

Inventory Physical Count Process: A Best Practice Discourse

Sitraselvi Chandren^{#1}, Santhirasegaran Nadarajan^{*2}, Zaimah Binti Abdullah^{#3}

^{#1,3}School of Accountancy, ^{*2}School of Technology Management & Logistics

Universiti Utara Malaysia

06010 Sintok, Kedah. Malaysia

^{#1} sitraselvi@uum.edu.my

^{*2} santhirasegaran@uum.edu.my

^{#3} zaimah2258@uum.edu.my

Abstract - The inventory physical count is an activity conducted by firms to confirm and inspect physical inventory balance to book balance. The inventories are one of the major expenditure for the firms particularly the manufacturing industries which materially influence the financial results. For reliable financial results, firms need to organize inventory physical count in effective and efficient manner with best practices for quality inventories balance results. The results of the inventory physical count are essential to firms financial reporting as inventories influence on the firm performance and position. The correctness in inventory balances provides assurance to financial performance and position of firms. Thus, the purpose of this paper is to elaborate on the operational aspect of inventory physical count in terms of the roles played by the management and personnel in-charge of inventory physical count and how inventory physical count is organized and conducted from the beginning stage to ending stage. This paper provides a clear understanding of the general inventory physical count process including the best practices of this process as a strategy to achieve the desired inventory physical count results. This paper will be a guide on inventory physical count process to academic, practitioners and knowledge to students.

Keywords – Inventory, Inventory Management, Physical Inventory Count

1. Introduction

Why firms do show concern to inventories no matter whether the firms in trading, manufacturing or service industries. [1] reported that cost of materials is one of the main expenditure of the firms. Thus, these firms emphasize on the importance of inventories as it reflects on the firm performance and position. Inventory is known as asset because the firms physically own them and used those inventories to generate future economic benefits. Inventories are classified as current assets [2] as it is believe to be sold or used to render services within twelve months. The Malaysian Financial Reporting Standards (MFRS) 102, adopts International Accounting Standards (IAS) – IAS 2, define inventory “as (1) held for sale in ordinary course of business, (2) in process for production for such sale (3) in the form of materials or supplies to be consumed in the production process or in the rendering services”.

The item (1) is the finished goods, item (2) refers to work in process and item (3) is the raw materials. Thus, inventories are classified into these categories and reported annually in the financial statements.

2. Literature Review

Generally, inventory generates income and future cash inflow to firms, thus, it plays a pivotal role for firm financial performance and position. Consistently, [3] found that lower the inventory to sales ratio (effective inventory performance) is positively correlated with profitability of operations of United States manufacturing firms. There will be an argument on why inventory is positively related to profit as inventories are an unsold items, kind of loss to firms which eventually reduces the profits. In accounting treatment to determine the gross profit (Sales – Cost of Sales) which means the lower cost of sales greater will be the gross profit. To determine the gross profit for the reporting period, the closing inventory amount is deducted to the cost of sales (COS= Opening Inventory + Purchases – Closing Inventory) which reduces the cost of sales amount. Thus, the higher the closing inventory, the lower will be the cost of sales which increases the gross profit, in sum the higher the closing inventory, the greater will be gross profit. This reflects that the existence of positive association between inventory and profit. Therefore, it is important that inventory is reported at the correct quantity (QTY) and unit price to sum up to accurate inventory amount (QTY x Unit price) in order to determine the accurate profit. The unit price for the inventory is determine through the lower of cost and net realizable value [4]. The challenge arises from the quantity aspect of the inventory as to the existence, condition and accuracy level of the inventories balance. How to report the correct closing inventory balance? Some firms might argue that we have invested in high-tech software which is capable to produce the accurate inventory closing balances. Despite of having high-tech software, is it the inventories transactions are correctly entered to the system, do these inventories physically exist, the inventories balance in the computer system tally with the physical inventories balance and what is the nature of these inventories condition e.g. obsolete or slow moving? The solution for these questions is the inventory physical count (IPC). The physical quantities in hand are determined through an inventory physical count as it is essential to determine the inventories value [2]. Inventory physical count (IPC) is an

action of staff members under the control of management to count inventory quantity balance at the physical inventory location. By inspecting the inventory balance physically, the existence, accuracy and condition of the inventory is determined. The frequency of the inventory physical count is decided by the firms and is part of firm operation policy. The advantage of having frequent inventory physical count enhances the quality of inventory management on the correctness and condition of inventories for example slow-moving, damaged and obsolete. However, firms should organize at least one inventory physical count at the year-end before financial closing. The annual inventory physical count (year-end inventory physical count) of the firm is evidenced by the presence of the external auditors. The questions on who should initiate the IPC, number of departments involved, the general process and flow of the physical count and the management action taken with the outcome of the IPC results are debatable. This paper contributes to explain the general process to achieve the best practices in IPC cycles from the starting point to the ending point. This will be valuable information to academics, practitioners and students on in-depth knowledge on the functional aspect of the inventory physical count process as a strategy to achieve the desired results through the best practices involvement at all levels of staff in the firm. There is limited literature available for inventory physical count, however, the authors' vast experience in organizing; coordinating and auditing the inventory physical count will be the fundamentals for this paper. This paper on IPC general process is more to manufacturing industries which adopts perpetual inventory system. In perpetual inventory system, the discrepancies in inventories are determined through inventory physical count [2].

2.1 Inventory Physical Count

The inventory physical count (IPC) whether the year-end, monthly or half-yearly according to firm policy, is initiated by the accounts department with the support from purchasing department, materials control (store) department, production department, production planning department, information technology (IT) department, sales department (finished goods and warehousing section) and security department. The corporate governance mechanisms give impact to inventories decision that affects firm operating performance [5]. This reflects that corporate governance mechanisms play a vital role in firms' inventory management. In some firms, the person charged with governance, the chief executive officer (CEO) and audit committee involve to support and provide valuable inputs for producing intended IPC results. Corporate governance, the governing body of firm plays an important role in the best practices including in the operational matter best practices. The best practices of IPC relate to the effectiveness of firms' operations that influences the firms' performance and position in the financial statements. This justifies the importance of IPC in particular the year-end IPC which requires involvement of top management and all staff level for a positive IPC outcome with less error and discrepancies between the

book balance (logical) and the physical balance. The IPC results determine the accuracy of the year-end inventory balance which provides the direct impact to year-end profit and inventory asset position. The IPC cycles-time can be on monthly or half-yearly basis, however, firms emphasize more focus to the year-end IPC with serious involvement from the top management as it determines the firm performance and position for the whole year. The IPC process cycles cover the management functions on proper planning, organizing, leading, control and action from all parties in the firm. The IPC process cycles in Figure 1, begin (starting point) as early as one or two months before the IPC day (during) until the finalization (ending point) of the IPC results to conclude the year-end inventory balance on existence and condition.

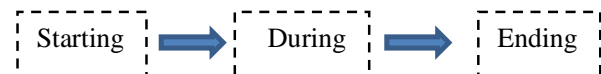


Figure 1. IPC Process Cycles

3. IPC Starting Point

3.1 IPC Instruction Manual

Firms require a guide manual for the best practices in IPC. The instructional manual is a guide before and during inventory physical count normally prepared by the accounts department for the use of respective departments and counters including checkers.

3.2 IPC Instruction Manual for Inventories Issuing and Receiving Section

This instructional manual guides on the inventories issuing and receiving flow for store, production and warehouse department. The manual guides on setting a dateline for issuing and receiving inventories; updating the issuing and receiving documents to the inventory software systems, keeping track on the inventories classification (raw material, work in process and finished goods), arranging the inventories according to the location, tagging the count sheets to all the inventories, counting the inventories and matching the inventory information (part name, quantity and unit measurement) to the count sheets inventory information (pre-printed count sheet) by the counters, identifying any slow-moving and outdated inventories before the IPC. This instructional manual clearly states on pooling of slow moving and obsolete inventories in one area, requires preparing a report for the list of the slow moving and obsolete inventories. These slow moving and obsolete inventories are tagged with a blank count sheet attached with the report list and not counted with the active inventory balances during IPC which finally requires for inventory adjustment with the top management approval.

3.3 *IPC Instruction Manual for the Supervisors, Checkers and Counters*

The supervisors' role is to control and oversee the situation during the IPC. The supervisors are to handle any unresolved issues for the discrepancy found by the checkers during IPC. The checkers role is to independently confirm the counted inventory figures by the counters and signing in the checkers section in the count sheet. Both supervisors and checkers are independent staff not involved in the role of counters. Counters are representatives from store department, production department and warehouse. They involve in the day to day receiving, arranging and issuing inventories. Counters at store, production and warehouse segregates active and old inventories, classify the inventories as raw material, work in process and finished goods. The counters arrange, organize and tagged the count sheets on every inventory. The counters are well familiarized with the inventories in terms of QTY balances, unit of measurements and inventory codes (part name). They will count the inventory first before the IPC day. The instruction manual indicates the roles of supervisors, counters and checkers during the IPC process cycles.

3.4 *Meeting with Head of Departments*

This is a crucial meeting which discusses IPC plan on preparation and organizing the event from the starting point to ending point. This meeting headed by the accounts department and involves various departments namely purchasing and procurement, sales, store, IT, security, internal audit, production, production planning departments. The meeting addresses the key areas for the IPC process, responsibilities by the respective departments involving in the IPC and set datelines for the important processes as reported in Table 1.

Table 1. Key areas of discussion

Departments	Key areas
Accounts, Internal Audit, Store, Purchasing, Production, Production Planning & Sales	<ul style="list-style-type: none"> Decide the IPC dates at Store, Production and Warehouse and at Sub-contractor premises (if the inventories placed at sub-contractor' premises). The starting and finishing time including the IPC dates are set in the meeting. <p>Best practice: The dates for IPC are collaboratively set so it will be held based on mutual understanding and commitments of all respected parties. Large corporation planned the first day IPC at store and the second day at production and warehouse. During the first day,</p>

	<p>the production and warehouse can do necessary preparation while IPC carrying out at store.</p> <p>One day prior of IPC day or before IPC start time, the superior or personnel in charge will ensure all inventories are well arranged with count sheets tagged. A well-organized inventories according to location avoids unwarranted delays during IPC.</p>
Store & Purchasing	<ul style="list-style-type: none"> Receiving items (cut-off) dateline from suppliers. Rejected and replacement goods delivery datelines. <p>Best practice: Only the inventories owned by the firm for that financial year are counted during IPC.</p>
Store, Production & Warehouse	<ul style="list-style-type: none"> The cut off dates: the last day of receiving raw materials from suppliers, issuing raw materials from store to production and finished goods issued to warehouse and finished goods shipped from the warehouse (the sales point). <p>Best Practice: For accurate physical inventories balance results, requires no movement in inventories from one area to other.</p>
Store, Production & Warehouse	<ul style="list-style-type: none"> Identification of slow moving and obsolete inventories. Keeping these inventories a side (not included in the IPC) for inventory adjustment.
	<p>Best Practice: Inventories are held for sale, in the process of production later for sale or materials or supplies to be used in production (Lazar & Choo, 2012). Thus, only active inventories are kept and counted to determine the inventory balances.</p>
Store, Production & Warehouse & Security	<ul style="list-style-type: none"> The dates on last issuing and receiving of inventory to be notified to security to restrict incoming and outgoing consignment.

	<p>Best Practice: To avoid incoming and outgoing of consignment and raw materials for accuracy inventory balances.</p>	Store, Production & Production Planning	<ul style="list-style-type: none"> No movement of inventory one day before and during IPC at the production area. Thus, the production planning department to plan the production activity well to avoid any unnecessary delivery issue to the clients.
Store, Production, Warehouse & IT	<ul style="list-style-type: none"> Dateline to key-in and update the receiving and issuing documents to the inventory computer system to update the inventories book balance. 		<p>Best Practice: IPC should not affect sales, well scheduled production before the IPC would not affect the sales commitments during the closure of operation to conduct IPC.</p>
	<p>Best Practice: Updating document to system within the dateline provides the correct book balance which can reconcile with the physical balance.</p>		
Store, Production, Warehouse & IT	<ul style="list-style-type: none"> The dateline and printing the pre-printed count sheets. Pre-printed count sheet has details of inventory information (part name, location, unit measurement and quantity balance). Count sheets printed in different colors according to inventory location and pre-numbered in sequence to avoid missing. Distribution of count sheets to the respective departments (Store, Production, Warehouse, Sub Contractor if any) 	Store, Production & Warehouse	<ul style="list-style-type: none"> The senior or superior are in charge during IPC if there is any matters that need special attention or discrepancy in counting. The senior or officer in-charge from the respective department to assure that the counters have well counted the inventories and the physical inventories balance matches with the count sheet balance. After IPC, to set the dateline for key-in the count sheets to the computer system so that the comparison results between the inventories book balance and physical balance can be determined.
	<p>Best Practice: Pre-printed count sheet is more effective compared to blank count sheet to avoid manipulation. Different colored count sheets according to location avoid entry errors for example store count sheets entered to production location in the computer system. Pre-numbered count sheets assure completeness in the entry to the system.</p>		<p>Best Practice: The officer in-charge should be able to control any discrepancy issues arise. The officer in-charge can be more than one person according to the job load required to monitor the counters. The officer in-charge should ensure all inventories with count sheet and all counts sheets have signed by the counters after agreeing the physical inventories balance with count sheet balance. This is to avoid the counters to blindly signing the count sheets without verifying the physical inventory balance. This best practice validates the accuracy of physical inventories balance.</p> <p>After IPC, all count sheets are collected, arranged according to pre-numbered sequence and key-in to system. The dateline is set to key-in the count sheets including the independent check carry out on count sheets inventory balance and verifying the data entry before printing the</p>
IT & Accounts	<p>The dateline is set for the output of the final inventories balance (book balance) report subsequent to printing the pre-printed count sheet. This report given to accounts department.</p>		
	<p>Best Practice: This final inventories balance report before IPC indicates no further adjustments to inventory balance until the final adjustments after IPC. This inventory report is given to external auditors to re-confirm book balance from the report to physical balance during IPC.</p>		

	inventories comparison report between the book balance and the physical balance eliminates entry errors for correctness in physical inventories balance.		auditors' observation and recommendation on the way the IPC operated enhances the efficiency and effectiveness of IPC procedures. Basically is an advantage for firms to invite auditors to attend IPC for enrichment IPC best practices.
Warehouse & Sales & Accounts	<p>The revenue recognition point based on the firm accounting policy for the consignment delivery to determine the inventory. If it is Free on Board (FOB) shipping point the consignment is recognize as inventory until the shipping point. For FOB destination consignment is recognize as inventory until it reaches the destination. The inventories are included in IPC according to the arrival point. Thus, the management has to decide whether it is FOB shipping point or FOB destination point to determine the inventory balance.</p> <p>Best Practice: All the inventories own by the firm is included in IPC for accuracy value of inventories.</p>		
Internal Audit & Accounts	<ul style="list-style-type: none"> To advise the departments on any internal control issues or control procedures to achieve IPC with best practices. <p>Best Practice: Internal control encourages effective and efficient operations including the reliability of financial reporting [6]. Thus, effective and efficient IPC with proper control procedures enhances the reliability financial reporting for inventories balance and profit.</p>		
Accounts	<ul style="list-style-type: none"> To invite external auditors to attend the IPC To minute the IPC meeting with head of departments. <p>Best Practice: According to International Standard Auditing (ISA) 501, inventory is essential to the financial statements, thus the external auditor urged to attend the IPC [7]. The external auditor sample independent check on the physical inventory balance to inventory report balance strengthens the financial reporting quality. External</p>		

3.4 Meeting with Supervisors and Checkers

The appointed supervisors and checkers are called for the meeting two weeks before the IPC day. This meeting is chaired by the officer-in charge of IPC from accounts department to brief on roles of supervisors and checkers during IPC and the expectations and commitments from them to make the IPC successful. The briefing to cover the importance of IPC, implication of IPC results to the year-end financial closing, checkers to sign after the counter's signature, the checkers to count the inventories before signing the count sheets, any discrepancies to call upon the supervisors to settle the discrepancy between the physical inventory balance against the pre-printed count sheet balance and the coverage areas or locations during IPC. To show the sample count sheets in different colors according to location or area and explain to checkers on understanding and verifying on inventories part name, unit of measurements and quantity balance before signing in checkers column in the count sheet. The supervisors and checkers are informed on the area of assigned according to the location during IPC, as they would be aware of the coverage area during IPC. The briefing should cover on the punctuality and discipline of supervisors and checkers to avoid delays during IPC. They should be briefed on all inventories supposed to be tagged with count sheets and be caution on any slow moving or obsolete inventories. The supervisors and checkers should be notified on no movements of inventories are allowed as the company operation is closed during the IPC.

Best Practice: This meeting with the supervisors and checkers create awareness to them on the seriousness and essentiality of the IPC results for the firm financial reporting. As matter of fact, more commitments and accountability will be showed by them to meet the IPC objective. This pre-IPC meeting educates them (checkers) on their role and get familiarize with the inventories information, the purpose of count sheet and the importance of counting and verifying the inventory before signing on the count sheet. The briefing to supervisors on their lead role in managing the checkers, handling inventories discrepancy issues and monitoring for any movement of inventory during IPC builds a strong foundation for best practices in IPC operation. The discipline and sense of responsibility of supervisors, checkers and counters with support from the respective management is an aspect of governance that proofs best practices for an affluent IPC results.

4. IPC During

Planning, decision making, implementation of action and keeping track according to the plan is essential before the IPC day. A well formulated action plan and work towards achieving the planned results before IPC as discussed in earlier chapters of this paper ensures a smooth operation during IPC. During IPC is purely inventories counting and confirmation by checkers. After the counting process with the accounts department approval the counters to collect the count sheets. Finally the count sheets are keyed-in into inventory system for reporting purpose.

Before the IPC begins, the officer in-charge and head of accounts department and the respective head of departments and officers in-charge of store, production and warehouse to ensure no business operation on the IPC day, no movement of inventories, the inventories are arranged according to location, the obsolete and slow-moving items are separated with a detail list attached, all inventories are tagged with count sheets, all count sheets are signed by counters. The participation and support of person in charge of governance and top management of the firm by attending the IPC encourages further the seriousness and commitment of all respective people involved during IPC. The counters even they have counted the inventories and signed the count sheets before the physical count day, their presence during IPC is important for any inventory discrepancy and to provide assistance to officers in-charge. **Best practice:** All inventories owned by the firm is counted without any mislaid or error, this safeguards on the precision of year-end inventories balance. The accounts department should take note of the starting time and ending time of IPC. **Best practice:** The time taken is to analyze later the reason for any unwarranted delays compared to previous years IPC that requires for improvement.

Discrepancy arises if the physical inventory information (e.g. unit part name) or balances do not agree with the count sheet during IPC. The checkers need to seek the supervisor's assistance to solve the issue. For discrepancy in quantity or inventory balance, the normal practice is to urge the counter to recount the inventory at the presence of the IPC supervisor and checker. Once the inventory balance is confirmed, the counter and the checker are required to re-sign by the side of the corrected inventory balance figure in the count sheet. The supervisor has to take record of the count sheet number to be reported later to accounts department. **Best practice:** This clearly indicates proper control procedures in place to handle inventory discrepancies during IPC. No changes done to count sheet without any supervisor presence and inventory recounting. The IPC supervisors and officer in-charge from the accounts department need to go around the IPC assigned location to oversee and settle any unexpected situation or discrepancies in inventory balance and information. **Best practice:** This ensures effective and efficient operation of IPC for victorious inventory results. Any major discrepancy for example most inventory balance do not match with the count sheets

balance the department head of the respective IPC section (store, production and warehouse) and head of accounts department have to make critical decision in handling the situation.

The external auditors attend the IPC to observe for any weaknesses that need improvement or corrective action. The external auditors will also conduct sample physical verification from the physical inventory balance to counts sheets balance. The officer in-charge from accounts department provides necessary assistance to the external auditors. **Best practice:** The presence of external auditors during IPC enhances the quality of IPC operation and the physical inventories results. The external auditors' comments on the current practices provide for further improvement in firms' control procedures in the next IPC. The external auditors' sample checking on the physical inventory balances and information against the count sheets build the confidence in the correctness of the physical inventory balances. Once the IPC completed, the accounts department to record the ending time, officially close the IPC for the day. The respective head of departments e.g. store, production and warehouse to instruct all counters to collect the count sheets from the inventories and arrange the count sheets in sequence numbers according to location. **Best practice:** a well-organized IPC with adequate support from all staff e.g. checkers, counters, supervisors and officers-in-charge from the starting time to ending time with proper monitoring and instructions of management for effective and efficient IPC. A systematic IPC process assures for the best results of physical inventories balance.

5. IPC Ending

The collected count sheets are entered to the inventory computer system by the respective department involved in IPC e.g. store, production and warehouse within the dateline period. **Best practice:** To set target entry date to avoid unnecessary delays which affects the year-end financial closing. The completion of entry process proceeds with independent check within the dateline given by the officers in-charge from the respective departments e.g. store, production and warehouse. The independent check covers the accuracy of entry of the count sheets quantity balance and correctness of inventory information (part name) to the system. **Best practice:** To avoid any negligent action that affects the inventory physical balances. The final discrepancy reports between the inventories book balance and physical balance printed by the IT department. These reports are distributed to the respective departments e.g. store, production and warehouse including the accounts department. This report is crucial for the respective departments to identify the reasons for the discrepancies.

Scenario A: Physical balance greater than book balance- This scenario is uncommon as it reflects that received inventories are not updated correctly in the system, generally due to weak internal control system. **Scenario B:** Book balance greater than physical balance -This is a

common scenario due to unadjusted obsolete or slows moving inventories, system error due to no proper housekeeping of inventories for cancellation, return and missing. Basically this is also due to weak internal control system. The differences in Scenario B should be kept at minimal level with proper explanation and supporting documents to proof for the differences. Scenario A or B requires the respective departments (store, production or warehouse) to gather appropriate and justified evidence with explanation for the discrepancies. This evidence will be forwarded to the top management or person charged with governance for their approval for the inventory adjustments (discrepancies). Once the top management approves the inventories discrepancy report, accounts department to adjust the discrepancies accordingly, followed by the IT department opens the system for the inventories receiving and issuing entries in the new financial year. **Best practice:** No inventories are adjusted by the accounts department without the top management approval in conformant with firm policies. This is a principal adopted by firms to safeguard the assets for effective best practice. The ending part for the IPC is the post-mortem meeting conducted by all the respective departments involved in the IPC headed by the accounts department. The meeting agenda reflects on the overall performance and weakness encountered during the IPC including any deficiency highlighted by the external auditors. The shortcomings before and during IPC process is used as the lessons that need for improvement for the next IPC. **Best practice:** For continuous improvement in IPC process for a reliable financial reporting and internal control operation.

6. Discussion

The strength for quality financial reporting on true economic performance and position of firm relies on the operational efficiency and effectiveness through sets of best practices by the firm. Inventories are firm asset that reflects on performance and position. The accuracy, existence and condition of these inventories need to be maintained for reliable reporting for the firm performance and position. Thus, inventory physical count is a solution to confirm the accuracy of physical balance to book balance and to validate the existence and condition of the inventories. In sum, the inventory physical count (IPC) is an essential operational process to determine the inventories balance. The IPC should be conducted in orderly manner from the beginning stage to the ending stage by the respective parties in the firm for successful inventories balance results. The firm financial position and performance derived from the best practices employed in IPC process cycles by all the respective departments.

7. Conclusion

This paper highlights the roles played by firm and the governance in designing and achieving the best practices to meet desired IPC results. This discourse explains the purpose of IPC and the general process of IPC operation with the best practices in place. This paper contributes to provide in-depth knowledge from the planning stage to

the ending stage of IPC on how orderly the activities are planned, organized and put in action for desirable outcome.

References

- [1] Narayana Subramaniam, P. (2014). Inventory management: principles and practices. Kindle Edition.
- [2] Ng, E. J. (2012). A practical guide to Malaysian Financial Reporting Standards (MFRS Framework) 4th ed. CCH Asia Pte Limited.
- [3] Capkun, V., Hameri, A. & Weiss, L.A. (2009). On the relationship between inventory and financial performance in manufacturing companies. *International Journal of Operations & Production Management*, 29 (8), 789 – 806.
- [4] Lazar, J. & Choo, H.C. (2012). *Malaysian Financial Reporting Standards 3rd revised ed.* McGraw-Hill Education.
- [5] Nadarajan, S., Chandren, S., Bahaudin, A.Y., Mohamed Elias, E.M. & Mohd Nawawi, M. N. (2015). Corporate governance and operating performance inventory study on Malaysian listed firms. *International Journal Supply Chain Management*, 4(2), 68-71.
- [6] Arens, A.A., Elder, R.J., Beasley, M. S., Amran, N.A., Hanim Fadzil, F., Mohamad Yusof, N.Z., Mohamad Nor, M.N. & Shafie, R. (2014). *Auditing and assurance services in Malaysia, An intergrated approach (3rd ed.)*. Pearson Education.
- [7] Messier, Glover, & Boh, P.M. (2007). *Auditing and assurance services: a systematic approach 3rd ed.* McGraw-Hill.