

# THE EFFECT OF MANAGER'S KNOWLEDGE OF THE AVAILABILITY OF MANAGEMENT ACCOUNTING INFORMATION SYSTEMS BASED ON ACTIVITIES BY MANAGEMENT WAY TO CONTROL AS AN INTERVENING VARIABLE

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## Abstract

*This study aims to obtain results of interpretation of : (1) The effect of manager's knowledge on management accounting information system towards management's ways of controlling; (2) The effect of management's ways to control towards the availability of management accounting system based on the activities; (3) The effect of manager's knowledge about management accounting information system towards the availability of management accounting system based on activities through management's ways to control as an intervening variable.*

*This research method is using descriptive and verificative types. The unit of analysis in this study is the national private commercial bank in North Sumatra by accounting and finance manager as respondent. Descriptive analyzes were performed to analyze the object of research. While the verification analyzes conducted to examine the influence of manager's knowledge about the management accounting information system and styles of management's control towards the availability of activities based on management accounting systems with Partial Least Square (PLS) analytical methods.*

*The results of the research shows that: (1) Manager's knowledge of management accounting information systems significantly influence the style of management control; (2) The style of management control significantly affect the availability of management accounting information system of activity-based and (3) Manager's knowledge of management accounting information systems significantly affect the availability of management accounting information system based on the activities through style of management control as an intervening variable.*

**Keywords:** Knowledge, Style Management Control, Management Accounting Information Systems Activity-Based.

## 1. INTRODUCTION

Competition which has been globally and is competing is a very important factor to be considered by the management in running the company. For each product, the problem is not just how the company can market its product, but faced with the industries that would compete closely with similar industries which is constantly innovate new things. Information is instrumental in the organization, because with information, company managers can determine the development of activities that occur in the company and with information managers can avoid risk that might put company on the lose (Azhar Susanto, 2008). The quality of information refers to the quality of the output produced by the information system (DeLone and McLean,

2008). Quality within an organization according to Reeves and Bednar (2000) is advantage, value, compliance with specifications, and meet customer expectations. Gorla et al, (2010) suggested that quality information, is the concepts related to the quality of the output produced by the information system, which is useful for business users. Meanwhile, according to Sacer et al. (2006) says that the quality of information that is timely, accurate and reliable.

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Meanwhile, according to Zaidi and Bouzidi (2010) information that has quality is the information that corresponds to the desired specifications of the user, and information that meet or exceed user expectations. Furthermore, according to Wilkinson (1999) information that has quality has characteristic, relevance, accuracy, timeliness, conciseness, clarity, quantifiable, and consistency and According to McLeod (2007) information that has quality must have the characteristics of relevance, accuracy, timeliness, completeness. Chenhall (2003) stated that management accounting information that has quality are Broadscope, Timelines, Aggregation, and integration. Information that has quality is used to support the planning, controlling and business activities (Sacer et al., 2006). Information that has quality can be used also for decisions which result can lead to right decision, more accurate allocation of the resources and better time respond so that it can provide benefits and reduce the cost (Loudon and Loudon 2008). To achieve this goal the company is required to have management accounting information that has quality (Sacer et al., 2006). Accounting information can provide information for various purposes, such as statistical information and figures that can be used to determine all the financial health of the organization, investors use accounting information to determine whether they should invest in a company and shareholders can monitor the financial health of the organization by using accounting information to see if they receive a return on their investment (Richardson and Melvin, 2012).

Furthermore, the availability of adequate management accounting information system, encourage accountability and transparency of the financial information. Thus, it will reduce conflict within the organization (Abernethy and Guthrie, 1994).

A good management accounting information system design is largely determined by the ability of management to identify the information that is needed in the management process to achieve organizational goals. Every organization and business units has a different needs for management accounting information systems, according to the state of the organization and the business units itself. Therefore, management

accounting information system should be designed as tailor-made (Garrison et al, 2011).

Susanto (2008) says that the better of the quality of information, the better the quality of communication in an organization that will make the integrity of the organization also better. Furthermore, quality of information will improve also the quality of understanding of the managers of the organization in seeing the changes that occur both inside and outside the organization that will quickly and accurately respond to changes that arise.

Phenomena that arise regarding to the not quality of management accounting information occur in the banking industry. Bank has its own characteristics compared with other service companies. Bank operates in the trust of customers, with no customer confidence, the only remain left would be bank nameplate only. In the case of PT Bank Century Tbk, which indicates that the central bank does not provide information that is transparent, accurate and on time to the Financial System Stability Committee (KSSK) and to the Deposit Insurance Agency (LPS) (Anwar Nasution, 2009). Also that the information about the condition of CAR (Capital Adequacy Ratio) of Bank Century is not actual, so that the decisions taken regarding the size of the bailout fund changes, from Rp 689 billion to Rp 6.7 trillion (Shamsuddin, 2010).

Further phenomena that occur because the application of management accounting information systems don't have a good quality is the findings of Bapepam in the case of Great River where there are excesses of records or overstatement of sales and receivables accounts (Fuad Rahmany, 2006). Then Joni Swastanto statement (2011) that the critical points on banking operations, is the provision of credit to the fictitious debtor or fictitious collateral, funding such a fake deposit slips, activity of bookkeeping or bank's accounting for personal interests of employees and for information technology. The government does not have a good control over the implementation of the accounting system and this department does not have personnel who can master the science of accounting, in addition to poor computer system (Nasution, 2008). Lippo Bank case with leakage of inside information that has not become public property and it has been used for the purchase of shares (Syahdeini, 2003). The case of City bank, there is a blurring of the transaction and recording that is not correct towards some transfer slip (Ichsanudin, 2011). Next Mega Bank case that has forged deposits (Nasution, 2012).

Seeing the role of information that is so high for the organization, make the organization becomes very dependent on management accounting information systems (Azhar Susanto, 2008), because the information is an output from the system information (DeLone and McLane, 1992). The same thing dictated by Sacer et al. (2006) the purpose of management accounting information system is to ensure the produce of good quality of information, as management accounting information system designed to provide information for managers (Ritonga, 2011). Accounting information system management is an important part of the whole of enterprise's information systems (Sacer et al., 2006), because the system of accounting information management is a process that generates information for management (Prasanna Raghavendra, 2012), regarding pricing, costs and cash flow and

to assist the consideration of operational and strategic program in the long term in a dynamic and competitive environment (Mitchell et al., 2000).

Similarly, according to Marian Taicu (2006) who states that the accounting information management system is the main provider of information required by management. Management accounting provides information, both financial information and non-financial information to managers and employees of the organization, because the information that is needed by the decision makers include financial information and information that are non-financial such as quality of the product, customer satisfaction and the level of service response (Atkinson et al., 2012).

Atkinson et al., (2012) stated that the scope of management accounting information systems related to the role of management such as planning, controlling, and organizing. Planning includes product planning activities regarding to projected revenues and expenses, production planning regarding to the availability of resources and its uses in a wide range of products made by the organization (Atkinson et al., 2012: 3). Organizing activities focused on the preparation of the production system of goods or services and infrastructure, which includes the efficiency and productivity of the machine (Atkinson et al., 2012).

Management accounting systems and methods that are appropriate for managers, are depending on the benefits which is the expected quality on decision making comparing to the costs incurred. Good management accounting system is determined by the needs of management. However, all the accounting management system has the same mission, namely: (1) the transmission of information to help produce a wise decision; and (2) meet the user motivation to achieve organizational goals or objectives (Hongren, 2004). Hansen and Mowen (2008) classified the management accounting system into the accounting system based on management function (functional-based management accounting system) and management accounting systems based on activity (activity-based management accounting system). Management accounting's information is the kind of information that is intended to support managers in performing its functions, namely (1) planning; (2) control, evaluation and continuous improvement; (3) decision. Several studies have concluded that there is a connection between the way the use of management accounting information by managers with the formulation and implementation of strategies (Abernethy & Brownell, 1999; Naranjo & Hartmann, 2006).

Manager's knowledge about management accounting information system, affecting the selection/use of management accounting information systems that are adequate. Knowledge is a mixture of information, experience, and insight to prepare a framework that can be used as consideration when assessing new information or evaluate the relevant circumstances. Knowledge which is indicated by the ability (abilities) and skills (skills) plays a major role in individual's behavior and performance (Gibson, 2005). Ability refers to individual's capacity to perform various tasks in a job (Robin, 2003), while skills are competence-related tasks (Gibson, 2005). Ability and skill will be owned if the individual has the knowledge (Stone, Hunton & Weir, 2000).

In organization, knowledge possessed by the human resources is a very important asset because in human resources, their knowledge are attached. To achieve competitive advantage, an organization, beside requires tangible resources, such as financial resources, building, market position, technology, organizationis also requires a resource that is intangible, namely human resources with the knowledge and skills that are attached to it. The knowledge possessed by humanresources is intellectual asset that are vital to organization for supporting the creation of competitive advantage.

The lack of competence in the management accountant in organization in carrying out its duties as a provider of information for the manager, can cause weak draft of the management accounting information systems within the organization. Lack of competence of management accountants in organization, can also inhibitline managers to use management accounting information interactively. The use of accounting information in an interactive management is the use of management accounting information that leads to learning, continuous performance improvement and assisting in the resolution of conflict within the organization (Naranjo & Hartmann, 2006). Based on the background of the problems that have been raised, so what becomes a problem in this research is how the influence of the manager's knowledge about management accounting information system towards the availability of management accounting system on activity-based through management's style of control as an intervening variable.

## 2. RESEARCH METHODS

- (a) **Research approach:** The types of research that are being used are descriptive and verificative. The method that is used in this research is based on survey research. Survey method is done by taking a sample of the population and use questionnaire as data collection tool.
- (b) **Variable operationalization:** The variables and indicators of research used in this study are described as follows:

**Table 1 Operational Variables**

| <i>Variable</i>                                                        | <i>Concept</i>               | <i>Dimension</i>                                                    | <i>Indicator</i>                                                                        | <i>Size</i>                                                                                                                        | <i>Scale</i>                     |
|------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Manager's knowledge of the management accounting informationsystem (X) | Management control style (Z) | The level of knowled ge and understa nding of the manager of manage | ment accounting information system (Gibson 2005, Robin, 2003; Davenport & Prusak, 1998) | The style and the way managers take advantage of management accountinginformation in the management process (Abernethy & Brownell, | 1999: Naranjo & Hartmann, 2006). |

|                                        |                                                                            |                                                                                         |                                                                                          |                |
|----------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------|
| Diagnostic style and interactive style | Educational background                                                     | The level of formal education related to management                                     | g the destination                                                                        | OrdinalOrdinal |
|                                        | Participation in seminars and courses related to management and accounting | Quantity manager participation in seminars and courses related to management accounting | The level of involvement and flexibility of lower managers in the budgeting process      | OrdinalOrdinal |
|                                        | Managerial experience                                                      | Understanding of management accounting system                                           | Availability of media delivery to the organization's mission and vision under management | Ordinal        |
|                                        | Negotiations and tolerance in determining the destination                  | Managerial experience of manager                                                        |                                                                                          | Ordinal        |
|                                        | Decentralization budget                                                    | The level of understanding of management accounting system                              |                                                                                          | Ordinal        |
|                                        | Communication methods of vision and mission of the organizational          | The level of negotiation and tolerance in determining                                   | The availability of non-financial performance measures                                   | Ordinal        |
|                                        | The use of non-financial performance measures                              |                                                                                         |                                                                                          |                |
|                                        |                                                                            |                                                                                         |                                                                                          |                |
|                                        |                                                                            |                                                                                         |                                                                                          |                |

| <i>Variable</i>                                                                                                    | <i>Concept</i>                                                                                                                                                                                                                                                        | <i>Dimension</i>                                                                                                   | <i>Indicator</i>                                | <i>Size</i>                                                      | <i>Scale</i> |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------|--------------|
| The availability of management accounting information system, activity-based (Activity Based Management / ABM) (Y) | Activity-Based Management is one of forms of management accounting information system which focuses on the activity. The purpose of this system is so that managers can focus on activity control and cost aimed to improve customer value. (Hansen and Mowen; 2008). | <b>Activity-based costing (ABC)</b><br>Implementation of activity-based costing system<br>(Activity Based Costing) | Grouping the cost based on the activity-        | The availability of cost information according to activity group | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    | The use of the base load (cost driver) non-unit | The basic availability of charging unit                          | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    | Intensification of the fee                      | The use of driver tracing method in costing                      | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    | The understanding of the value process          | The level of understanding of the process of value creation      | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       | <b>Process Value Analysis</b><br>Analysis of the process                                                           | The measure of activity performance             | Availability of activity performance measurement                 | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    | Measurement and activity performance            | Availability of the activity performance report                  | Ordinal      |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    |                                                 |                                                                  |              |
|                                                                                                                    |                                                                                                                                                                                                                                                                       |                                                                                                                    |                                                 |                                                                  |              |

(c) **Population and Sample:** Analysis unit of this study is the national private bank in North Sumatra which totaled 34 banks, the respondents are managers in accounting and finance.

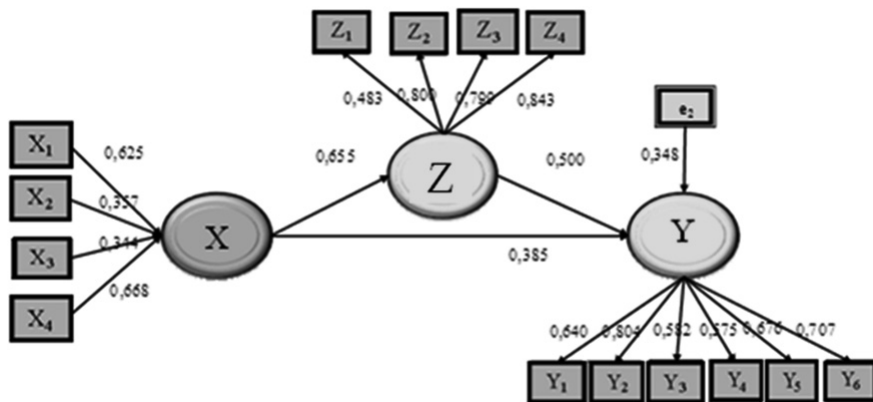
(d) *Testing Instrument Research:* Before the questionnaires are distributed to respondents of the research, researcher conduct validity test and instruments reliability test towards the questionnaire. Validity test that is being used is the internal validity test by using the technique of "product moment". Based on the results of the analysis showed that the correlation coefficient for each of the questions that are presented have a greater coefficient ( $r_{xy}$ ) greater compared to the critical correlation coefficient ( $r_{tabel}$ ). This indicates that each item contained in all questions can be declared valid and fit for use as a reference variable measurement of knowledge management on management accounting system, style of management control, and the availability of management accounting information system based on activities (Activity Based Management / ABM).

Meanwhile, the reliability test that is applied to the instrument in this study is internal consistency test, by testing the instruments, then the received data would be analyzed by using Cronbach's Alpha. Based on the results of the analysis showed that the coefficient number alpha coefficient ( $\alpha$ ) is closer to 1 than 0.7, so it can be concluded that the list of questions that are presented reliable to use.

(e) **Analysis and Testing Hypotheses:** The analytical method is being used to get a picture of the manager's knowledge on management accounting information system, styles of management control, and availability of management accounting system based on activities is descriptive analysis method. Meanwhile the verification analyzes is conducted to examine the influence of manager's knowledge about management accounting information systems towards the availability of management accounting system with activity-based through style of management control as an intervening variable with Partial Least Square (PLS) method.

### 3. RESEARCH RESULT

Based on the hypothesized structural model, shows result of calculation with the help of the Smart PLS 2.0 model, the influence of manager's knowledge on management accounting information systems to the style of management control, the model of influence of how using management accounting information on the availability of management accounting system activity-based and mode of influence of manager's knowledge on management accounting information system about the availability of management accounting systems against the availability of management accounting system through style of management control as an intervening variable as follows:



Picture 1:

Diagram of the Line of Structural Relationship Effected by Manager's Knowledge on Management Accounting Information Systems Towards Availability of Management Accounting System Based on Activity (Activity-Based Management)

Through Style of Management Control As an intervening variable

(a) **The influence of Manager's Knowledge on Management Accounting Information Systems towards Management Control Style:** Based on the hypothesized structural model, shows a result of Influence of manager's knowledge on management accounting information systems towards management control style that is expressed in the estimated parameters as follows:

$$Z = 0.655 X + 0.570$$

Coefficient path value of the manager's knowledge variable on management accounting information system towards management control style is 0,655. Coefficient path value which is positive shows that the high level of manager's knowledge about management accounting information systems will make manager's knowledge on accounting information system also higher. It shows the magnitude of influence of the manager's knowledge about management accounting information system towards the style of using management accounting information is  $= 0.655 \times 0.655 \times 100\% = 43.0\%$ .

**Table 2**  
**Significance Test on the Effect of Manager's Knowledge on Management Accounting Information Systems towards Management Control Style**

| <i>Variable</i>                                                 | <i>Coefficien<br/>Effect</i> | <i>t-<br/>count</i> | <i>t-<br/>critic</i> | <i>Conclusion</i>             |
|-----------------------------------------------------------------|------------------------------|---------------------|----------------------|-------------------------------|
| Manager's knowledge on management accounting information system | 0,655                        | 12,8<br>34          | 1,96                 | There is a significant effect |

Source: Result of data (2015).

The score of T-count coefficient path of manager's knowledge variable on management accounting information system towards the control style of management is 12.834. Because the score of t-test bigger than *t*-critical, we conclude that manager's knowledge on management accounting information systems is significantly influence the style of management control. The results shows that the manager's knowledge about management accounting information systems affect the style of management control with how big is the influence of manager's knowledge about management accounting information systems towards the control style of management is 43.0%, while the influence of other factor is 57.0%.

This study found that exogenous variable on manager's knowledge of management accounting information systems significantly influence the style of management control. Control styles of management are manager's ways in using management accounting information to support its duties and functions.

The style of management control by managers divided into two, named diagnostic styles and interactive style (Abernethy and Brownell, 1999). Managers are said to use the management accounting information with diagnostic style, if management accounting information is limited only to be used to perform budgeting and realization of the budget reporting tool, without connecting it with goals that are more strategic. Managers are said to use management accounting information system interactively, if manager use management accounting information as a tool to control what can stimulate accountability (accountability), coordination, motivation, as a learning machine and assist the management team in doing problem solving (Abernethy and Brownell, 1999; Naranjo and Hartmann, 2006). The more adequate manager's knowledge of management accounting information system, the manager will be more interactive in using management accounting information.

This research proves that inadequate of manager's knowledge on accounting and finance manager on management accounting information system, effect on how management accounting information being not used interactively. The study also found that how big is the influence of manager's knowledge of management accounting information systems towards the controlling style of management is up to 43.0%. This shows that the influence of manager's knowledge about management accounting information systems towards the style of management control in the bank can only be explained by 43.0%. Nonetheless, the magnitude of the effect (43.0%) is considered sufficient to explain, that the factor of manager accounting and finance about management accounting information systems have a considerable influence towards the controlling style of the bank's management team in using management accounting information. Managers who have adequate knowledge about management accounting information system will be capable of providing and designing management accounting information systems that can encourage management teams to use informations about management accounting interactively and use mangement accounting information systems as a strategic management tool.

Formal educational background should be enough to make the accounting and finance managers to be able to understand the basic concepts of managerial accounting. Based on the collected data shows that most accounting and finance managers in banks have formal educational background in accounting or management bachelor (49.25%). However, the ability of each manager in understanding the concept of managerial accounting and the diversity of educational facilities, allowing managers to have a different understanding on the basic concepts of management accounting. Therefore, in this study, the understanding of the basic concepts of managerial accounting is included as one of the indicators that influence on the image of manager's knowledge about management accounting information systems. In effort to understand the basic concepts of management accounting, managers were asked to answer 20 questions about the basic concepts of management accounting. The results are managers, in average answered 68% the question correctly. If the maximum score is 100%, then the answer of 68% is above the average, or the manager's comprehension of the basic concepts of managerial accounting is actually quite good. Nonetheless, management accounting information system design that can encourage managers to use it interactively, it is not enough if merely based on the understanding of accounting and finance manager on the basic concepts of management accounting.

It takes a very good understanding of (advanced) management accounting information systems, so that managers who are responsible for the accounting and finance field can do the analysis and synthesis of the need for management accounting information system so that next can direct managers to use the system interactively. Managers who use information of management accounting interactively, will use the management accounting information as a basis for running the management process.

The factors that influence the style of management control in the bank are more compared to other companies in general. These factors include: (1) The purpose of the organization (2) government policy factors (Bank Indonesia) greatly affects the style of management control of the bank, the lack of flexibility in managing the bank can inhibit the use of management accounting information interactively;

(3) Social and political factors are dominant factors in the managing the bank. The influx of political factors into the management of banks, causing delays in bank management professionally. Professionalism of management in this case is defined as the management of corporate style, using principles of strategic management correctly in accordance with the conditions of the organization.

**(b) The Influence of Management Control Style Towards the Availability of Management Accounting Information Systems on Activity Based (Activity-Based Management):** Based on the framework of the test of the structural model, this study examines the effect of the style of management's control to the availability of management accounting information system based on the activity (activity-based

management). The style of management control hypothesizedly has a significant impact on the availability of management accounting information system for activity-based. To prove this hypothesis, testing based on survey data that has been collected researchers in the field

From the results of processing data using Smart-PLS 2 software, shows a structural equation as follows:  $Y = 0.500 + 0.348 Z$ . The coefficient value of the path of management's controlling style variable towards the availability of management accounting information system for activity-based amounted to 0.500. The positive coefficient value of the path indicates that the style of management control is high (as appropriate) will make the availability of management accounting information system for activity-based is also more appropriate. The result shows the enormity of the influence of management controlling style towards the availability of management accounting information system for activity based (activity-based management) is  $= 0.500 \times 0.500 \times 100\% = 25.0\%$ .

**Table 3**  
**Significance test on the Influence of Management's Controlling Style To the availability of Management Accounting Information Systems for Activity Based (Activity-Based Management)**

| <i>Variable</i>                                      | <i>Coefficient Effect</i> | <i>t-count</i> | <i>t-critic</i> | <i>Conclusion</i>             |
|------------------------------------------------------|---------------------------|----------------|-----------------|-------------------------------|
| The using of Management Accounting Information style | 0,500                     | 4,336          | 1,96            | There is a significant effect |

*Source:* Research data (2015).

The T- count value of the variable path coefficient control style of management to the availability of management accounting information system based on activity (activity-based management) is 4.336. Because the value of *t*-test bigger than *t*-critical, we conclude that this style of management control is significant towards the availability of management accounting information system based on activity (activity-based management). The results showed that the style of management control affects the availability of management accounting information system based on activity (activity-based management).

This study found that the style of management control affects the availability of adequate management accounting information system. In this study, it found that if not using the management accounting information interactively by the bank's management team, they tend to still use diagnostic style in using the of management accounting information. The use of information with diagnostic style by managers is merely for the purpose of budgeting and evaluation of the budget. The focus of the purpose is limited to the correspondence between the realization of the budget, has not harmonize the use of management accounting information with the organization's strategic objectives. Thus, managers who use management

accounting information in diagnostic style perceive that management accounting information is limited to information of financial only.

Professionalism in managing an organization demands professionalism in managers in various levels, including manager of accounting and finance. Professionalism in managers are shown through manager's interactive controlling style (Naranjo & Hartmann, 2006). If the bank management team are not using the management accounting information with interactive style, it could lead to unavailability of management accounting information system based on activity (activity-based management) in the bank and the study found that the team manager of accounting and finance at the bank has not been able to design a system of management accounting information that is capable of directing the top management team to carry out the management and control processes interactively. The management team who use accounting management information with interactive style will identify or formulate and implement strategies with clear goals that lead to the achievement of the vision and mission of the organization.

The enormity of the influence of the style of management control to the availability of management accounting information system based on activity (activity-based management) is 25.0%, while the influence of other existing factor is 75.0%. It needs to have further identification, other factors that affect the relationship between management control styles with the availability of adequate accounting information systems. Several factors are thought to be: (1) the complexity of the management accounting information system design based on activity (activity-based management); (2) the reluctance of the management team and members of the organization to make changes (Resistance to change); (3) lack of awareness of policy makers on the importance of building a system of management accounting information sufficient for the bank.

**(c) The Influence of Manager's Knowledge on Management Accounting Information Systems Towards Management Accounting System Based on Activity Availability (Activity-Based Management) with Management's Controlling Style as an intervening variable.** From the results of the processing data using Smart-PLS 2 software, shows a structural equation on the influence of manager's knowledge on management accounting information system towards availability of management accounting system based activity as follows:  $Y = 0.385 X + 0.348$

The path coefficient value of the manager's knowledge variable in management accounting information systems to the availability of management accounting system based on activity (activity-based management) amounted to 0.385. The coefficient value which has a positive path showed that the manager's knowledge about management accounting information system that is appropriate (higher) will make the availability of management accounting system based on activity (activity-based management) are also increasingly adequate.

The enormity of influence on manager's knowledge about management accounting information system towards the availability of management accounting system based on activity (activity-based management) is  $= 0.385 \times 0.385 \times 100\% = 14.8\%$ .

**Table 4**  
**Significance Test on The effect of Manage's Knowledge on The Management Accounting Information System Towards The Availability of Management Accounting Information Systems Based on Activity**

| <i>Variable</i>                                                    | <i>Coefficient Effect</i> | <i>t-count</i> | <i>t-critic</i> | <i>Conclusion</i>             |
|--------------------------------------------------------------------|---------------------------|----------------|-----------------|-------------------------------|
| Manager's knowledge about management Accounting information system | 0,385                     | 3,448          | 1,96            | There is a significant effect |

*Source:* Research data (2015).

T-count value of the coefficient path of manager's knowledge variable of management accounting information system towards the availability of management accounting system based on activity (activity-based management) is 3.448. Because the value of *t*-count is bigger than *t*-critical, we conclude that manager's knowledge on management accounting information systems significantly influence the availability of management accounting system based on activity (activity-based management). The results shows that the manager's knowledge about management accounting information system affect the availability of management accounting system based on activity (activity-based management). The enormity of influence of manager's knowledge about management accounting information system towards the availability of management accounting system based on activity (activity-based management) is 14.8%, while the influence of other existing factor is 85.2%.

Managers who have adequate knowledge on management accounting information system will be capable of providing and designing management accounting information systems that can encourage management teams to use management accounting information interactively and use management accounting information systems as a strategic management tool. Information is very instrumental in the organization, because with information, company managers can determine the development of activities that occur in the company and with information managers can avoid the risks that could hurt the company (Susanto, 2008: 37).

The results are consistent with the opinion expressed by Ritonga (2011) states that the Management Accounting Information Systems is designed to provide information for managers. Management Accounting Information Systems aims to improve the quality of information (Laudon et al., 2008; Wang et al., 2005: 7). Similar disclosed is said by Duggan and Reichgelt (2006: 18) that the information system should collect data and turn it into information that has quality. Furthermore Sacer

et al., (2006: 59) states that the quality of accounting information is a prerequisite to achieve the business objectives of the company, and obviously there is no quality in accounting information without the absence of accounting information systems. It is expressed also by Turner and Weickgenannt (2009: 245) process-based information systems that provide high-quality information to the management. Likewise disclosed by Jackson, Sawyer and Jenkins (2009: 30) The information system has several benefits to improve the speed and quality of information exchange, reduce lead times, and reduce processing costs.

Furthermore, to indicate whether the style of management control is an intervening variables in the structural model under the study, will then be shown the results of the model of the influence of manager's knowledge about the accounting information system towards the availability of management accounting information system based on activity (activity-based management) through management control styles. The result of the influence of the manager's knowledge on management accounting information system towards the availability of accounting information system based on activity (activity-based management) through the control style of management can be seen in Table 5 below:

**Table 5**  
**The Enormity of The Influence of X Towards Y Through Z**

| <i>Variable</i> | <i>Pyxi . Pyx</i> | <i>Total Effect</i> |
|-----------------|-------------------|---------------------|
| X-Z-Y           | 0,655 × 0,500     | 32,8%               |
| X-Y             | 0,385 × 0,385     | 14,8%               |

*Source:* Research data (2015).

Based on Table 5 it is known that the influence of manager's knowledge about management accounting information system towards the availability of management accounting information system based on activity (activity-based management) through the controlling style of management is 32.8%, while the influence of the manager's knowledge on management accounting information system towards the availability of management accounting information system based on activity (activity-based management) directly is 14.8%. The results indicate that the style of management control is an intervening variable due to the influence of knowledge manager on management accounting information system towards the availability of management accounting system based on activity (activity-based management) through style of management control is greater than direct effect of manager's knowledge on management accounting information systems towards the availability of management accounting system based on activity (activity-based management).

Management accounting information system is a formal system, which is designed for management to provide information necessary for decision-making and to evaluate the managerial activity (Chenhall, 2005; Garrison, Noreen and

Brewer, 2011, Hansen and Mowen, 2008). Practices using management accounting system are generally carried out through: (1) the calculation of unit cost; (2) the preparation of the budget; and (3) evaluation of performance. Overview of the availability of management accounting information system in the National Private Banks is indicated by the classification of expenses calculation "unit cost" 93.07% of respondents said that the costs are classified on the basis of a specific classification. Furthermore, 73% of respondents replied that the firm has a system/method/ method of calculation "unit cost" and 72% of respondents said they calculate the "unit cost" for any services that are given. Meanwhile based on planning and budgeting, 93% of respondents replied that they have guidelines for the preparation of the budget and 78% of respondents said that every part of the company assembles budget revenues or expenses. Furthermore, 85% of respondents stated that they have accounting and finance functions responsible for accounting, finance and budgeting

Furthermore, seen from evaluations conducted by 89% of respondents stated that the accounting and financial reporting about annual revenue realization costs and 83% of respondents stated that the achievement of the budget have influence in the reward. Based on the above, the majority of managers stated that they had their banks have management accounting information systems. Nevertheless, it should be studied more deeply, whether the management accounting information system in banks are adequate. Bank products are diverse in the services. For organizations that produce products with high variability, the adequate accounting system is the management accounting system of activity-based or often referred to as the Activity-based management (Devine, Ealy and O'Clock, 2008). Therefore, more studies need to be done on the application of the management accounting information system of activity-based (activity-based management) for banks.

## **4. CONCLUSIONS AND SUGGESTIONS**

### **Conclusion**

Based on the phenomenon, the formulation of the problem, hypotheses and research results, the authors draw conclusions as follows:

1. Manager's knowledge on management accounting information system affect significantly towards the management style of controlling.
2. The style of management control significantly affects the availability of management accounting information system on activity-based.
3. **Manager's knowledge about management accounting information systems significantly affect the availability of management accounting information system based on activity through the style of management control as an intervening variable.**

## **Suggestion**

1. Management of banks should start to pay attention to the quality of human resources in the field of accounting and finance. Things to do related to the quality of human resources in the field of accounting and finance, among others: (1) Recruitment of accounting and finance workers with an educational background that corresponds to the field of work; and (2) Encouraging employment in accounting and finance for self-actualization always perform in accordance with the development needs of the organization.
2. Top managers of banks are expected to undertake the development and self-actualization in the field of bank management. As such, they are expected to have better competence in managing the bank. Top managers who have good competence in managing the bank can use an interactive management accounting information and can manage the bank a more professional manner.
3. In order to bridge the lack of competence of the manager of accounting and finance, the bank's top management team should be open to discussions with parties who have competence in the field of management accounting information system, including the willingness to use the services of consultants who are experts in the field of management accounting information systems. Thus the management accounting information systems can be developed according to the needs of the organization.
4. Management of the bank should be more open to research related to management accounting information system of the bank. Thus, the bank's management team will be able to identify the problems in the banking system, and can immediately get a solution to the problems encountered.
5. In the matter of management accounting education at the Faculty of Economics, has been a lot of discussion about the importance of management accounting information systems for organizations. Nevertheless, the object of the discussion is still largely focused on the organization of the manufacturing company. Although in some textbooks have included a discussion of object instances for a service organization, but the discussion is still too short and not deep. Currently, the bank is an organization that really needs the support of management accounting information systems for various purposes. Therefore, it needs to be considered in managerial accounting material to provide a more in-depth discussion about management accounting information systems for banking, given the bank is an organization that has unique characteristics.

## **5. IMPLICATIONS FOR NEXT RESEARCH**

This study is a preliminary study that still has many flaws to be able to explore deeper about the bank management accounting information system. Therefore,

further research is still needed to express, repair and design management accounting information systems required by the bank.

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