

RISK MANAGEMENT SOLUTIONS

by Dadang Suwanda

Submission date: 24-Mar-2020 08:47AM (UTC+0700)

Submission ID: 1280823704

File name: Jurnal_Manajemen_Risiko_English_NM.docx (421.83K)

Word count: 12955

Character count: 74913

RISK MANAGEMENT SOLUTIONS IN LOCAL GOVERNMENT FINANCIAL MANAGEMENT

Dadang Suwanda

Faculty of Financial Management, Indonesian Institute of Domestic Administration (IPDN)
dadang_suwanda@ipdn.ac.id

Abstract

Risk management in financial management in developing countries has emerged as one of the most interesting research topics today. The magnitude of the role of the local government financial management sector has not been accompanied by adequate risk management. Risk management is an important part of decision-makers. Poor risk management in financial management often leads to loss of public trust with the consequences of failure in the administration of good and clean governance. To improve government financial management, risk management is needed that must be managed effectively. The study was conducted using a single case, with a qualitative method approach through interviews, questionnaires, observation, documentation and focus group discussions (FGD). This research, presents empirical data in a case study in one of the local governments in Indonesia about the risk of government financial management, namely public financial management, especially local governments that have not been mapped, the results are expected to be used for future research. The focus of this research is on the use of risk management measures as a strategic skill in managing regional finances. Specifically, the aim is to find out the extent of these risk steps to predict periodic instability periods.

Keywords: Risk, Local Government, Regional Government Financial Management, Public Risk Management.

1. Introduction.

Modern society faces many challenges, human life, community welfare, and the environment are threatened by risks that can be systemic such as climate change, epidemics and financial crises (Gai & Kapadia, 2019). The latest stage of development of the world community today is the complexity and dynamics that have evolved which have led to an endless increase in the level of risk in all fields (Pettit, Croxton, & Fiksel, 2019). Risk leads to uncertainty over the occurrence of an event that causes a small loss that is not so significant or a large loss that affects the survival of governance (Kettlewell, 2019; Svetlova & Thielmann, 2020). This raises systemic risks that have an impact on changes in speed and complexity intensity (Berger, Roman, & Sedunov, 2019; Biagini, Fouque, Frittelli, & Meyer-Brandis, 2019; Schweizer, 2019). All of that demands anticipatory action from the start in dealing with risks so that problems can be faced (Stewart, 2019; Zwikael, Smyrk, & Stewart, 2019) so as not to cause a loss (Svetlova & Thielmann, 2020).

The risk is something that cannot be avoided (Tran, 2019). However, in many situations, systemic risk can be predicted and managed (Manguzvane & Muteba Mwamba, 2019; Wijethilake & Lama, 2019). However, in many situations, systemic risk can be predicted and managed (Anouche & Boumaaz, 2019; Laisasikorn & Rompho, 2019; McMahon & Hartmann, 2019). For a long time, the management of risks was considered to be purely a problem of the application of the conclusions of the relevant quantitative science (Abdel-Basset, Gunasekaran, Mohamed, & Chilamkurti, 2019; Anouche & Boumaaz, 2019; Fowler & Quigley, 2019). Now it is increasingly appreciated to involve the skills of governance as well as Public agencies, political administrators, regulators, etc. (Akingbola, Rogers, & Baluch, 2019; De Marchi & Ravetz, 1999; Ivanyos & Sándor-Kriszt, 2015; Olvera-Garcia & Neil, 2019).

Local governments that are part of the government must carry out government management activities including financial management (Alpenberg & Karlsson, 2019; Z. Chen, Pan, Wang, & Shen, 2016). Financial management is one of the supporting elements of the development of a country (Caperchione, Cohen, Manes-Rossi, & Brusca, 2019; Iqbal, Nawaz, & Ehsan, 2019; H. Yang & Van Gorp, 2019). Local government financial management always experiences very complex risks including in budgeting (Ali, Shrestha, Chatfield, & Murray, 2019; Alpenberg & Karlsson, 2019; Z. Chen et al., 2016; Ihlanfeldt & Mayock, 2015; Kennedy, Tennent, & Gibson, 2006; Mauro, Cinquni, & Pianezzi, 2019; Widanaputra & Mimba, 2014). Local government financial management related to planning, implementation, reporting, monitoring and evaluation as well as accountability and supervision (H. T. Chen, Morosanu, Powell-Threets, Lian, & Turner, 2019; Dewi, Manochin, & Belal, 2019; Dillard & Vinnari, 2019), and is always related to tax revenue, expenditure and budget management (Eckersley, Murphy, & Ferry, 2019; Guarini & Pattaro, 2019). All that affects the allocation of resources and

the distribution of income, supervision and control and fiscal relations between governments (Francesca Manes Rossi, Eugenio Caperchione, Sandra Cohen, 2018).

In managing revenue and expenditure, local governments sometimes face deficits (L. E. Johnson, Lowensohn, Reck, & Davies, 2012; Mauro et al., 2019) including when they lack the income to cover expenses (Ifere & Okoi, 2018). Most of the time is spent finding solutions to problems, for example by borrowing funding (de Araujo, Barroso, & Gonzalez, 2019; Foltin, 2017; L. E. Johnson et al., 2012; Urahn et al., 2013). This can be seen from the many needs faced with limited sources of regional income (Hadfield & Cook, 2019; Mardiasmo, 2002; Tung & Bentzen, 2019). Therefore, spending priorities and good planning can be the key to getting around budgeting. Conditions of financial deviations to the budget both in terms of revenue, expenditure, and financing must be following the ability of the region that is circumvented in financing the implementation of government (Halim & Kusufi, 2007).

In the current conditions, public financial management must consider various factors and various risks to complete the assigned tasks to be effective (Tkachenko, 2020a). The magnitude of the role and risk in the local government financial management sector must be accompanied by adequate risk management (Palutikof et al., 2019). Local governments are always aware that success must involve the assessment of risk management. Often local governments do not realize the importance of understanding risk (Mees, Uittenbroek, Hegger, & Driessen, 2019). The consequences of ignorance have an impact on the achievement of program goals and activities such as the failure of programs and activities, the achievement of outcomes to the community, the occurrence of fraud and others. Therefore the government needs to recognize what risks are inherent and will hinder the achievement of government objectives. Good risk management will reduce the impact of risk on achieving the objectives of government agencies.

Local government financial management must be reported systematically and structured following the rule force in a country (Jones, Holmes, Fischer, & Cole, 2019; Kloot & Martin, 2000; Laswad, Fisher, & Oyelere, 2005). The Republic of Indonesia Supreme Audit Agency (BPK) found many problems related to regional financial management, including 7284 weaknesses in the internal control system, 7549 non-compliance with statutory provisions valued at Rp.25.14 trillion, and 164 issues of inefficiency, inefficiency, and ineffectiveness valued at Rp. 25 trillion (The Audit Board Of The Republic Of Indonesia, 2019). This has become a worrying phenomenon. Not yet optimal management of regional finances can also be seen from various cases of criminal acts of corruption that occurred in the misuse of the financial budget which reached 154 cases with state losses reaching Rp. 1.2 trillion (The Audit Board Of The Republic Of Indonesia, 2019).

There are many risks in the management of regional finances in deviations from the budget, often in the infrastructure sector where the largest budget allocations are marking up, markdown, fictitious reports, abuse of authority and embezzlement so the financial statements are often not following the actual realization (Keban, 2019). This opinion reinforces the research of Warongan, Pagalung, Uppun, & Habbe (2014) which explains that poor public financial management including local government will provide an opportunity to commit irregularities and mistakes and lead to fraud that causes corruption and poor public services. The many problems faced by local governments ranging from asset management, finance to the low local revenue (PAD) have a negative effect on the implementation of local government in Indonesia. Ernst & Young (2009) mentioned that there are several reasons for the need to manage risk, namely 1) risk management promotes transparency to the stockholders on what the risk that the corporate is exposed to, also how much how to mitigate, 2) everyone is accountable for the risk embedded in their activities.

Local government as a public organization needs a methodology that can be used to identify, measure, monitor and control risks arising from financial management, thus budget management will be carried out effectively so that negative impacts do not occur. In addition to ensuring continuity, community service and the development of organizational goals that are in line with the vision and mission in meeting the expectations of stakeholders.

To realize this, local governments need to continuously recognize risks in achieving the goals set. Siahaan (2013) is of the view that risk failure can be avoided by risk management, which can be used as a basis for determining risk maps, as well as the impact and attitude that must be taken. Kirogo, Ngahu & Wagoki (2014) research explains that risk-based management has a positive effect on financial management so that they can know what actions should be taken to respond to risk which exists. Although attention to risk management has increased, there are still many differences in the results of academic research in local government management. One of the reasons that emerged was because of difficulties in determining the right size of risk management. As a result of research that the application of risk management systems will improve the performance of local governments (García-Juan, Escrig-Tena, & Roca-Puig, 2019; Yasin, Artinah, & Mujannah, 2019). As well as other studies, revealed that risk management must have a relationship with the performance of existing resources in local governments, Djurijevska-Markoski & French (2019), through his research on the US government in the United States believes that there is a positive relationship between state

government ²² sees application of risk management. Statistically and economically it was found to increase to 17%, after the existence of risk management.

The results of implementing risk management for local governments are by ¹⁷ creating synergies between risk management activities (Miccolis & ⁶¹ Smith, 2000; Cumming & Hirtle, 2001; Lam, 2001; Meulbroek, 2002). The application of risk management seems to raise risk awareness, which supports better operations and strategic decision making of local governments (Suardini, Rahmatunnisa, Setiabudi, & Wibowo, 2018). Therefore, researchers have thought that it is still very important to conduct research on risk management about the financial management of local governments, which can then become a reference for research and local government.

2. Historical Theoretical background

2.1. Reviews Local Government Financial Management

Local government financial management ¹² refers to public sector management (Caruana, Brusca, Caperchione, Cohen, & Rossi, 2019) ⁸ namely the existence of a set of laws, rules, systems, and processes that refer to existing policies and government, to mobilize revenues, allocate public funds, conduct public expenditure, calculate funds and audit results (Lawson, 2015). A large number of actors are involved in this public financial management cycle to ensure it operates effectively and transparently while maintaining accountability (Lawson, 2015; Mehrpouya & Salles-Djelic, 2019; Tkachenko, 2020a)

Public financial management consists of several parts ⁶ including budgeting, accounting, purchasing/procurement, financial management, cash management and auditing (Coe, 1989). The chain of activities ranging from budget planning by the executive and authorization of the budget by the legislature to the distribution of the implementation of activities (Wildavsky, 1986)) so that local governments must hold the procurement of assets and work contracts, payment verification, cash management, the release of payment obligations, accounting, reporting, control, auditing, and evaluation (Brignall & Modell, 2000).

Public financial management (PFM) includes planning, budgeting, accounting, reporting, supervision, monitoring and evaluation activities (Allen, Schiavo-Campo, & Garrity, 2003). Another theory argues PFM is the budget cycle, starting from the preparation and planning of the budget, internal control, accounting, internal and external audit, reporting and monitoring (Lane, 2002).

2.2. Interdisciplinary conceptions of risk.

Risk can be defined as a condition that will occur from the consequences of possible losses that are expected from disrupted economic activities (Bizottság, 2010; ISDR, 2009). Conceptual picture of risk according to Bizottság (2010) and ISDR (2009) is explained in the figure below:

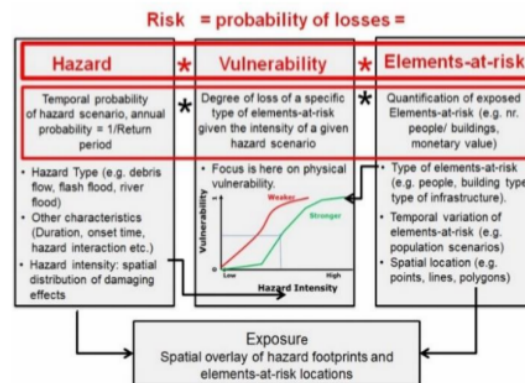


Figure 1.
Perspectives the Risk by Bizottság (2010), ISDR (2009).

The figure above explains that the risk is divided into hazards, vulnerabilities and risk interaction elements, risk loss analysis that will occur are calculated based on physical vulnerability data by taking into account the calculated risk elements (Bizottság, 2010; ISDR, 2009). Other theories that risk explains uncertainty about the consequences of an activity carried out (Aven & Renn, 2010; B. B. Johnson & Covello, 2012). In most of the literature, researchers also agree

that the problem of risk is always associated with negative consequences of impacts (Beasley et al., 2019; Buregeya, Loignon, & Brousselle, 2019; Christopher & Lee, 2004; Poshakwale, Aghanya, & Agarwal, 2019; Spekman & Davis, 2004; Vu, 2019; Wagner & Bode, 2006).

Concerning risks in the local government sector which demands transparency and increased performance of their activities but with a limited budget (Guillamón, Bastida, & Benito, 2011), risks in the implementation of local government especially in regional financial management always increase from year to year (Edwards, Griffith, Burton, & Mackey, 2019) and always influence the achievement of objectives (Bocken & Geradts, 2019; Chambers & Rand, 2011; Edwards et al., 2019; Guillamón et al., 2011) understanding risk is a must for local governments, by being able to more precisely determine the priority of the program of activities carried out so that local government objectives can be realized (Bocken & Geradts, 2019), the sections involved in managing local government finances need to identify risks to reduce the dangers and losses arising from these activities, due to implementation the implementation of local government is always at high risk (Qiao, 2007).

³¹ 2.3. Public Risk Management

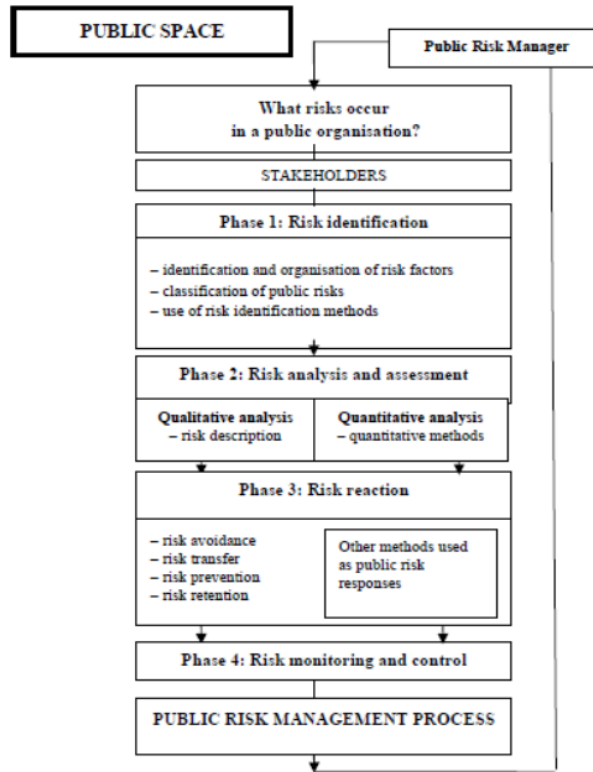
The concept of risk management has a long period to become literature. starting with the Greeks who offered their ability to assess risk in decision making (Bernstein, 1996). in the field of scientific research, risk management includes new theories compared to other sciences, about 30 to 40 years of undeveloped (Akintoye & MacLeod, 1997; Aven, 2016a; Bui, Cordery, & Wang, 2019; Dandage, Mantha, & Rane, 2019; Haimes, 2005; Scholes, 2000). From the present period, we see many scientific writings such as dissertations, scientific journals, papers, and conferences that discuss the concept of how to appraise and manage risk appropriately (Aven, 2016b). for now, risk management becomes a theory applying conclusions using the rules of the rules Relevant science (Council, 2009; Failing, Gregory, & Harstone, 2007; Fischhoff, 1995; Klinke & Renn, 2019; Walker, 2003; Q. Yang, Wang, & Ren, 2019). Now risk management is often used in the implementation of activities in both private and public organizations such as local governments (Baxter, Bedard, Hoytash, & Yezegel, 2013; De Marchi & Ravetz, 1999; Dupire & Slagmulder, 2019; Klinke & Renn, 2019; Petersen, 1997; Scholes, 2000).

Demidenko & McNutt (2010) in their research results revealed that risk management is a means to realize organizational goals and monitor the performance of management. Risk management involves identifying risks, predicting how likely they are and the impact if they occur, ⁶⁰ deciding what actions to take and implementing those decisions (Williams et al., 2006). Risk management helps the ⁶⁰ decision-making process by taking into account matters outside the control of the organization that affects the achievement of organizational ³⁰ goals. Risk management is applied because it will produce more information about organizational risks and produce ³⁰ better management and better decision making (Kleffner, Lee, & McGannon, 2003).

Risk management also applies analytical techniques and measures or risk management to measure the amount of financial loss (or profit) face ⁵⁹ the organization (Beasley et al., 2019; Brous, Janssen, & Herder, 2019; Kliem & Ludin, 2019; Mulvey & Erkan, 2006; Schenker-Wicki, Inauen, & Olivares, 2010), however, governments need to know the impact of any possible outcomes and their implications for profitability. In order to measure this risk is useful, so it can be calculated ²⁸ actual gains and losses that arise (Gorrod, 2004). The objectives of risk management relating to the public include ²⁸ to eliminate or reduce damage to the threat of loss to public institutions through systematically organized efforts (Lewis, 2020; Machlis & Tichnell, 2019; Petrescu, Postole, & ⁶ Obanasu, 2019). The importance of risk management to local government financial management can be measured. ⁶ But this does not mean that financial management risk management ignores potential risks other than local government, especially those from the central government. (Petrie, 2013).

⁷³ 2.4. Risk Management Process in a Public Organization.

Risks in the public sector so far may not be completely eliminated but must be managed properly and correctly by using the application of appropriate methods, techniques, and analytical tools. Tworek (2015), recommends that the risk management process consists of four stages in a public organization, an explanation of these stages is presented in the Figure below:



21 **Figure 2**
 The flow stages of the risk management process in public organizations by Tworek (2015)

21 The risk identification phase is the first stage in the risk management process in public organizations, where the phase is activities to find or find out the sources of risk that may arise in the activities carried out by classifying these risk sources. then in the analysis and risk assessment phase, calculating the estimated risks and impacts that will arise. the next stage is the risk reaction phase, where this phase, determines the right way or method to prevent risks that have been previously identified, analyzed and assessed, the last stage is the risk monitoring and control phase, where the parts of risk are higher, more priority for monitored and controlled. this phase is to see the development of the extent to which the application of risk management in these activities, in the process of applying risk management in public organizations, it is necessary to consider external factors and internal factors that will affect the course of the activities of the public sector organization (Tworek, 2015a).

41 2.4.1. Risk identification

The risk identification phase becomes the most important among the other phases because this phase is the process of determining risks that have the potential to hamper program activities and activities to achieve organizational goals (Tworek, 2015a), by documenting and communicating to the stakeholders involved (Conrow, 2003), the steps in determining risk, must be carried out appropriate, appropriate processes for risk identification and for each quality process, identifying and recording risks (Vasile, Croitoru, & Mitran, 2012; Zou, Zhang, & Wang, 2007). risk identification activities must include what can happen and what can cause risk, both the causes of risk - both external and internal to the organization by recording risks into the risk register and opportunities that will be the foundation for the next stage (Hopkin, 2018). In essence, in the process of risk identification is to analyze and search for a list of potential risks and can also affect the objectives of the activities of an organization (Harold, 2010), various techniques that can be done to identify risks include the following:

Table 1.
Risk Identification Technique by Barton, Shenkir, & Walker (2010),
Ostrom & Wilhelmsen (2019), Abdel-Basset et al., (2019)

Internal Interviewing and Discussion	External Sources	Tools, Diagnostics and Processes
<ul style="list-style-type: none"> • Interviews • Questionnaires • Brainstorming • Self-assessment and other facilitated workshops • SWOT analysis • Historic of risks • Audit and • Inspection reports 	<ul style="list-style-type: none"> • Comparison with other organizations • Discussion with peers • Benchmarking • Risk consultants 	<ul style="list-style-type: none"> • Checklists • Flowcharts • Scenario analysis • Value chain analysis • Business process analysis • Systems engineering • Process mapping

Many techniques can be used to conduct risk identification (Ostrom & Wilhelmsen, 2019), but in this study will be used the way of discussion with interviews with authorized parties, Focus Group Discussion, observation and deepening of documents related to research. Risk identification aims to identify and make a list of possible risks (Abdel-Basset et al., 2019). In addition, identification is also carried out regarding the probability of the risk that will occur, causes and effects that may arise from these risks. Furthermore, after all, risks have been identified, an assessment process is carried out on each risk to determine the category of each risk. The process of identifying this event was carried out through a discussion and interview approach and reviewed from several previous studies relating to risks that might occur in the application (Abdel-Basset et al., 2019; Barton et al., 2010; Ostrom & Wilhelmsen, 2019).

2.4.2. Risk Analysis and Risk Assessment.

Risk analysis and risk assessment required to process the data obtained to obtain a risk profile by assessing the potential risks that have been identified. (Ostrom & Wilhelmsen, 2019; Purnamasari & Rani, 2019). Risk analysis and risk assessment refer to two factors, namely the quality of risk and the quantity of risk. The quality of risk is related to the likelihood of risks that will arise, while the amount of risk is related to how big the impact of risk on the sustainability of the organization. The purpose of this stage is to obtain a list of risks that have been assessed based on the level of likelihood of risk occurrence and the impact caused by the risk (Lucchetti, Arcese, Martucci, & Montauti, 2019). The results of risk analysis and risk assessment are a list of risks mapped to determine which risk priorities will be addressed first (Yoe, 2019b, 2019a).

Mapping techniques in this study, using the dimensions of the likelihood of risk occurrence and the dimensions of the impact if the risk occurs. The first dimension, states the level of likelihood that a risk will occur. The higher the likelihood of a risk occurring, the more priority attention must be given in its handling. Conversely, the lower the likelihood of a risk occurring, the smaller the priority of attention in handling it (Moeller, 2011; Tworek, 2015a). This research dimension might be divided into five categories, namely almost never, unlikely, possible, likely and almost certain as shown in the table below :

Table 2.
Level Likelihood

Level	Description
1 Almost Never	Does not occur in 5 years
2 Unlikely	Occurs 1 time in 5 years
3 Possible	Occurs 1 time in 2 years
4 Likely	Occurs 1-4 times in 1 year
5 Almost Certain	Occurs > 5 times in 1 year

The second dimension is the impact that will arise if the risks faced really come true. The higher the impact, the higher the level of attention, conversely, the lower the impact, the lower the interest of management to deal with the risks faced. In this study, the dimensions of the impact are divided into five categories, namely minor, moderate, severe, major, and worse case, as shown (Chapman, 2011; Evans & Olson, 2001; Moeller, 2011), as shown in Table 3 below:

Table 3.
Level Impact

Level		Description
1	Minor	Very Small Impact
2	Moderate	Small Impact
3	Severe	Big Impact
4	Major	Big Impact
5	Worse Case	Very Big Impact

From the result of the two dimensions, a likelihood and impact matrix is then made, where the matrix is divided into five levels, namely Level 1 (Extreme), level 2 (High), level 3 (Medium), level 4 (low), and level 5 (very low), according to the priority level of handling of the risks faced, where the higher the impact and the greater the likelihood that occurs, the higher the overall level of risk, as shown in Table 4 below:

Table 4.
Matrix of Impacts and Likelihood (Chapman, 2011; Evans & Olson, 2001)

LEVEL		Impact					
		1	2	3	4	5	
		MINOR	MODERATE	SEVERE	MAJOR	WORSE CASE	
Likelihood	5	ALMOST CERTAIN	Medium	High	High	Extreme	Extreme
	4	LIKELY	Low	Medium	High	High	Extreme
	3	POSSIBLE	Low	Medium	Medium	High	High
	2	UNLIKELY	Low	Low	Medium	Medium	High
	1	ALMOST NEVER	Very Low	Low	Low	Low	Medium

2.4.5. Risk reaction.

The next phase is the phase risk reaction, based on the results of risk analysis and risk assessment, a risk reaction is carried out which aims to find out which risks have the highest to lowest priority level and determine which risks are followed up with treatment and which risks only need to be monitored (Friedman, 2019). In this process, an alternative selection is carried out to deal with risks, assess their treatment options, prepare a risk management plan and implement it. This stage involves the leaders of the organization, in which risk management relates to the allocation of resources and funds needed in handling risk. Basically, risk reaction is an attempt to reduce the impact of risk and reduce likelihood (Aven & Renn, 2010).

The selection of risk management is carried out by taking into account the principle of costs and benefits for local governments, the impact on the likelihood of occurrence (likelihood) and the impact of risk (impact), the possibility of opportunities arising, and the need to also consider the effects on other. Risks alternative actions that can be taken, namely: 1) Accepting Risk, is the act of financial management of the local government to accept risk by not taking meaningful actions that require large resources. This action is usually applied to risks where the overall risk level is low (not significant) so that if the residual risk is handled, it will incur costs that are not proportional to the benefits; 2) Avoiding risks, is the actions of local government financial managers not to conduct certain business or activities that contain undesirable risks. This action is applied to the level of risk that has a very high impact that can affect the running of the organization where the risk reaction will ordain a very high time and cost. 3) Reducing Risk is the action of an organization with all available resources trying to minimize risk as optimal as possible. This action can be carried out by conducting periodic monitoring and reducing the impact caused by the occurrence of a risk, usually on high-risk and low-risk risks, by making plans for budget changes; 4) Dividing Risk, is an act of the regional government financial manager to transfer risk from the regional government financial manager to a third party who can manage the risk, among others, through contracting. The principle of strategy must be carried out effectively and optimally by considering risk management to the impact of risk, the cost of risk reaction and the ability to handle risk (Barbera, Jones, Korac, Saliterer, & Steccolini, 2019; Bhavnani & Lacina, 2017; Wise & Witesman, 2019).

2.4.6. Risk Monitoring and Control

Risk monitoring and control is the final step in the risk management process, where the system is monitored to measure the efficiency of corrective actions and detect potential risks not identified in the previous step, this step can

im²⁶plement the risk management system (Ennouri, 2013). Risk monitoring and control must be carried out both ongoing and separately separate evaluation Ongoing monitoring activities are reflected in supervision, reconciliation, and other routine activities. In the process of monitoring, it is necessary to pay attention to obstacles such as reporting deficiencies, namely reporting that is incomplete or even excessive (irrelevant). These constraints arise from various factors such as information sources, reporting material, the parties submitted the report and directions for reporting (Turner & Weickgenannt, 2020).

3. Research Methodology.

This section explains the research⁵⁵ methodology used in this research, by conducting an in-depth collection of empirical data on the risks of any risks that arise in the implementation of public financial management. To collect empirical data, we follow a qualitative case study approach with various perspectives related to research (Maxwell, 2019) involving several government organizations.

This research uses case³⁷ studies, the reason being that case studies are an effective tool for analyzing complex and specific problems in real life, case selection is not random but based in theoretical/selective sampling, with one local government selected because many stakeholders are involved with complex interactions that pose major challenges for the coordination and financial management of the local government (R. J. Yang, Zou, & Wang, 2016). The method approach in this study, using respondents' participatory techniques associated with in-depth interviews. In-depth interviews are one of the best-known strategies for collecting qualitative data. The various qualitative interview strategies that are commonly used emerge from a variety of disciplinary perspectives which produce a wide variation between qualitative approaches (DiCicco-Bloom & Crabtree, 2006).

The experience of researchers as lecturers and public financial management consultants or regional governments in local⁷² governments in Indonesia facilitates access in data collection and respondents also influence the selection of one of the local governments in Indonesia as the object of research in this case study research. With personal closeness between researchers and respondents, it helps to collect various forms of empirical data relating to not only the design and implementation of this research but also how respondents are active in helping to select research data. Because it is expected that research results help as one solution (Poggenpoel & Myburgh, 2005) in the implementation of financial management in the local government.

Data collection is driven by the aim of understanding risk research¹⁶ risks that arise in the implementation of local government financial management and how to obtain research solutions. Primary data was coll⁵³ected through structured in-depth interviews with respondents (see Table 5) from four different back¹³grounds: (a) The Ministry of Home Affairs as the main implementing agency for financial management in the³⁶ region (b) Ministry of Finance as the budget provider for local governments (c) government agencies as executors of public financial management (d) experts in the field of public financial management risk management.

Table 5.
Profile of Interviewees.

Level Government	Position	Number of interviews
National Level	Director-General of Regional Financial Development At The Ministry of Home Affairs Indonesia	1
	Director General Of Budgeting of The Ministry of Finance Indonesia	1
Regional level	Secretary of Garut Local Government	1
	Head of Garut Local Finance and Asset Management Board government	1
	Head of Garut Local Revenue Board government	1
	Head of Garut Local Development Planning Board government	1
	Head of Garut Local Inspectorate government	1
Expert Judgement	Doctor University Lecturer	2
Total		10

All respondents are guaranteed confidentiality and objectivity before the interview. The main purpose of the interview was to explore respondents' experiences and perspectives about public financial management activities at the study site. Interviews each lasted between 60 and 120 minutes. The interview is comple⁷⁰ted by field-based discourse analysis of data documentation, the material on regional budgeting and expenditure. Risk in the implementation of public financial mana⁴gement, whether risk management has been carried out and material related to the risk management policies issued by the Ministry of Finance and the Ministry of Home Affairs as policymakers for the regulation of the

implementation of public financial management at the local government level. Also, a broad review of publications in helping to understand the procedures, technical aspects of risk management in public financial management. Each source provides insight into risks and how respondents experience and think about risks in public financial management. All interviews were recorded and then transcribed in detail and meticulously while *cross-checking* with research data in the field and documentation data.

4. Result and Discussion.

Significant risks continue to color the Indonesian economy which can be a test of Indonesia's risk management framework which may occur sooner than anticipated (Triggs, Karibu, & Wang, 2019). For recovery and sustainable development, Indonesia needs a good and effective government. Indonesia's reforms to succeed, all decentralized regions must develop healthy regional economic development plans. Indonesia must apply the principles of good and effective governance, which means that it develops institutional capacity and leads to checks and balances at various levels of government (Tambunan, 2000). Indonesia is a unitary state that implements a decentralized government system by giving autonomy to regional governments (Ritonga, Clark, & Wickremasinghe, 2019). Delegation of authority and affairs of the central government, including managing its finances (Suhardi, Husni, & Cahyowati, 2019). Where the process of division of the budget from the central government level to regional governments to support the delegation of authority and the transfer of some government affairs to be more effective and efficient (Ritonga et al., 2019). The above literature is one of the reasons why the local government in Indonesia is the object of this research

Local government financial management is a risk-filled activity (Edwards et al., 2019). This is because of the number of funds managed by the local government. This was also experienced by the regional government which was used as the object of research, namely Garut Local as one of the regional governments that had such a large budget, had authority in carrying out the regional financial management and had to face risks in financial management. In the 2018 budget year, the amount of the regional budget was Rp. 4.1 trillion with details as shown in table 6 below:

Table 6.
Garut Local Government Development Budget fiscal year 2018
by Regional Finance and Asset Management Board

DESCRIPTION	AMOUNT (Rp.)
Regional Revenues	3.958.846.796.316,00
Expenditure	4.111.597.456.316,00
<i>Surplus/(Defisit)</i>	(-)152.750.660.000,00
Regional Financing	
a. Revenue	160.750.660.000,00
b. Expenditure	8.000.000.000,00
Financing Netto	152.750.660.000,00

Receipt of funds from the central government and the use of such large funds must be managed in an orderly manner, obeying the laws and regulations, efficient, economical, effective, transparent and responsible with due regard to the principles of justice, propriety, and benefits for the community (Duchacek & Duchacek, 2019). From the results of observations in the field, it is known that the management of local government finances has not been running effectively and satisfactorily. There are findings in the field about 1) from the data is known that there are findings of a weak internal control system in management that has not been fully regulated (The Audit Board Of The Republic Of Indonesia, 2019), findings have been followed up by 78.13%, while the remaining 9, 38% have been followed up but not according to recommendations and 21.88% have not been followed up; 2) The composition of employees in the regional government in financial management is not ideal, not yet effective, not efficient and not yet professional (Pratiwi, Jamaluddin, Niswaty, & Salam, 2019), this finding is in line with research, that there is no match between the HR needs of the regional government and employees received according to their skills; 3) The ability of regional financial independence, funding for development needs is still low. The ratio of PAD to total revenue has only reached 11% (Garut Local Government, 2019); 4) The results of the implementation of the flagship program "Amazing Garut" in the form of infrastructure, education and health infrastructure and infrastructure development are at risk of not being completed on time when the fiscal year ends due to a late budget from the central government (Garut Regional Government, 2019).

The above problems, causing regional financial management activities will face the complexity of the problem, instability, and uncertainty that cause systemic risk (Steers & Nardon, 2014) and have negative connotations, are disliked

and avoided (Moeller, 2011), This causes small and large losses which influences the continuity of administration of a regional government (Hanafi, 2014). Local governments will always face risks from both inside and outside (Deslatte & Swann, 2020; Luo, 2019; Tkachenko, 2020b; Tong & Zhang, 2020). The results of the study after analyzing the regional financial management of the Garut Local Government obtained the following results:

4.1. Risk Identification.

In the research process the identification of financial management risks in the Garut Local Government is carried out through three approaches, namely with input from experts, discussions, and interviews, as well as data collection and processing carried out to identify these risks, ranging from financial statements, results of interviews and brainstorming, questionnaire analysis with respondents and input from the study of financial management of the regional government that focuses on the regional financial management cycle starting from planning and budgeting, budget execution, administration, reporting and accountability and supervision that results in a complete list of potential risks as outlined in table 7 below:

Table 7.
Overview Risk Identification Of Financial Management Garut Local Government.

Category of risk	Description	Total Risks Identified	Reg.	Potential Risks
Risk Planning and Budgeting	The process of determining the amount of allocation of economic resources for each program and activity in the form of money units starts from the Preparation of the Regional Medium-Term Development Plan (RPJMD), then downgraded to a Regional Government Work Plan, followed by a General Budget Policy (KUA), Memorandum of agreement and Guidelines for Compilation of Budget Work Plans (RKA) -KPD, compiled into APBD Plans and after being ratified as APBD.	4 risk	1.	Correction or revision of the APBD when it is evaluated by the provincial government.
			2.	Lack of understanding of SKPD in the process of preparing Work Plan and Budgeting (RKA-SKPD) budgeting documents and Budget Implementation documents (DPA-SKPD).
			3.	Lack of budgeting/regulation/operational guidelines/technical guidelines/SOP instruments used in the APBD preparation process
			4.	There is still a lack of understanding of the rules and accuracy of the assistance/verification team in examining/verifying RKA-SKPD and DPA-SKPD documents.
Budget Implementation Risk The	regional government work unit carries out revenue and expenditure implementation activities and until the first semester is accounted for in the first-semester Budget Realization Report.	4 risk	5.	implementation of budget absorption largely piles up at the end of the fiscal year.
			6.	The budget absorption is not in accordance with the budget allocation provided.
			7.	Lack of SP2D issuance mechanism for overpayment The
			8.	low awareness of tenants of social facilities / public facilities regarding the obligation to pay fees.
Administration Risk	Recording in an orderly, systematic and chronological manner for regional revenues and expenditures for one fiscal year	9 risk	9.	delay in reporting employee data updates related to salary and child support, resulting in a frequent overpayment of family allowances.
			10.	Lack of storage space for financial records whereas financial records are valid for up to 20 years.
			11.	The optimal accuracy of asset data in each SKPD is not yet optimal.

Category of risk	Description	Total Risks Identified	Reg.	Potential Risks
			12.	HR financial manager in SKPD who is not from an Accounting education background.
			13.	There is no application system for regional cash receipts and disbursements that are connected between a regional cash manager and bank of perception.
			14.	Not yet optimal in the integrity of the asset management application system to support accrual financial statements
			15.	Regulations related to government accounting standards still need to be adjusted.
			16.	Changes to regulations regarding the budget grants and social assistance at the time of budget had been ratified
			17.	certification of the assets such as land which has not been optimally related to ownership proof markers.
Reporting and Accountability Risks	At the end of the budget execution period, budget users carry out accountability activities through local government financial reports, which consist of budget realization reports (LRA), balance sheets, cash flow statements, notes to Financial Statements (CaLK). To assess the reasonableness of the financial statements, the Supreme Audit Board (BPK) conducts an examination of the regional government's financial statements by giving a fair opinion without exception, fair with an exception, not giving an opinion and an opinion not fair.	2 risk	18.	Unorganized tax reporting centre both taxes income or value-added tax deposited by the treasurer of SKPD expenditure to the tax service office.
			19.	Asset valuation procedures are inadequate.
Risk Oversight	A series of monitoring, examination and evaluation activities on the implementation of policies. Supervision is carried out to ensure that all program policies and activities are carried out in accordance with applicable regulations. Financial management oversight activities are carried out by the government internal supervisory apparatus, carried out by the Regional Inspectorate by providing guidance, supervision, training, and consultancy	7 risk	20.	Limited human resources supervision owned by district inspectorates.
			21.	Limited supervision time.
			22.	Limited supervision budget.
			23.	Auditee not or are less willing to cooperate
			24.	Documents supervision difficult / can not be obtained, either because of lost, damaged, or because it is the auditee who deliberately do not want to hand over documents
			25.	existence of laws and regulations that impede supervision, such as rules regarding the confidentiality of bank and related tax audit
26.	findings from supervision not followed up or utilized			

Risk identification of Garut local government management's financial table in sees how much risk must be faced by local governments related to local financial management.

4.2. ¹⁴ Risk Analysis and Risk Assessment

Risk analysis and risk assessment aim to analyze and manage problems (Yoe, 2019a, 2019b), to facilitate the implementation of risk reaction (Tworek, 2015a). Risk analysis and risk assessment are needed by local government financial management, bearing in mind that risks can come from anywhere (Ostrom & Wilhelmsen, 2019). For this reason, local governments in managing their finances must be able to anticipate the possibility of risks (Triggs et al., 2019) and prepare for improvements if risks arise (Purdy, 2010; Sbragia, 2019).

The most common way to prioritize risk is to designate risk levels for each area of ³ Level 1 (Extreme), level 2 (High), level 3 (Medium), level 4 (low), and level 5 (very low) areas, which are increasingly the greater the impact and likelihood rating, the higher the overall risk level (Tworek, 2015b), as explained in table 8 below:

Table 8.
Risk Analysis and Risk Assessment Measurement Results.

No.	Risk Type	Register	Risk	Likelihood	Impact
1.	Risk of Planning and Budget.	1.	APBD corrections or revisions when evaluated by the provincial government.	Likely	Worse Case
		2.	Lack of understanding of the SKPD in the process of preparing the Work Plan and Budgeting (RKA-SKPD) budgeting documents and the Budget Implementation Document (DPA-SKPD).	Likely	Major
		3.	Lack of budgeting instruments (regulations / operational guidelines / technical guidelines / SOP) used in the process of preparing the APBD	Likely	Worse Case
		4.	There is still a lack of understanding of the rules and accuracy of the assistance/verification team in examining/verifying RKA-SKPD and DPA-SKPD documents.	Almost Certain	Severe
2.	Risk of budget execution The implementation of the budget	5.	absorption largely accumulates at the end of the fiscal year.	Likely	Major
		6.	Absorption of the budget does not match the budget allocation provided.	Likely	Worse Case
		7.	There is no SP2D issuance mechanism for overpaid	Likely	Major
		8.	low awareness of tenants of social facilities / public facilities regarding the obligation to pay fees.	Likely	Worse Case
3.	Administration Risk	9.	Slow reports on employee data updates related to salary and child support, resulting in a frequent overpayment of family benefits.	Possible	Major
		10.	Lack of storage space for financial records even though financial records are valid for up to 20 years.	Almost Certain	Major
		11.	optimal accuracy of asset data in each SKPD is not yet optimal.	Almost Certain	Major
		12.	HR financial managers in SKPD who are not from an Accounting education background.	Almost Certain	Worse Case
		13.	There is no application system for cash receipts and disbursements that are connected between a regional cash manager and bank of perception.	Almost Certain	Worse Case
		14.	Not yet optimal in the integrity of the asset management application system to support financial statements on an accrual basis	Almost Certain	Worse Case
		15.	Regulations related to government accounting standards still need to be adjusted.	Almost Certain	Worse Case
		16.	Changes to regulations regarding the budget grants and social assistance when the APBD has been established.	Possible	Major
		17.	Certification of assets in the form of land that has not optimally related to ownership proof markers.	Likely	Worse Case
4.	Risk of Reporting and Liability	18.	Tax reporting has not been regulated by the central tax income or value-added tax deposited by the treasurer of SKPD expenditure to the tax service office.	Possible	Major
		19.	Asset valuation procedures are inadequate.	Possible	Severe

No.	Risk Type	Register	Risk	Likelihood	Impact
5.	Oversight Risk	20.	Limited supervision of human resources owned by the district inspectorate.	Almost Certain	Major
		21.	Limited time for supervision.	Almost Certain	Severe
		22.	Limited budget oversight.	Almost Certain	Worse Case
		23.	auditees are not or are less willing to cooperate	Almost Certain	Severe
		24.	Document oversight difficult / can not be obtained, either because of lost, damaged, or does not want to hand over documents	Almost Certain	Worse Case
		25.	existence of laws and regulations that impede supervision, such as rules regarding bank secrecy and related to tax audits.	Almost Certain	Severe
		26.	Findings from supervision are not followed up or utilized.	Almost Certain	Major

The results of the risk analysis and risk assessment are then mapped to determine the main risks that must be prioritized to be addressed. The two dimensions are then made of an impact and likelihood matrix, as shown in the table below, where the matrix is then divided into five quadrants according to priority level or priority scale for handling risk. The following outlines the matrix results of the mapping of the likelihood and impact of risks related to Garut Regional Government financial management, which can be seen in Table 9 below:

Table 9.
Matrix Of Impacts And Likelihood
Risk Financial Local Government Garut

			IMPACT				
			1	2	3	4	5
			Minor	Moderate	Severe	Major	Worse Case
LIKELIHOOD	5	Almost Certain			4, 21, 23, 25	10, 11, 20, 26	12, 13, 14, 15, 22, 24
	4	Likely				2, 5, 7	1, 3, 6, 8, 17
	3	Possible			19	9, 16, 18	
	2	Unlikely					
	1	Almost Never					

From the likelihood and impact matrix, the risks that have been assessed can be categorized into 5 levels, namely: Level 1 (Extreme), level 2 (High), level 3 (Medium), level 4 (low), and level 5 (very low). Following are the results of the mapping of risk analysis and risk assessment based on the level shown by the percentage shown in Figure 3 below:

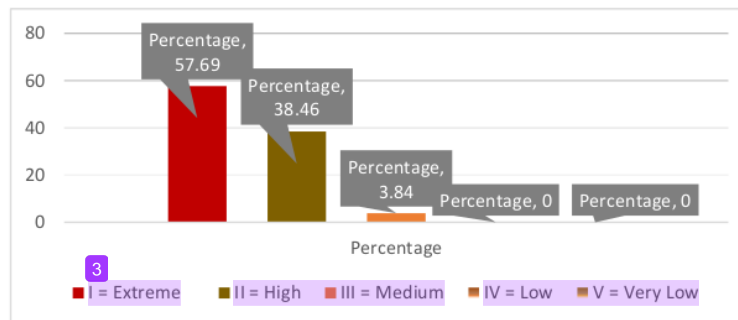


Figure 3.
All Risk Level Percentage

The results of the graph above show the number of high risks faced, as many as level I as much as 57.69% and level II as much as 38.46% of overall risk, medium risk (level III) as much as 3.84%. According to Ramli (2011), risks that are included in the category of high risk (*high risk*) and very high (*extreme*) are unacceptable risks. This risk needs to be taken to prevent and reduce the level of risk to an acceptable level. Risk at extreme levels (Level I), namely the lack of optimal integrity of the asset management application system to support accrual financial statements with the consideration of technology that is the main concern. This shows that the aspect of application system technology is the most important thing related to the implementation of the financial management of the Garut Local government. From the results of risk analysis and risk assessment, the priority level of each risk will be prioritized to be addressed, which can be seen in Table 10. below:

Table 10.
Recapitulation Based on Risk Level

Risk Level	Register	Risk Potential	Risk Type
Extreme	1	APBD correction or revision when evaluated by the provincial government.	Planning and Budgeting Risk
	3	Lack of budgeting instruments (regulations/operational guidelines/technical guidelines/SOP) used in the process of preparing APBD	
	4	There is still a lack of understanding of the rules and accuracy of the assistance/verification team in examining/verifying RKA-SKPD and DPA-SKPD documents.	
	6	The budget absorption is not in accordance with the budget allocation provided.	Budget Implementation Risk
	8	Still low awareness of tenants of social facilities / public facilities to the obligation to pay levies	
	10	Lack of storage space for financial records even though financial records are valid for up to 20 years	Administration Risk
	11	Not yet optimal accuracy of asset data in each SKPD.	
	12	HR financial managers in SKPD who are not from an accounting education background.	
	13	There is no application system for cash receipts and disbursements between regions connected to the regional cash manager and bank of perception.	
	14	Not yet optimal in the integrity of the asset management application system to support accrual financial statements	
	15	Regulations related to government accounting standards still need to be adjusted.	
	17	Certificate of assets in the form of land that has not yet been optimally related to ownership proof markers.	
	20	Limited human resources supervision owned by district inspectorates.	Risk of Monitoring
	22	Limited budget for supervision monitoring	
	24	documents that are difficult/ cannot be obtained, either because they are lost, damaged, or because the auditee is intentionally unwilling to submit documents	
26	Findings from supervision are not followed up or utilized		
High	2	Lack of understanding of SKPD in the process of preparing documents budgeting Work Plans and Budgets (RKA-SKPD) and Budget Implementation Documents (DPA-SKPD).	Planning and Budgeting Risks

Risk Level	Register	Risk Potential	Risk Type
	4	Lack of understanding of regulations and assistance / verification team accuracy in checking / verifying RKA-SKPD and DPA-SKPD documents	Implementation Risk
	5	The implementation of budget absorption mostly accumulates at the end of the fiscal year Budget	
	7	There is no SP2D issuance mechanism for the excess payment	
	9	Late reports on employee data related to salary and child support, resulting in a frequent overpayment of family benefits	Administration Risk
	16	Changes to the budget grants and social assistance at the time the APBD has been established	Reporting and Liability Risk
	18	Disorderly reporting of taxation centers both tax income and value-added tax deposited by the treasurer in issuing SKPD to the tax service office	
	21	Limited supervision time Supervisory	Risk
	23	Auditees do not or do not want to cooperate	
25	The existence of legislation that impedes supervision, such as regulations related to bank secrecy and related tax audits		
Medium	19	Asset valuation procedures are inadequate	Risk Reporting and Accountability

4.3. Risk Reaction

Risk reaction is adjusted to the type of risk and the priority level of the risk. In this study, there are 26 risks that accept different risk management as shown in Table 11. below in:

Table 11. Risk Level Reaction

Risk Level	Risk Potential	Risk Reaction	Implementation Solutions
Extreme	Correction or revised APBD when evaluated the provincial government.	Dividing risk	Improving the ability of TAPD in the process of preparing the APBD
	Lack of budgeting instruments (regulations/ operational guidelines/technical guidelines/ SOP) used in the process of preparing the APBD	Reducing the risk	Doing a copy of the documents needed in the APBD preparation process.
	There is still a lack of understanding of the rules and accuracy of the assistance/verification team in examining/verifying RKA-SKPD and DPA-SKPD documents.	Sharing the risk	out training, outreach and technical guidance on budgeting to all components of the budgeting HR in the SKPD The
	absorption of the budget is not in accordance with the budget allocation provided.	Dividing risk	Optimizing the preparation of cash budget per 3 months (cash flow) The
	low awareness of tenants of land social facilities / public facilities of the obligation to pay levies	Reducing the risk	billing every maturity in accordance with the Regulations on Regional Levies
	Lack of storage space for financial files even though financial records apply up to 20 years	Reducing the risk	<ul style="list-style-type: none"> ● digitizing documents ● Separating archives that have expired ● Increasing HR ● Improvement of facilities and infrastructure
	Not yet optimal accuracy of asset data in each SKPD.	Dividing risk	Arranging regional regulations, regent regulations, technical guidelines and SOP for financial and asset management as well as the

Risk Level	Risk Potential	Risk Reaction	Implementation Solutions
			reconciliation of assets updating the BMD census
	HR financial managers in SKPD are not from an accounting educational background.	Sharing the risk	Conducting training and technical guidance to the accounting manager in the SKPD as well as the accounting certification exam.
	There is no application system for regional cash receipts and disbursements that are connected between a regional cash manager and bank of perception.	Reducing risk	Coordinating with Perception Banks to create a Cash management system
	Not yet optimal synergy of the asset management application system to support accrual financial statements	Reducing risk	Developing existing regional asset management applications, especially goods inventory information systems
	Regulations relating to government accounting standards still need to be done adjustment.	Reducing the risk	doing renewal regional financial system in accordance with existing regulations
	Certificate of assets in the form of land that has not optimally related to ownership proof markers.	Share the risk	of simultaneous coordination with the National Land Agency, as well as the elimination of regional assets that are already unfit for use
	Limited human resource supervision owned by the district inspectorate.	Dividing the risk	coordination of the Inspectorate with the Regional Employment Board to increase employee supervision
	Limited budget oversight	Reducing the risk	coordination with the inspectorate to make changes budgeting
	Document oversight difficult /can not be obtained, either because of lost, damaged, or the auditee who deliberately do not want to hand over documents	Reducing the risk	Conduct socialization to the auditee about understanding local government oversight
	Findings from supervision are not followed up or utilized	Sharing risk	of the Inspectorate Coordination with the Work Unit to follow up findings
High	Lack of SKPD understanding in the process of preparing the Work Plan and Budgeting Budget document (RKA-SKPD) and Budget Implementation Document DPA-SKPD).	Dividing the risk	Inviting the stakeholders involved in the process of preparing the APBD in the <i>focus group discussion</i> (FGD).
	There is still a lack of understanding of the rules and the accuracy of the assistance team/verification check / verify documents RKA-SKPD and DPA-SKPD	Dividing the risk	Conduct training, outreach and technical guidance on budgeting to all the components of the HR-budgeting in SKPD
	Implementation of budget spending most of piling up, in the end, fiscal year	Share the risk of functioning	<ul style="list-style-type: none"> the economic development bureau. Acceleration through early auction announcements in the process of procurement of goods and services
	There is no SP2D issuance mechanism for overpayments	Reducing risk	ing and updating financial and asset management application systems
	Slow reports on updating employee data related to salary and child benefits resulting in a frequent overpayment of family benefits	Reducing Risk	Optimization of the Staffing System with the process of <i>updating</i> employees
	Changes to regulations regarding the budget grants and social assistance when the APBD has been established	Reducing the risk	Controlling budgeting in accordance with the needs and regulations.
	Not yet an orderly reporting of good central taxation tax income and value-added tax deposited by the treasurer of the SKPD expenditure to the tax service office	Reducing the risk	compiling state tax and income tax reports in accordance with the regulations so as to create an accurate tax report

Risk Level	Risk Potential	Risk Reaction	Implementation Solutions
	Limited time for supervision of	Dividing risk	Coordination with the relevant work units to carry out additional oversight of the
	Auditee no or less willing to cooperate	Dividing risk	socializing to the auditee about understanding the supervision of the local government
	Existence of laws and regulations that impede supervision, such as rules regarding the confidentiality of bank and related tax audit	Reducing risk	coordination with the Directorate of Taxation to undertake the MOU relating to the supervision of the local government
Medium	Assessment procedures inadequate assets	Reducing risk	Developing an integrated asset management system

The selection of risk management is carried out by taking into account the principle of cost and benefit for the government e regional governments, their impact on the likelihood of risk likelihood and risk impact, the possibility of opportunities arising and the need to consider their effects on other risks as well.

4.4. Risk Monitoring and Control.

The Garut Local Government has had a systematic policy and procedure mechanism in the management of regional finances such as regional cash control, regional asset inventory, regional budget difference. However, communication and information have not been well documented. In monitoring each SKPD has a mechanism and policy/SOP to conduct evaluations in the management of regional finances, such as holding a reconciliation of financial statements with all SKPDs and following up on audit findings.

5. Conclusion

In this study, we analyze the implementation of risk management that focuses on the financial management of the Garut Local Government. The survey results show that the identified risks were 26 risks with risk-sharing at the level I as much as 57.69% and level II as much as 38.46% of overall risk, medium risk (level III) as much as 3.84%. The results of the identification show that the risk management of the District Government of Risk will potentially experience many problems and obstacles that will arise if the implementation of risk reaction is not carried out in accordance with the recommendations in this study originating from the brainstorming of the implementation of focus group discussions conducted in this study.

6. Acknowledgments

The authors thank the Pasundan University for giving the author the opportunity to complete this journal, as well as the Garut local government and the state civil apparatus who are willing to be objects and respondents in this study.

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