

EXPERIMENTAL EVIDENCE: DOES CLAWBACK PROVISION CHANGE THE  
EARNINGS MANAGEMENT METHOD FROM ACCRUAL TO REAL  
ACTIVITY?

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**Abstract**

Clawback provision reduces the manager's intention to perform misstated financial statements because the board of directors will recoup the compensation paid to their managers, based on the managers' misstated financial reports. The purpose of this study is to examine the effectiveness of clawback's adoption to reduce the intention to manipulate earnings, different from previous research, this study uses the setting in countries with high uncertainty avoidance and low individualism culture because national cultures give important explanations about the variances of the effectiveness of compensation schemes. The study shows that the adoption of clawbacks decreases the intention to perform earnings manipulation, especially accrual manipulation. However, clawbacks lead to managers executing earnings management method that is harder for the regulators and auditors to detect.

**Keyword:**

Clawback provisions, accrual manipulation, real activity manipulation, earnings manipulation

## 1. BACKGROUND

Earnings has an important role in the evaluation of company performance that encourages managers to manage earnings. Earnings management refers to the use of personal judgment in reporting and in structuring the transactions to alter the financial reports to either mislead some stockholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on the reported accounting numbers (Healy and Wahlen, 1999). To prevent earnings management, many companies have recently adopted a policy of "compensation recovery", commonly known as clawback. Clawback is a provision authorizing the board of directors to cover the compensation paid to their managers, based on the incorrect financial statements of managers (Chan et al., 2015)

Previous studies have tested the effectiveness of clawbacks. Chan et al. (2012) and DeHaan, Hodge & Shevlin (2013) found that after the adoption of clawbacks, misstated financial statements decreased. But the recent research stating that clawbacks carry unexpected consequences. Chan et al. (2015) showed that companies which adopt clawbacks change their earnings management method from the accrual's manipulation to the real activity's manipulation, since the latter is not easily detected by regulators and auditors. Initially, the clawback model was designed by regulators to improve earnings qualities or elevate the integrity of financial statements. In reality, however, clawbacks lead to managers executing earnings management that is harder for the regulators and auditorsto detect (Chan et al., 2015). Subsequently, the majority of the previous studies use the setting of companies listed on the US Stock Exchange (Chan et al., 2012; Datta and Jia, 2013; Chan et al., 2015), however the effectiveness of clawback's adoption by countries with different cultures has rarely been documented in the previous research.

Schuler (1998) stated that national cultures give important explanations about the variances of the effectiveness of compensation schemes. Han *et al.* (2010) found that the cultural dimension of uncertainty's avoidance and individualism explains the earnings management practices in certain countries. Countries with high uncertainty avoidance and low individualism( such as Indonesia), have a lower earnings management level than countries with low uncertainty avoidance and high individualism (such as the US). The present study are, therefore aimed at first testing whether the implementation of compensation clawback in Indonesia, i.e. a country

with high uncertainty avoidance and low individualism levels, is effective in reducing the intention to practice earnings management. Second, whether clawback cause a change in earnings management methods from acruual to real activity manipulation

The present study has an important implication by providing recommendations to managers and regulators concerning the possibility of the adoption of clawback compensation schemes in countries with cultures that are different from the clawback initiator countries. This study is different from previous studies in that, first, it uses the setting of a country with different cultural dimensions; the majority of the previous studies use the setting of companies listed on the US Stock Exchange. Secondly, the majority of the previous studies make use of secondary data (Chan et al., 2012; Iskandar-Datta and Jia, 2013; Chan et al., 2015); the present study uses an experimental design seeing that, in Indonesia; clawback compensation schemes are still rarely used.

## **2. LITERATURE REVIEW**

### **2.1. Clawback on Earnings Management**

#### **2.1.1. Clawback**

Clawback is one form of recovery provision introduced by Section 304 of the Sarbanes-Oxley Act (SOX) in 2002. The Securities and Exchange Commission (SEC) seeks to clawback performance-based compensation paid to the CEOs and CFOs of public companies if previously generated financial statements have been requested to be restated as a result of misconduct.

According to Prospect Theory (Kahneman and Tversky,1979,1992), people receive greater disutility from the losses than the utility they receive from equivalent benefits. Therefore, the individual must work harder to avoid penalty than to get bonuses from equal amounts of dollars. Hannan et al. (2005) found that individuals prefer to pursue a higher effort to avoid punishment rather than receive a bonus of an equivalent dollar amount.

Clawback has a penalty or loss feature. Clawback adoption leads managers to work harder to avoid any action that leads a penalty or clawback. Earnings management increases the risk of detection by auditors and regulators, triggering a clawback. Therefore, companies implementing clawback provisions have better

financial reporting quality than non-adopting firms to reduce detection risk (DeHaan, Hodge and Shevlin, 2013).

### **2.1.2. Earnings Management**

There are several methods of earnings management in the corridor accounting standards that are: First, accrual manipulation, i.e. the manipulation of earnings through the manipulation of discretionary accruals. A discretionary accrual is one that is used to decrease or increase the earnings reported by the management selecting the accounting policies subjectively (Scott, 2009), for example managers choose the accelerated depreciation method over the straight-line method to decrease reported earnings. Second, the manipulation of real activity, defined as a deviation from the normal operating activities of a company motivated by the desire of its management to provide a false understanding to stakeholders that certain financial reporting objectives have been achieved through the normal operating activities of the enterprise (Roychowdhury, 2006). In other words, real earnings management involves attempts to alter the reported earnings by adjusting the timing and scale of the underlying business activities, for example by reducing discretionary spending such as R&D expenses, Selling, and General & Administrative (SG&A).

Each earnings manipulation method has its costs and consequences. Accrual manipulation does not have a direct influence on cash flows, so that it only has a small possibility of destroying the company's value (Badertscher, 2011). Since accrual management is conducted within the reporting standards, the possibility of it being detected by investors, regulators, and auditors is lower than in the case of fraud. Real activity manipulation is done by reducing the discretionary expenses so that this has an impact on cash flows. In the long run, real activity manipulation has a negative impact on the optimal business activities and has the potential to destroy the company's value (Badertscher, 2011). Earnings manipulation through real activities makes it possible for the company to elevate short-term profits and return of shares, but this trend will reverse to the level before earnings manipulation started after three years (Chan et al. 2015). In spite of having an impact on the cash flow, the detection risk of real activity manipulation is lower than that of accrual manipulation (Badertscher, 2011) since the decrease in the discretionary expenses, such as R&D, will not become a focus for inspection by the auditors or regulators.

### **2.1.3. Clawback provision and Earnings Management**

Several previous studies to test the effectiveness of clawback to reduce the level of earnings management. Denis (2012) found that markets and auditors see the improvement in the quality of financial reports after the implementation of clawbacks. First, the adoption of clawbacks is a signal to the boards of directors that companies have a larger commitment to greater financial integrity. Second, the auditors' erroneous belief that a firm which adopts the clawback provisions will issue more accurate reports leads them to examine the firm's financial statements less carefully, thereby reducing the likelihood that they will find a material misstatement that requires a restatement. Therefore the voluntary adoption of the clawback provisions does not, in fact, lead to more accurate financial statements (Denis, 2012). This is in accordance with findings from recent research showing that clawback carries unexpected consequences. Chan et al. (2015) found that companies in the US that adopt clawbacks change their earnings management method from accrual manipulation to real activity manipulation. Graham, Harvey and Rajgopal (2005) found that managers prefer real activity manipulation to accrual manipulation, seeing that the former is harder for auditors and regulators to detect, so that this option offers less risk of being found out.

On the whole, the empirical evidence shows that the earnings manipulation method with the biggest risk of detection is accrual manipulation, followed by real activity manipulation. Managers prefer real activity manipulation since it is carried out and hidden in transactions that are seemingly legal, so that it is hard for auditors and regulators to detect. Clawback compensation schemes are able to reduce the earnings management methods that are easy to detect but have increased the use of earnings manipulation methods that are difficult to detect. We, therefore, propose the following hypotheses.

H1: After the adoption of clawback, the intention to manage earnings decreases.

H2a: After the adoption of clawback, the intention to perform accrual manipulation decreases.

H2b: After the adoption of clawback, the intention to perform real activity manipulation increases.

### **3. METHOD**

#### **3.1. Experimental Design**

To test the hypotheses outlined in the previous section, a series of experimental sessions were conducted, lasting for approximately 45 minutes each. The experiment consisted of three parts. First, the participants were told they were in a bonus compensation scheme, which was then changed to a clawback compensation scheme. Second, the participants' earnings were calculated for each of the previous parts. Third, they answered questions about their understanding of the experiment and demographic characteristics in the exit questionnaire.

The 2 x 1 within subjects design, with repeated measures of the dependent variable, was used to examine the likelihood of participating in earnings management behavior. In all the scenarios, the participants were asked to assume the role of the CFO in a fictitious organization and make decisions based on the proposal presented in the scenario.

The participants are master's level accounting students who have work experience. Because of their work experience, participants are expected to have sufficient background knowledge to complete the experimental task. Elliot et al., (2007) stated that using a student sample is an acceptable methodological choice if the students have sufficient background knowledge to complete the task. Another reason for the use of students as participants are: First, the purpose of this study is to test a theory; this theory should hold regardless of the population, indicating a student sample is appropriate (Croson, 2007). Second, students are readily available, have fewer time restrictions, and are more likely to give their full attention (Jones, 2013).

#### **3.2. Manipulated Variables**

##### **3.2.1. Compensation Scheme**

Two compensation schemes were used: A bonus scheme and a clawback scheme. First, The compensation scheme provided is a bonus scheme. In the bonus scheme, if the company achieves its profit targets, the participants will get a bonus. The participants were asked to select an alternative proposed proposal to achieve the profit targets. If they choose the alternative, then they will get a bonus in accordance with the alternative answer they selected. The experimenter invited an auditor to examine the participants' answers and detect any manipulation of the earnings. If a participant

is caught doing earnings' manipulation, he/she will be given a reprimand card by the auditor. Second: the compensation scheme is changed to clawback. In the clawback scheme, the participants were informed that the Financial Services Authority had issued a new policy; the clawback compensation scheme. In this scheme, if a participant is caught undertaking earnings' manipulation, the bonus that had been awarded would be slashed. Participants were given cases similar to normal bonus schemes, and were asked to select the available proposals to obtain the targeted profits. The experimenter examined the participants' answers to detect any manipulation of the earnings.

### **3.3. Measured Variables**

The measured variables in this study include the intention to perform earnings management.

#### **3.3.1. Intention to Perform Accrual Manipulation and Real Activity Manipulation**

Each participant was given one scenario and asked to select three proposals. The scenarios were modified from Clikeman and Henning (2000). The first proposal was to measure the intention of performing accrual manipulation. Participants evaluate a proposal to delay recognition of maintenance costs until the following year. To assure that the participants understand that the scenario is in accordance with the accounting standards, this scenario is provided: "While you are aware this does not violate the accounting standards, you are concerned that this may affect the comparability of the financial statement from one year to the next."

The second proposal is to measure the intention to perform real activity manipulation through cutting maintenance costs. To assure that the participants understand that the scenario is in accordance with the accounting standards and has a low detection risk, this scenario is given: "While you are aware this does not violate the accounting standards and has a low detection risk, you are concerned that this short-term advantage will disappear afterwards."

The third proposal is about not undertaking any profit manipulation, although the targeted profits have not been achieved. The participants answered questions relating to their intentions regarding the proposals made in the scenarios. The first question was: "What is the degree of possibility of you performing earnings manipulation?" The scale provided five options; 1 indicating extremely disagree and 5 extremely agree. Secondly, the participants then answered two questions related to their

intentions regarding each proposal made in the scenario. One question used a positive mode: “What is the possibility that you do or choose the proposal?” The other question used a negative mode: “What is the possibility that you reject the proposal?”

### **3.4. Manipulation Check**

Three questions were asked for the manipulation check. First, to ensure that the participants understood the changes in the compensation schemes, the question asked: “Will there be punishment, in the form of cutting the bonus, if earnings management is detected?” Second, to make sure that the participants understood the acceptability under the accounting standards, the question asked whether or not they believe the proposal they chose is in accordance with the accounting standards. These questions were asked at the end of the survey.

### **3.5. Monetary Incentives**

The participants receive compensation depending on their choice of proposals and this compensation will be withdrawn if it is detected that they have done earnings manipulation. The amount of the retracted bonus depends on the selected proposals. A detailed description is presented in Table 1. The participants know they will be paid, based on the scheme. Payments averaged from \$2 to \$16 after any clawback or bonus cutting.



**Table 1.** Manipulation Used In Each Experiment

PANEL A: Compensation Scheme

		<b>BONUS</b>			<b>CLAWBACK</b>
Proposal number	Proposal given	Bonus received by participant	Outside/within corridor of accounting standards	Detection risk	Bonus cutting*
Proposal A	Doing accrual manipulation by delaying recognition for machine maintenance and repair	Selecting proposal A will increase profits by 20%. CFO will receive compensation of 20% for net profit or \$10	Within the corridor of accounting standards	Moderate	Cut \$6
Proposal B	Doing real activity manipulation by reducing expenses for machine maintenance and repair	Selecting proposal B will increase profits by 20%. CFO will receive compensation of \$10	Within the corridor of accounting standards	Low	Cut \$4
Proposal C	Not doing manipulation	Selecting proposal D will cause target profit not to be achieved. CFO will receive compensation of \$5	Within the corridor of accounting standards	None	No cutting

\*) the amount of bonus deducted is based on the level of detection of the selected proposal

#### 4. RESULT

The following table shows the descriptive statistics for the 266 participants. The average age of the participants is 24.69 years. Their average GPA is 3.41. Their average full time working experience was 1.97 years. Male participants comprised 43% of the sample, and females 57%.

**Table 2.** Participants' Demographic Information

	Min	Max	Mean	Standard Deviation
Age	22	36	24.69	2.75
GPA	3	4	3.41	0.49
Work experience	1	5	1.97	1.24
	N	%		
Male	114	43%		
Female	152	57%		

Panel A of Table 3 shows the test results of the intention to perform earnings manipulations for each of the conditions. Panel B shows the overall analysis, as well as the resulting simple main effects.

Table 3

#### Results of Experiment

##### Intention to Do Earnings Manipulations: Influence of Compensation Scheme

##### Panel A: Descriptive Statistics—Means Intention to Do Earnings Manipulation (Standard Deviations)

	Row Means
Bonus	2.32 (.98)
Clawback	1.98 (0.90)

Panel B: Analysis of Variance Results and Simple Effect Tests

Compensation Scheme and CEO Pressure on Intention to Manipulate Earnings

Source	Statistics	Two-tailed <i>p</i> -value
Compensation Scheme	13.75	< 0.01

These research findings show that compensation schemes have a significant influence on the intention to perform earnings' manipulations. For the bonus compensation scheme, the intention to perform earnings manipulation is higher (2.32) compared to that for the clawback scheme (1.98) ( $F = 13.75$ ;  $p < 0.000$ ). This finding supports H1 in that the adoption of the clawback compensation scheme decreases the intention to perform earnings manipulation.

The hypotheses testing for H1a-H1b is done by testing the choice of earnings manipulation methods taken by the participants to achieve the targeted profits. Table 4 shows the testing results to find whether or not compensation schemes have an influence on the participants' preferences when selecting the earnings manipulation methods.

**Table 4.** Results of Experiment

Panel A: Descriptive Statistics—Means Intention to Do Earnings Manipulation (Standard Deviation)

	Accrual Manipulation	Real Activity Manipulation	No Manipulation
Bonus	2.45 (1.13)	3.00 (1.14)	3.39 (1.12)
Clawback	1.87 (1.07)	3.58 (1.26)	3.71 (1.32)

Panel B: Analysis of Variance Results and Simple Effect Tests  
Compensation Scheme on Choice of Profit Manipulation Method

Source	Accrual Manipulation		Real Activity Manipulation		No Manipulation	
	Statistics	Two-tailed <i>p</i> -value	Statistics	Two-tailed <i>p</i> -value	Statistics	Two-tailed <i>p</i> -value
Compensation Scheme	4.26	< 0.05	9.86	< 0.01	2.29	0.13

The intention to use accrual manipulation under the bonus scheme is higher (2.45) compared to that under the clawback scheme (1.87) ( $F = 4.26, p < 0.05$ ). Changing to the clawback compensation scheme results in a lowering of the intention to commit accrual manipulation. H1a is supported.

Conversely, in the intention to use real activity manipulation, after the adoption of clawback, real activity manipulation turns out to be increasing. The mean score for the intention to use real activity manipulation under the bonus scheme (3.00) increases to 3.58 with the clawback scheme ( $F = 9.86, p < 0.01$ ), so H1b is supported.

Additional testing was conducted to test whether the compensation scheme affects the intention of not manipulating earnings. The results show that compensation schemes do not have any influence over the intention not to perform earnings manipulation. For the bonus scheme, the intention not to perform earnings manipulation (3.39) is lower than that in the clawback compensation scheme (3.71); the difference is, however, not significant.

## **5. DISCUSSION**

Findings of the study show that the adoption of clawbacks does not eliminate all the types of profit manipulation; since after the adoption of clawbacks, the intention to perform real activity manipulations becomes even higher. This is due to the fact that the use of real activity manipulation represents a deviation from the optimal operating decision, such that it is not likely to be deemed improper by the auditors and regulators. This finding is consistent with that of Chan *et al.* (2015) in that the use of the real activity manipulation method heightens after a company adopts clawbacks, while the use of accrual manipulation decreases for the reason that accrual's use is easily detected by auditors or regulators, which triggers clawbacks.

## **6. CONCLUSION**

The results show that the change of the compensation scheme from a bonus scheme to a clawback scheme caused unexpected consequences. The change to the clawback scheme causes the intention to use the real activity manipulation method to increase, although the intention to use accrual manipulation decreases. This is caused by the fact that accrual manipulation tends to attract more scrutiny from auditors and regulators.

High accounting accruals are more likely to be associated with accounting restatements, which trigger clawbacks. On the other hand, real activity manipulation is considered to be a less risky option than accrual management. Real activity manipulation is only a slight possibility of it being regarded as inappropriate by auditors and regulators.

The results of this study carry implications on the implementation of clawbacks in countries with high levels of uncertainty avoidance and low levels of individualism. In countries with these characteristics, an individual will take greater care when selecting an earnings management method to achieve the targeted profit. This is done to avoid uncertainty in the compensation received. Future research may possibly add cultural variables at the individual level to examine the effectiveness of clawbacks.

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