



# Information Technology Governance Audit In The Financial Sector Using Cobit 5 Framework

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## ARTICLE INFO

### Article history:

Received Sep 18, 2022

Revised Oct 7, 2022

Accepted Oct 22, 2022

### Keywords:

COBIT 5  
APO domain  
Maturity level  
Audit IT  
Financial sector

## ABSTRACT

Companies require information technology to assist their operational tasks, such as in the banking sector. PT. Penkalis Sridanta As a provider of labor, money is one of the most crucial aspects of the business. Existing Information Technology in the financial sector is unable to maximize the company's performance, particularly in the handling of financial data, due to current issues. To maintain optimal Information Technology management, it is necessary to measure the current level of Information Technology governance and compare it to the level required by the organization, particularly in the financial industry. This assessment relates to the APO (Align, Plan, and Organize) domain of COBIT 5, with a particular emphasis on the APO01 (Manage the Information Technology Management Framework), APO02 (Manage Strategy), and APO06 (Manage Budget and Costs) sub-domains. Service Contracts), APO12 (Manage Risk). The conducted maturity level assessment reveals that the organization, particularly in the financial sector, is still at level 3 (Defined), with level 4 as the aim (Managed).

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## INTRODUCTION

Information technology is frequently seen as a tool that can help businesses reach their strategic plans in order to realize their vision, purpose, and financial objectives. In order to guarantee the veracity and precision of business processes, firms also require assistance from a variety of variables, including capable Human Resources (HR) and suitable information technology proficiency (Martynov et al., 2019). As an illustration, consider the business PT. Penkalis Sridanta, which is one of the businesses active in the service industry as a provider of labor.

Almost all of the company's business procedures require information technology, including receiving power & AC installations, CCTV installations, BPJS payments, PDAM, Telkom, and Cable

TV. This business comprises of various departments, including finance, operations, and human resources. IT must be implemented based on the policies established by the company's leadership in order to increase the performance and efficiency of each of these areas. As a provider of labor, money is one of the most crucial aspects of the business. The financial sector is responsible for creating PLN invoices, VAT and PPh21 tax reports, tax invoices, salary recaps, and daily, monthly, and annual cash books (Voutilainen & Koskinen, 2019).

The utilization of modern information technology in the financial industry still faces obstacles that prohibit it from optimizing the organization's performance, notably in the management of financial data. Due to the fact that the financial sector's use of information technology is still limited to the compilation of financial reports using Excel, the administrator in charge of finances must be exceedingly cautious while doing calculations, such as recalculating salaries. In the realm of finance, he has already deployed the system to handle his funds at PT. Penkalis Sridanta. However, after some time using the system, the administrator in charge of money began to encounter difficulties. The information you wish to enter into the system does not correspond with the general ledger or the proper location for the account. Consequently, the company's financial management technique is once again semi-manual. The organization's method for managing financial data is now undergoing modification. In accordance with its strategic objectives, vision, and mission, the company also aspires to increase the effectiveness and efficiency of its business operations by maximizing the use of currently available information technology hardware and software (Tangka et al., 2020). Prior to establishing the information technology implementation, the company confronted challenges, including the absence of a standard used as a guide for development and the limitations on innovation in tool or technology updates. In addition, the company is unaware of its own level of maturity in incorporating current information technology innovations, notably in the financial sector. Prior to creating information technology, it is necessary to undertake an audit of information technology governance (Aprilinda et al., 2019) in order to detect difficulties and determine how advanced the financial sector's usage of information technology is (Fernandes et al., 2020).

The information technology audit is conducted with the purpose of evaluating and assessing risks to safeguard valuable assets and determining methods to minimize these risks, so that the final results of the information technology audits conducted can provide recommendations for information technology improvements that will serve as a guide for the company when making decisions. Several previous studies that implemented information technology audits to assist businesses, namely IT audits that focused on governance sector (El ghazi El Houssaïni et al., 2016)(Aprilinda et al., 2019) and IT governance audits that focused on the APO12 Domain at DisKominfo (Arief & Wahab, 2016), were conducted to measure the level of capability, and the final one was intended to provide recommendations for improving governance (L. A. L. Smidt, 2016)(Andry, 2016). IT management for the future, an IT audit based on maturity level and a gap analysis to establish maturity level (Hardinata, 2019). Consequently, the purpose of this study is to develop a control mechanism or an information technology audit to measure the level of maturity of the use of information technology in the financial sector, with reference to the COBIT 5 standard.

## RESEARCH METHOD

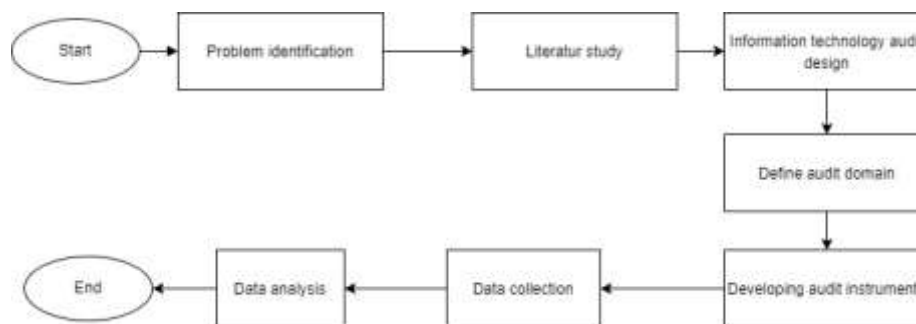
### A. Information Technology Audit

Auditing information technology entails gathering and analyzing evidence to determine if the company's information processes have been managed in accordance with established standards (van der Nest et al., 2017). The evidence is used to establish whether the information systems contained within IT are able to preserve assets and maintain data integrity so that it may be directed toward accomplishing business goals through the efficient use of resources (L. Smidt et al., 2019).

### B. COBIT 5

The COBIT 5 framework is comprised of 5 domains, each with a full definition and including general standards and objectives for corporate IT governance and management (Pederiva, 2003). EDM (Evaluate, Direct, and Monitor), APO (Align, Plan, and Organize), BAI (Build, Acquire, and Implement), DSS (Deliver, Service, and Support), and MEA (Monitor, Evaluate, and Assess) are the five domains of COBIT 5. A maturity level model is one measure of the performance of an information technology system (Krisanthi et al., 2014); this model is used to govern information technology operations utilizing the COBIT framework and scoring/scoring information. Raise it to the maximum level possible so that the governance part of information technology can operate efficiently.

### C. Research Stages



**Figure 1.** Research stages

This study's initial step is to identify issues with ongoing IT governance in the Finance Sector; this is done to determine the present field circumstances by identifying business goals and ongoing IT goals (before the study). After determining the existing conditions, the second step is to conduct a literature review in the form of similar research. Previous research with a comparable audit framework, notably COBIT 5, revealed the following: The writers followed the road and selected domains based on this research. In addition, in the third step, the author creates a plan for the audit stage that will be conducted, followed by mapping the business objectives and IT objectives for the Finance Sector and, in the fourth stage, selecting the domain. The mapping refers to the Enterprise Goals mapping guide, IT-related Goals, in order to match the organization's business and IT goals in accordance with the COBIT 5 standard. From the mapping, the audit process-required domains are derived. The fifth stage is then continued with the creation of data gathering instruments for the chosen topic. Collecting data from stakeholders participating in the business process is the sixth step. A maturity level will then be applied to the analysis of this data. By analyzing the outcomes of data collection are selected values (calculation results) for each domain that indicate the level of domain area maturity. In the next step, the study is continued with a gap analysis (Salleh et al., 2019) in which the researcher obtains the research findings, analyzes them, and gives a comparison scale between the results of the existing maturity level and the expected maturity level for the organization. As the final step of the research process, recommendations for improvement can be made based on the results of the analysis of the current findings in order to help PT. Penkalis Sridanta accomplish its desired goals, particularly in Finance.

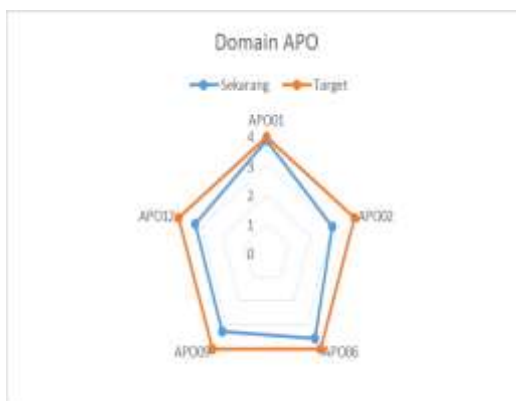
## RESULTS AND DISCUSSIONS

### A. Maturity Level Gap Analysis

**Table 1.** GAP Analysis

Domain	Process	Current Maturity	Expected Maturit	GAP	Adjustment and Repaired Status
APO01	Manage the IT Framework for Management	3,87	4	$4,0-3,87= 0,13$	Fixed
APO02	Managing Strategy	3	4	$4,0-3= 1$	Fixed
APO06	Managing Budgets And Expenses	3,58	4	$4,0-3,58 = 0,42$	Fixed
APO09	Information Technology Management Service Contracts	3,28	4	$4,0-3,28= 0,72$	Fixed
APO12	Risk Management in Information Technology	3,25	4	$4,0-3,25= 0,75$	Fixed

The average maturity level of the APO01, APO02, APO06, APO09, and APO12 domain sub-processes is level 3, whereas level 4 is the desired maturity level. The gap analysis between the Current Maturity and Expected Maturity sub-process of the evaluated APO domain is depicted in the graph in Figure 2.



**Figure 2.** APO Domain

**B. Improvement Recommendations**

The maturity level gaps identified in the control objectives for the subdomains APO01 (Manage the IT Management Framework), APO02 (Manage Strategy), APO06 (Manage Budget and Costs), APO09 (Manage Service Agreements), and APO12 (Manage Risk) can be closed by a company, particularly in the financial sector, by implementing the following improvements or adjustments:

1. Subdomain APO01 (Manage the IT Framework for Management):

The present level of financial maturity is level 3. (Defined). The results of respondents' responses to question No. 8 for the APO01 sub domain indicate that the administration of the IT management framework is still subpar due to the lack of a documented policy or strategic plan. For PT. Penkalis Sridanta to strengthen IT governance and reach the desired maturity level target of level 4 (Managed), every process that exists at every level must be followed.

Proposed Improvement Recommendations:

Companies in the financial sector need to create documented policies, strategic plans, and IT service governance standards that involve stakeholders and IT managers.

## 2. Subdomain APO02 (Managing Strategy):

Currently, the level of financial maturity is level 2. (Repeatable). The results obtained from the respondents' responses to questions 9 and 12 for the APO02 subdomain indicate that the company's vision and mission are uncertain and that the IT manager has been unable to build a system suited for application in the financial industry. To attain the predicted maturity level aim of level 4 (Managed), PT. Penkalis Sridanta, particularly in the financial sector, can enhance IT governance by completing each and every existing process at every level.

### Proposed Improvement Recommendations:

By putting the company's vision and objective in writing, emphasis is placed on comprehending them.

## 3. Subdomain APO06 (Managing Budgets And Expenses):

Currently, the level of financial maturity is level 2. (Repeatable). The results collected from the respondents' responses to questions 14 and 19 for the APO06 subdomain indicate that errors and mistakes are still possible when planning the budget for IT procurement or maintenance. To attain the predicted maturity level aim of level 4 (Managed), PT. Penkalis Sridanta, particularly in the financial sector, can enhance IT governance by completing each and every existing process at every level.

### Proposed Improvement Recommendations:

The financial sector and the person in charge of IT must collaborate to set a budget for the acquisition or maintenance of IT services.

## 4. Subdomain APO09 (Information Technology Management Service Contracts):

Currently, the maturity level in finance is level 3. (Defined). The conclusions gathered from the responses of respondents address the absence of a special system to support firm activities, particularly in the financial sector, the absence of a catalog as a reference for IT, and the absence of monitoring the achievement of progress in IT services. To attain the predicted maturity level aim of level 4 (Managed), PT. Penkalis Sridanta, particularly in the financial sector, can enhance IT governance by completing each and every existing process at every level.

### Proposed Improvement Recommendations:

Implementation of IT services must be monitored and accomplishments reported so that the alignment of IT services with financial sector business requirements can be evaluated.

## 5. Subdomain AP012 (Risk Management in Information Technology):

The present level of financial maturity is level 2 (Repeatable). In the IT department, not all work processes are well-documented, and standard operating procedures (SOPs) for managing risk control are not yet comprehensive, according to the results gleaned from the responses to the answer points. To attain the predicted maturity level aim of level 4 (Managed), PT. Penkalis Sridanta, particularly in the financial sector, can enhance IT governance by completing each and every existing process at every level.

### Proposed Improvement Recommendations:

Companies, particularly in the financial sector, place a greater emphasis on optimizing risk management to avert potential hazards. For instance, by creating a BCP (Business Continuity Plan) to prepare the business for potential disruptions.

## CONCLUSION

Conclusions drawn from the use of IT audits using COBIT 5 in the financial sector are (1) PT. Penkalis Sridanta's financial sector currently has an average IT governance implementation level of 3.39, which falls under level 3 (Defined) and is 0.61 below the desired level 4 aim (Managed). (2) The APO01 subdomain at level 3.87 is included in level 4 (Managed), the APO02 subdomain at level 3 is included in level 3 (Defined), and the APO06 sub domain at level 3.58 is included in level 4 (Managed) of the COBIT 5 domain APO (Align, Plan, and Organize) to manage the IT management

framework, strategy, budgets and costs, manage IT service agreements, and manage IT risks in the financial sector of PT. Penkalis (Defined). (3) It is discovered that the maturity level of each examined sub-process of the APO domain (Align, Plan, and Organize) is still below the predetermined threshold. As a result, additional attention is required in the form of improving management as soon as feasible, using recommendations for improvement as a reference for these improvements. This demonstrates that the maturity level target has not been achieved as envisaged by the financial industry. To serve as a guide for managing and maintaining IT, written policies, strategic plans, and IT service governance standards must be established. Additionally, the Company places more emphasis on optimizing risk management, particularly in the financial sector, in order to stop potential dangers. For instance, by creating a BCP (Business Continuity Plan) to get the business ready for potential disruptions.

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