay in the markets where they operate. The standards discussed in the literature include ISO 9001:2008, OHSAS 18001:2005, ISO 27001:2007 and ISO Guide 31000. Other important guidelines include as SSAE 16 (formerly SAS 70 in Type I and Type II) or those for the food sector such as HACCP, but they (SSAE 16 and HACCP) will not be reviewed here.

ISO (International Organization for Standardization) is a non-governmental organization and the world's largest developer and publisher of International Standards that tries to form several bridges between the public and private sectors. "It is important to mention that, its member institutes are part of the governmental structure of their countries, or are mandated by their government; it is a network of the national standards institutes of 159 countries (this number evolved every year), one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. ISO on the other hand, other members have their roots uniquely in the private sector, having been set up by national partnerships of industry associations".

Besides, "the standardization has been crucial for the development of the industrial society (Blind, 2004). At its origins, in the early 20th century, standardization was introduced in order to curb an uneconomical divergence of components, parts and supplies and to foster their interchangeability so as to facilitate mass production and the repair and maintenance of products and services.

Standardization, however, has gone further than this and has come to be applied to the very management processes and systems by which products and services are produced (Heras, 2006)."[23]

2 Literature review

2.1 ISO 9001: 2008

The meaning of quality has gone through several changes before arriving at the present concept. Several authors such as William Eduards Deming, known for "The Fourteen Points for Management" and dissemination of the Plan, Do, Check and Act Cycle (PDCA), Joseph M. Juran, who conceptualized the three processes for quality management known today as the "Juran Trilogy", and Kaoru Ishikawa, who developed the concept of quality circles to identify the root causes of problems and how to eliminate them using tools such as Pareto charts, cause-effect diagrams, and histograms, among others, have made the most significant contributions to the evolution of the concept, setting the standard for continuing the search for continuous improvement in organizations and achieve the satisfaction of customers, suppliers, employees, shareholders and,

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[23] Heras-Saizarbitoria, Iñaki, ISO 9001, ISO 14001 and Other Global Metastandards (March 17, 2010). Available at SSRN: http://ssrn.com/abstract=1573632 or http://dx.doi.org/10.2139/ssrn.1573632.

more broadly, society. ISO 9001 is arguably the most influential single meta standard that there has been to date (Braun, 2005).

The ISO 9000 "certification system for firm quality was introduced in 1987, and by the end of 2002 some 560,000 certificates had been awarded to sites in 159 nations (Corbett, 2003). In short, ISO 9000 (sometimes referred to simply as ISO here) certification for firm quality has been far and away the most successful and widespread set of standards implanted by the International Organization for Standardisation (Casper & Hancke, 1999; Mendel, 2002)".

Organizations began the search for efficiency in their operations in the late 70s. Their efforts ran parallel to the evolution of the concept of quality itself, giving rise to the 1979 publication of BS 5750, a method focused on controlling the results of processes to develop products or services, though not on continuous improvement. BS 5750 examines control, design, documentation, inspection and testing, internal quality audits, records and statistical techniques including the core issues for implementation processes, but it was not until 1987 that BS 5750, through the International Standardization Organization (ISO, 2001a) originated a compendium of ISO 9000 and published the first edition of ISO 9001, which provided guidelines for continuous improvement. The first, second and third revision to the standard were published in 1994, 2000 and 2008, respectively. ISO 9001:2008 is currently in force, with previous versions now obsolete. ISO 9001:2008 guidelines help identifying gaps in the organization and, by generating effective actions; they contribute to achieve the desired results for the organization.

ISO 9001:2008 "specifies for a quality management system, all requirements of this International Standard are generic and are intended to be applicable to all organizations, regardless of type, size and product provided, many companies needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements (ISO standard 9001:2008)".

There are several steps that the literature mentioned about how the companies should follow in order to implement the ISO 9001 and these are: Get acquainted with ISO 9001:2008 QMS Standard; action plan; revision of quality documentation; implementation; training of internal authors; internal audit; management review; inform certification body.

ISO 9001 "does not classify processes in any terminology presented in the literature section. In paragraph 4.1 (ISO 9001, 2008) there is an expression that "The organization shall determine the processes needed for the quality management system (QMS)". Later requirements for processes have been addressed for QMS processes. This is confusing, because QMS is not even a core process. Janas and Luczak (2002) describe the new ISO 9001:2000 requirements as a description of work processes. There is common understanding among certification bodies and ISO appliers that the ISO 9001 terminology is misleading".

The ISO 9001 standard can be applied to any organization looking to improve continuously over time. In Peru for example, over 800 companies have been ISO 9001 certified, from both industry and government. The Peruvian ISO 9001 corporate directory published by the Centro de Desarrollo Industrial (Industrial Development Center – CDI) shows Banco de la Nación, Interbank and BBVA Continental Funds, among others, are some financial sector organizations holding ISO 9001 (2008) certification. Figure 1 below shows the evolution of ISO 9001.

Figure 1. Evolution of ISO 9001
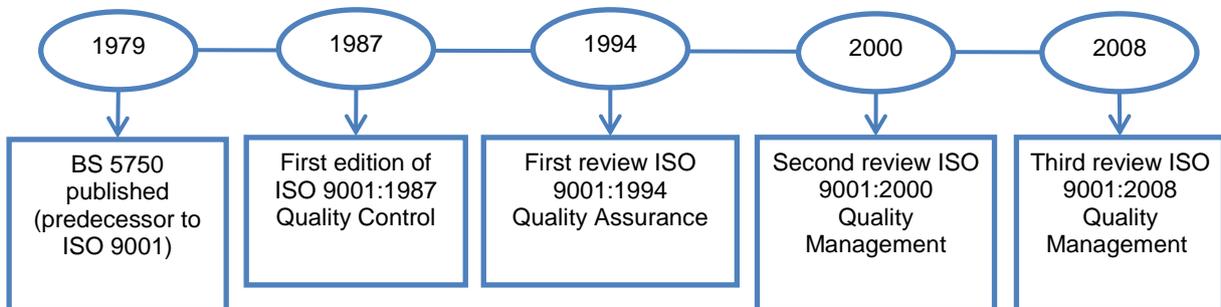
2.2 OHSAS 18001

Management of occupational safety and health has been an issue that long has been considered in organizations. Fortunately today organizations are aware of the importance of creating and preserving a safe environment for all their employees. The safety management and occupational health concept was born in the 70s through it adopted a reactive approach, i.e. the companies were managed under the

paradigm "Whoever harms, pays", disregarding their responsibility to provide a safe and healthy workplace, and harming their workers' health. By the early 80s organizations changed their approach to accident and disease prevention and recognized their responsibility in creating a safe and healthy work environment, resulting in more productive workers. In the 90s, the responsible and proactive role of organizations with regard to safety and occupational health consolidated; potential risk checks were introduced together with the quest for sustainable development, creating greater trust in and respect for organizations in their environment.

After the International Standardization Organization (ISO) successfully introduced its quality and environment management systems, in 1996 BS 8800:1996 was revised to propose guidelines for occupational safety and health management. In 1999, Technical Specification OHSAS 18001:1999 was introduced, although this standard was not developed or published by traditional mechanisms, it was reviewed by the team charged with developing it. By 2004, when ISO 14001:2004 (environment) was published, OHSAS 18001 standards were revised in order to seek their approval and publication worldwide in later years.

As we mentioned before, OHSAS 18001 "is a specification for Occupational Health and Safety (OHS) Management Systems jointly developed by a number of international certification bodies, national standards bodies such as BS 8800 and the Management Regulations 1992, and other interested parties. It enables organizations to manage operational risks and improve performance. It also provides guidance on how to manage OHSAS 18001 Quality Management System certificate the health and safety aspects of your business activities more effectively, while taking into careful consideration accident prevention, risk reduction and the well-being of employees (OHSAS 18001:2007). There are several common elements between these three

systems, such as management review, document control, corrective action and the requirement for trained personnel. These can be integrated into a single, joint system or a combination of any of the above. Audit of joint systems is available and may be the best method for some companies".

In 2006, an exhaustive review of the draft standard took place; "which includes alignment with ISO 9001 and ISO 14001. Finally in 2007, OHSAS 18001:2007 was adopted and published to consolidate the guidelines for good and occupational health and safety management systems. This standard was recognized worldwide for its implementation in organizations that wish to provide a safe and healthy workplace.

Implementing this system improves communication within an organization; contributes to strengthening corporate image; reduces the risk of accidents and / or illness in the workplace and consequently reduces employee absenteeism, thus increasing their productivity. This standard allows organizations to control risks and improve their occupational safety and health performance. Note that this standard helps to address this organizational element but does not establish criteria for the performance management system or establish specific requirements for designing such management system.

Moreover, the extent to which this standard is enforced depends upon various factors such as politics, the nature of activities and the complexity of the organization's processes. Nevertheless their common denominator is accomplishing the wellbeing of persons. In order to effectively manage occupational health and safety in organizations the current regulations, both domestically and internationally, should be taken into account, as well as the tools to help minimize and control risks in the workplace.

Figure 2 below shows the evolution of OHSAS 18001.

Figure 2. Evolution of OHSAS 18001
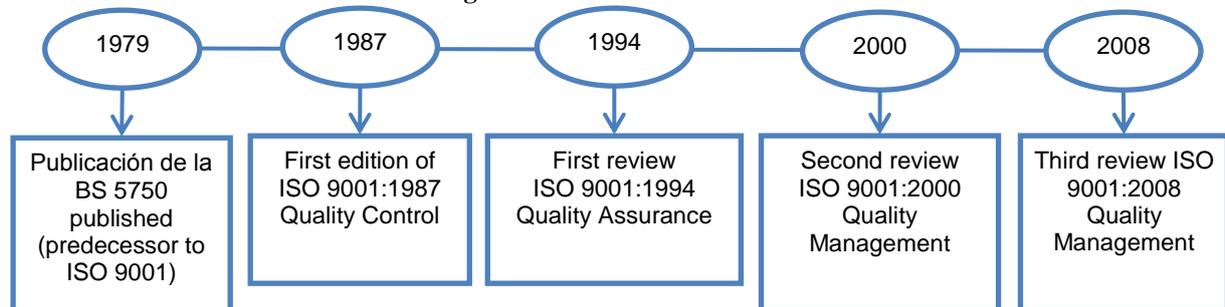
2.3 ISO 27001

ISO 27001 is a rule aimed at the safe management of information to establish and maintain the effective management of information from a continuous improvement standpoint. The normative standard of

the aforementioned series, the ISO 27001, contains the requirements for an Information Security Management System (ISMS)[24]

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[24] ISO/IEC: Information technology - Security techniques - Information security management systems - Overview and Vocabulary. ISO/IEC 27000, International Organization for

Importantly, this standard is compatible with ISO 9001:2008 and ISO 14001:2004. Annex A of this standard defines 11 domains, 39 control objectives and 133 controls that organizations must take into account when putting in place a safe information management system. Non enforcement must be accounted for.

This standard was published in 2005 and replaces BS7799 part 2. It differs from the latter in that ISO 27001[25] is compatible with ISO 9001 and ISO 14004 as mentioned above, and also adopts a process-driven approach and taking the PDCA cycle as its implementing tool.

"The ISO 27001 standards are structured according to the "Plan-Do-Check-Act" (PDCA) model, the so-called ISO 27001 processes[26]. In the Plan phase an ISMS is established, in the Do phase the ISMS is implemented and operated, in the Check phase the ISMS is monitored and reviewed, and in the Act phase the ISMS is maintained and improved"[27].

To implement an Information Security Management System (ISMS) compliant with ISO 27001[28] the organization must have adequately defined the tools used to identify the risks involved and the methodology for assessing these risks, and that these are sustainable over time and do not hinder this task in the future. The methodology and tools must be developed according to the criteria of the organization and its core business.

For this system to be successful, management must commit senior management as well as the employees to ensure the safety of the information contained in each organizational process and activity. It is therefore important to sensitize all stakeholders on the need to manage information security, as an organization's most valuable asset is its information, which it seeks to protect through the ISMS (Information Security Management Systems).

The fundamental principles of ISMS are the confidentiality of information, which ensures that the only the right person can access certain information; integrity, to ensure data objects and resources have not been altered and that only authorized personnel perform the appropriate changes; and availability, so information can be accessed securely when it is required for use.

At the regulatory level the Banking, Insurance and Pension Funds Superintendency of Peru and the Superintendency of Finance in Colombia have established guidelines that ultimately seek supervised companies have in place auditable and certifiable standards.

Figure 3 below shows the evolution of ISO 27001.

Standardization (ISO) and International Electrotechnical Commission (IEC) (2009).

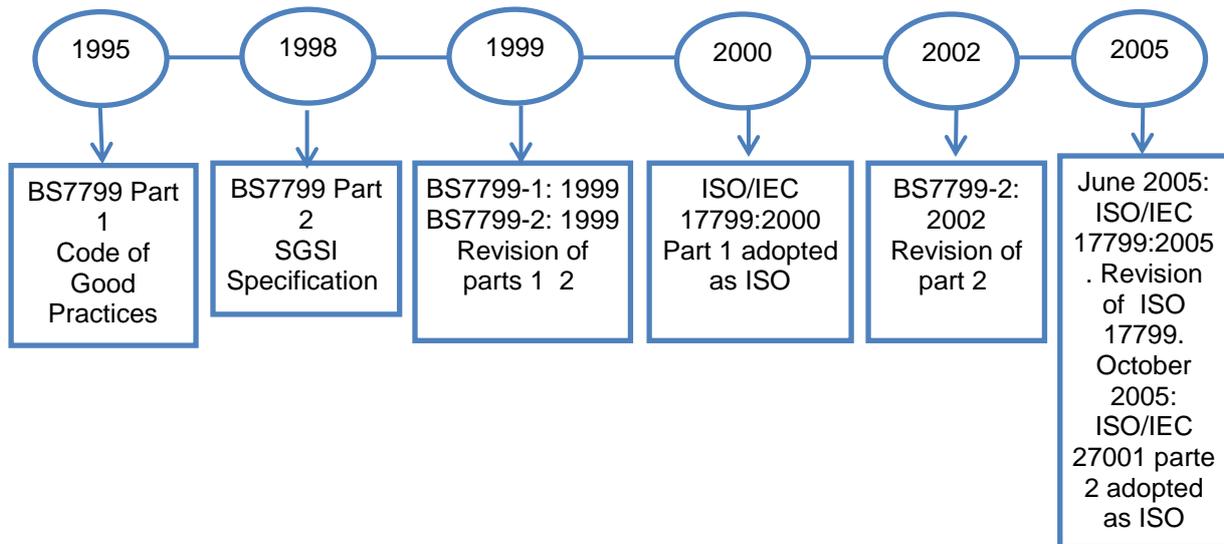[25] Fomin, V.V., Kaunas, L., de Vries, H.J.Y. and Barlette, Y. (2008), "ISO/IEC 27001 information systems security management standard: exploring the reasons for low adoption", paper presented at the 3rd European Conference on Management of Technology, Industry-University Collaborations in Techno Parks, Nice, France, September 2008.

[26] ISO/IEC: Information technology - Security techniques - Information security management systems - Requirements. ISO/IEC 27001, International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) (2005)

[27] Kristian Beckers, Stephan Faßbender, Maritta Heisel, Jan-Christoph K¨uster, and Holger Schmidt. Supporting the Development and Documentation of ISO 27001 Information Security Management Systems through Security Requirements Engineering Approaches, 4th International Symposium, ESSoS 2012 Eindhoven, The Netherlands, February, 16-17, 2012 Proceedings pp 14-21

[28] Certification Europe (2008), ISO 27001 Global Survey: The Facts and the Figures Underlying the Growth of ISO 27001 World-wide, Certification Europe, Dublin.

Figure 3. Evolution of ISO 27001

1995	1998	1999	2000	2002	2005
BS7799 Part 1 Code of Good Practices	BS7799 Part 2 SGSI Specification	BS7799-1: 1999 BS7799-2: 1999 Revision of parts 1 2	ISO/IEC 17799:2000 Part 1 adopted as ISO	BS7799-2: 2002 Revision of part 2	June 2005: ISO/IEC 17799:2005 . Revision of ISO 17799. October 2005: ISO/IEC 27001 parte 2 adopted as ISO

2.4 ISO Guideline 31000

The COSO (Committee of Sponsoring Organizations) Enterprise Risk Management (ERM) methodology and AS / NZS Risk Management Standard 4360 were the prelude to start developing ISO 31000, which provides the principles and processes of effective risk management in an organization, but that unlike previously developed standards, is not certifiable. By implementing ISO 31000 organizations can clearly define the risk management principles that it should enforce, in order to remove the audit and business barriers that prevent it from being fully compliant. It allows organizations to permanently review the processes for risk control in order to identify timely improvements; raise organization-wide awareness about the importance of risk management by all stakeholders of the organization, and finally, identify and evaluate uncertain events that generate a positive impact within the organization.

In this sense the ISO 31000 standard becomes a very valuable management tool for the organization as it helps mitigate risks and leverage positive impacts for the organization. "Similar to ISO 9000 and ISO 14000, which became references for managing these issues within organizations, the launch of ISO 31000 will provide countries worldwide with a set of internationally recognized guidelines for managing risk"[29].

ISO 31000 Risk Management – Risk Assessment Techniques offers guidance on good practices for risk assessment but does not help with implementing management tools. These tools should be defined by and for the organization that will adapt ISO 31000.

The ISO 31000 model is the first global standard for risk management, and it is becoming widely adopted internationally. ISO 31000 is intended to be generally applicable to a wide range of activities, decisions, and operations. Like the COSO (2004) model, it provides a framework to evaluate the elements of ERM. ISO 31000 is compatible with COSO (2004)[30]. Besides, the Standard ISO 31000:2009 could be applied to any type of risk, whatever its nature, whether having positive or negative consequences. Although ISO 31000:2009 Standard provides generic guidelines, it is not intended to promote uniformity of risk management across organizations. The design and implementation of risk management plans and frameworks will need to take into account the varying needs of a specific organization, its particular objectives, context, structure, operations, processes, functions, projects, products, services, or assets and specific practices employed.

The need for a common approach to risk management has been well known, and ISO set out years ago to provide such a standard. In fact, ISO notes that the ISO 31000 represents more than 20 years of development. "The organization indicates that much of the 31000 guideline was based on the groundbreaking risk management theory that was presented in the mid-1980s in the Australian/New Zealand Risk Management Standard 4360 (AS/NZS 4360). So the genesis of 31000 is well founded and completely tested".[31]

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[29] Modulo; ISO 31000: The new age in risk management begins now, according to modulo. (2009). Technology & Business Journal, , 515.

[30] OReilly-Allen, M., & Mawn, L. (2011). Internal audit: Be a key player in the risk management process. Pennsylvania CPA Journal, 82(3), 30-34.
[31] Moody, Michael J,M.B.A., A.R.M. (2010). Erm & iso 31000. Rough Notes, 153(3), 80-81.

The major obstacle faced by organizations in implementing ISO 31000[32] is to translate their concepts into tools, methodologies and processes that are appropriate for the organization to implement the guidelines. Organizations should identify the major risks they face. However, this is may not be an easy task if there is not in place a clearly defined, understandable and appropriate methodology that can be used subsequently to identify and evaluate new possible scenarios that may have either a positive or negative impact on the organization.

In addition to determining the tools and methodologies to quantify the identified risks and their combinations, to be effective this quantification must properly collect data on each of the organization's processes. Moreover, all organizational risk management methodologies, tools, practices and processes must be documented in order to help them to identify their risks.

Once risks are identified, what is their likelihood and potential impact? The assessment process helps management focus on the key risks, enabling quicker implementation of risk management and thus providing value faster. This is a time when opportunity can be realized; the organization can be made more efficient by eliminating services or processes that do not meet business objectives or address any significant risks. Changes like these can reduce bureaucracy and open the door to innovation.

"A popular tool for accessing risk is the heat map. Jurisdictions can use internal surveys, risk workshops, or interviews to collect information to populate the heat map, shown in Exhibit 4. Once risk information is collected and analyzed, the organization can develop its a risk profile. In this example, reputational and business recovery risk represent key risks and would deserve more attention and mitigation (control strategies) than, say, policy risk, which is likely to happen but unlikely to have much of an impact. As a medium to low risk, it would require less attention.

After key risks have been identified and assessed, four decision options are available: avoid, accept, reduce or mitigate and transfer.

Share the burden with a third party, combining acceptance and reduction of the risk. Examples include insurance, service-level contracts, and partnership agreements. An organization cannot insure against or transfer every risk, so it needs to make informed decisions about what risks to accept, avoid, and mitigate. Getting the right balance is the value proposition. If the organization decides to reduce or mitigate risk, a variety of mitigation strategies are available. They include preventative, detective, directive, and corrective controls.

Organizations need to put the right control in place for a given risk. Apart from the most extreme undesirable outcome (such as loss of human life), it is normally sufficient for a mitigation strategy to give a reasonable assurance of confining likely loss within the risk attitude or tolerance of the organization. Every control action has an associated cost, so the control should provide value for the money spent, in relation to the risk being controlled. Again, generally speaking, the purpose of control is to constrain risk rather than to eliminate it."[33]

Finally, we must describe the elements of risk management and the context in which the organization operates to more easily determine the risk management program's objectives.

3 Comments

Organizations in emerging markets need to identify their risks and opportunities and use several methods and processes that help them to manage risks and take advantage of opportunities in order to become more efficient and be more competitive in their markets.

The ISOs systems have received considerable attention in recent years and various studies have documented analysis and results of the impact of ISO's systems standards (ISO 9001 – OHSAS 18001), there are several companies in Colombia, Chile, Peru y México that are looking forward to obtain a certification that guarantee their products and service in order to compete all over the world.

Among the most rigorous empirical studies that examine how implementation of the ISO 9001 quality management standard affects employer's outcomes and practices. (Terlaak and King, 2006) in (David & Toffel, 2009) find that plants that adopt ISO 9001 typically increase their rate of production growth Quality has been defined in various ways by different writers, so we could conclude that implementing a quality management, environmental & safety systems generates positive aspects in several industries, but in service has not been explored in depth.

We consider and the literature reviewed reinforce that, the standard ISO 31000:2009 and the other mentioned could be used by any public or private organizations, because it provides general instructions.

Private and Public companies processes standardization will be a positive variable and futures studies could be focus in order to validate this initial hypothesis.

Organizations have the opportunity to refer ISO Guide 73:2009, risk management vocabulary and references, which complements ISO 31000 Standard by providing a collection of terms and definitions relating to the management of risk.

In the following years several companies in emerging markets will be implementing more this standards in order to guarantee their business continuity, because these standards allows them to

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[32] ISO 31000:2009, Risk Management - Principles and Guidelines.

[33] Wallis, P. (2012). Risk management achieving the value proposition. Government Finance Review, 28(1), 36-42.

order their procedures and increase their policies being more competitive.

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