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MEASURES TO PREVENT LISTED FIRMS FROM BEING EMPTIED: THE CASE OF TAIWAN

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ABSTRACT

Purpose- Enterprises are major elements of the national economy that provide employment opportunities and innovative products that improve quality of life. They also pay tax to promote national construction. Therefore, the legal operation of enterprises gives stability to a society. However, due to various reasons, domestic and global fraud occurs and emptying a company does most harm. Emptying means depleting a company's assets by illicit means.
Methodology- Previous studies on this issue focus mainly on one facet of the problem, such as a company's legal responsibility, the financial consequences, the strengthening of governance, the deployment of ethics or information transparency. Very few studies examine measures to prevent listed companies from being emptied from the perspective of regulation, control and autonomy. This study uses a Modified Delphi Method and 30 experts to extract a consensus of measures to avoid fraud, in terms of government regulation, accountant validation and enterprise autonomy. The method uses three rounds and the results show that the most effective means is for government to establish a law that forces criminals to give back the spoils and for enterprise to regularly receive training of board members on governance. The second effective means is to establish a law that provides reward and protection for informants and for enterprises to disclose the salaries of board members. The third effective means is for government to establish an institution that is responsible for fraud, to require company transparency and to require accountants to use combined financial reports for mutual investment to discover fake investments.
Findings- Careful examination of the top three effective measures shows that even though some of the methods are related to accountant validation and enterprise autonomy, their complete execution must rely on legislation. Therefore, it is clear that government regulation is the key to avoiding fraud.
Conclusion- Active regulation by the government is more effective than passive autonomy in enterprises. This conclusion is the result of deliberations by an expert panel that was composed of senior management, prosecutors and judges and accountants, so it is a company basis for legislative action.

Keywords: Empty out, governance, ethics, fraud, enterprise value.
JEL Codes: C61, L84, M12

1.INTRODUCTION

Enterprises are the corner stone of national economic development. They provide employment opportunities and help generate taxes and create a competitive advantage for the country, so they are highly regarded by governments around the globe. However, enterprises can also be a source of problems, such as tax evasion, employee safety and environmental pollution. The transfer of company funds into personal accounts affects society and the economy, so preventing companies from being emptied is a critical issue for all governments. Unfortunately, fraud occurs periodically worldwide. Cases of fraud include Enron, Worldcom, Xrox and Merck in America, so the Sarbane-Oxley Act was established to strengthen the monitoring of business operations.

This study defines emptying out a company as depleting a company's assets by illicit means, so preventing a company from being emptied requires that a company's personnel cannot annex property. The illicit means is usually accompanied by a falsified financial report and the embezzlement of funds. Non-listed companies are too numerous to monitor and cannot be managed promptly because of a lack of transparent financial reports, so this study determines measures that prevent listed companies from being emptied that involve legislation and judicial decisions. Previous studies that are related to the emptying out of companies mainly focus on case studies, financial warning systems, internal audits, governance and fraud, stakeholders' transaction of benefit and ethical issues. Few studies determine measures to prevent fraud by emptying from both internal and external aspects. Few clearly identify the relative importance of internal and external means or the priority for execution of measures within each of these aspects. This study firstly determines measures to prevent fraud that involves emptying from the aspect of government regulation, accountant validation and enterprise autonomy and then prioritizes these three aspects and establishes measures for each of these three aspects. Finally, all measures for the three aspects are ranked to give a combined effect of the measures. The results of this study serve as a guide for legislation and provide an effective method of preventing enterprise fraud. This paper is divided into five sections including introduction, literature review, research method, analysis of questionnaire and conclusion.

2. LITERATURE REVIEW

The purpose of corporate governance is to avoid fraud and to assure stakeholder's interests by monitoring business activities and financial operations through well designed management systems and control mechanisms. The Organization for Economic Cooperation and Development (OECD) issued a G20/OECD Principles of Corporate Governance that allows policy makers to develop a good governance system and promote economic development and financial stability (OECD, 2016).

Berle and Means (1932) proposed the concept of corporate governance in 1932 and since then, there have been many studies concerning the theory of corporate governance, such as "Beyond Property Right theory", "Separation of Ownership and Control theory", "Agency Theory" and "Stakeholder theory". Jensen and Meckling (1976) concluded that corporate governance must solve problems between owners and controllers, so the objective of corporate governance is to align their interests. Fama and Jensen (1983) noted that the key to corporate governance is to reduce agent cost. Shleifer and Vishny (1997) found that corporate governance must deal with the issue of insuring the owner's return on investment. Cochran and Wartick (1988) noted that corporate governance must solve problems of interaction between management, shareholders, boards and stakeholders.

To maximize benefit, enterprises frequently make illegal decisions because of greed. Ferrell et al. (2002) categorized the ethical issues as conflict of interest, honesty, promotion and technology. Enterprises are established to make a profit, because they cannot continue to operate without profit, but Enterprises' activities are strongly linked to society, so enterprises must be responsible for the impact that they have. The United Nations Conference on Trade and Development (UNCTAD) identified an enterprise's social responsibility as linking social needs to the enterprise's objective. The World Bank Group (WBG) defined an enterprise's social responsibility as a commitment that the enterprise promises to improve the quality of life of stakeholders by respecting their value, the regulations, the people, the community and the environment. The European Commission (EC) views an enterprise's social responsibility in terms of those factors that, during the operation, enterprises must be willing to consider in terms of stakeholders, society and the environment. Carroll（1979） noted that an enterprise's social responsibility includes economic responsibility, legal responsibility, ethical responsibility and voluntary responsibility. The World Business Council for Sustainable Development (WBCSD) treats an enterprise's social responsibility as adherence to an ethical norm, making an economic contribution and improving the quality of life of employees, their families, the community and society. Bowen (1953) defined an enterprise's social responsibility as the obligation that it must meet social values, standards and needs. Steiner（1980） identified an enterprise's social responsibility as: (1) Internal responsibility: legal selection, training, promotion and dismissal of employees, and an increase in the productivity of personnel and an improved working environment and (2) External responsibility: encourage entrepreneurship, fair payment and the hiring and training of disabled individuals.

The Association of certified fraud examiners (ACFE) defines financial report fraud as intentionally misleading or neglecting major facts or accounting data, which if considered as a whole, will affect the judgment and decisions of readers of the report. (Cohen et al. 2010). The ACFE notes that fraud that is related to financial reports is the least common form of fraud, amounting to 10.3%, but it causes the greatest financial loss with an average figure of 200 Million USD, which is 13 times the figure for regular annexation and 5 times the figure for corruption. Financial reporting fraud is a key focus for the prevention of fraud by enterprises. Flaming et al. (2016) investigated the financial report fraud between public and pravite companies. Romney et al. (1980) noted that fraud is the interaction of inner psychology and external context and factors of the inner state of mind include: (1) Situational stress, (2) Chance of fraud and (3) Personal traits. Wolfe and Hermanson (2004) showed that capability is actually the key factor that leads to fraud, because fraud cannot be successful if it is not possible. Capability includes intelligence, confidence, an ability to lie and an ability to resist stress. Zkul et al. (2012) and Enofe et al. (2015) explored the forensic accounting in preventing company fraud.

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3.RESEARCH METHOD

Traditionally, the first round of the Delphi method collects information that is related to the research topic by asking experts to answer open-ended questions. The results are then used to design the second round questionnaire. This study uses a modified Delphi method, which replaces expert opinions in the first round with material from the relevant literature. The Delphi method is a group decision making technique that was developed in 1948 by the Rand Corporation. In 1963, Dalkey and Helmer (1962) first published details of the Delphi method in an academic journal and in 1964, Helmer and Gordon published another long-term prediction report that used the Delphi method for areas other than military. Since then, the Delphi method has been used by industries, governments and medical disciplines to solve various decision-making problems.

The Delphi method recognizes an expert as one who understands a topic more completely and thoroughly than normal people. An expert can be a professional in that area, one with related experience or a member of a professional association (Hill & Fowles, 1975). Delbecg (1975) noted that the number of experts that the Delphi method requires is 15 to 30, if they are homogeneous, and 5 to 10, if they are not homogeneous. Dalkey (1969) concluded that the reliability of the Delphi method is greater than 80 % if the number of experts is more than 13. Based on these selection criteria, this study uses 30 experts, including senior management, prosecution lawyers and judges and accountants for the survey. Table 1 lists the details of the experts.

Table 1: Experts Details

Background	Position	Experiences (years)
Senior management	Bank board member	30
	President of company	30
	General manager of company	30
	President of company	30
	CEO of company	30
	President of company	30
	President of company	25
	President of company	30
	President of company	30
	Manager of company	25
Prosecution and judge	Prosecutor, Bureau Chief	20
	Attorney General	30
	Prosecutor, Deputy Chief, PhD, Professor	30
	Prosecutor, Prosecutor Chief	30
	Judge, Presiding judge	30
	Judge, Presiding Judge	28
	Prosecutor, PhD, Associate Professor	20
	Prosecutor	30
	Lawyer	30
	Prosecutor, PhD, Assistant Professor	20
	Prosecutor, PhD, Assistant Professor	25
	Prosecutor, Anti-Money Laundering Specialist	25
	Prosecutor	30
	Prosecutor	25
	Prosecutor, PhD, Assistant Professor	25
	Prosecution	30
	Prosecutor, Bureau Chief	28
	Prosecutor	30
	Judge, District Court Chief	30
Accounting	Accountant	30

This study uses a Likert scale for the expert survey. The questionnaire is divided into three aspects: government regulation, accountant validation and enterprise autonomy. (1) the government regulation section consists of 17 questions, (2) the accountant validation section consists of 6 questions and (3) the enterprise autonomy section consists of 10 questions. There are also three open questions that are denoted as “Other”. The experts fill these if they find other useful means. Table 2 shows the questionnaire.

Table 2: Delphi Method’s Questionnaire

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		least				Most
No	**Description**	**1**	**2**	**3**	**4**	**5**
	Government regulation					
1	Listed companies must deploy governance.					
2	Establish pre-warning system to monitor companies' operations.					
3	Listed companies must establish an audit committee and an independent director.					
4	Listed companies must deploy more than 50% independent directors.					
5	The audit committee must include a Forensic Accountant.					
6	Board decisions must be approved by an independent director.					
7	Board members and important staff must ensure responsibility.					
8	Regulate and increase the minimum number of shares for board members.					
9	Regulate and reduce the percentage of board members share mortgage.					
10	Apply regulation so that supervisors cannot be board members or managers of operations or financial issues for the invested company.					
12	Increase Accountant penalties, including criminal, civil and administrative penalties.					
13	Increase criminal penalties.					
14	Set a law for company fraud.					
15	Establish an institution that is responsible for company fraud.					
16	Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts.					
16	Set a law to provide reward and protection for informants.					
17	Increase the frequency of government auditing.					
18	Other：					
19	Other：					
20	Other：					
	Accountant validation					
1	Financial reports use analytical review procedures to audit if capital has been transferred.					
2	Accountants use a combined financial report for mutual investment to discover fake investment.					
3	Qualified opinion is further divided into mild, medium and severe.					
4	Increase accountants' ability to discover fraud.					
5	Correct erroneous accounting procedures.					
6	Ensure that accountants have professional responsibility.					
7	Other：					
8	Other：					
9	Other：					
	Enterprise autonomy					
1	Deploy governance.					
2	Implement an internal audit thoroughly.					
3	Internal auditors regularly demand bank credit information.					
4	Company charters specify a strict mortgage control mechanism.					

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5	Disclose the salaries of board members.					
6	Monitor employee email.					
7	50% of board members cannot be company stakeholders.					
8	Implement ethics.					
9	Establish a fraud risk management mechanism to avoid and detect fraud.					
10	Supervisors can appoint and dismiss accountants and heads of internal audits.					
11	Other：					
12	Other：					
13	Other：					

This study uses a scale from 1 to 5 to evaluate the effectiveness of the measures that prevent listed companies from being emptied: the higher the score, the better is the measure. To measure the consensus of expert opinions, criteria proposed by Fahety, Holden and Wedman are utilized. When the quartile deviation is less than or equal to 0.6, experts have a high level of consensus, when it is between 0.6 and 1, experts have medium consensus and when it is greater than 1, experts have no consensus.

4.ANALYSIS OF QUESTIONNAIRE

This section describes the analysis of the three rounds of questionnaires.

4.1. First Round Questionnaire

This study uses a modified Delphi method to design the first round questionnaire and summarizes three aspects that form the backbone of the questionnaire: government regulation, accountant validation and enterprise autonomy. The questions or measures within each aspect are also extracted from existing literature. Table 2 shows the questionnaire for the first round. The questionnaire starts with a description of the purpose of the research, implementation procedures for the Delphi method, the method of answering the questionnaire and reminds experts to add extra questions that are not listed in the questionnaire, if feasible. After collecting the first round questionnaire, the expert opinions were analyzed using a quartile deviation and it was found that: (1) Government regulation: 11 measures show a consensus, 6 measures do not show a consensus and 5 measures are suggested by the experts. (2) Accountant validation: 5 measures show a consensus, 1 measure does not show a consensus and 1 measure is suggested by an expert. (3) Enterprise autonomy: 6 measures show a consensus, 4 measures do not show a consensus and 4 measures are suggested by experts.

Measures that show a consensus are listed in Table 3. For the 11 measures within the government regulation aspect, the experts show a consensus on: (1) ”Listed companies must deploy governance”, for which the effectiveness is 3.9 or 78%; (3) ”Listed companies must set an audit committee with an independent director”, for which the effectiveness is 3.9 or 78%; (5) ”The audit committee must include a Forensic Accountant”, for which the effectiveness is 3.7 or 74%; (6) ”Board decisions must be approved by an independent director”, for which the effectiveness is 3.3 or 66%; (9) ”Regulate and reduce the percentage of board members share mortgage”, for which the effectiveness is 3.7 or 74%; (10) ”Apply regulations so that a supervisor cannot be a board member or manager for operations and financial issues for the invested company”, for which the effectiveness is 3.8 or 76%; (12) ”Increase Accountant penalties, including criminal, civil and administrative penalties”, for which the effectiveness is 3.8 or 76%; (14) ” Set a law for company fraud”, for which the effectiveness is 4.1 or 82%; (15) ” Establish an institution that is responsible for company fraud”, for which the effectiveness is 4.2 or 84%; (16) “Set a law to provide rewards and protection for informants”, for which the effectiveness is 4.3 or 86%, which is the most effective means in the first round, and (17) “Increase the frequency of government auditing”, for which the effectiveness is 3.8 or 76%. For the 5 measures within the accountant validation aspect, the experts show a consensus on: (1) ”Financial reports use analytical review procedures to audit if capital has been transferred”, for which the effectiveness is 3.9 or 78%; (2) ”Accountants use a combined financial report for mutual investment to discover fake investment”, for which the effectiveness is 4.2 or 84%, which is the most effective means in this aspect; (3) ”Qualified opinion is further divided into mild, medium and severe”, for which the effectiveness is 4 or 80%; (4) ”Increase an accountant’s ability to discover fraud”, for which the effectiveness is 3.2 or 64%, and (5) ”Correct erroneous accounting procedures”, for which the effectiveness is 3.8 or 76%. For the 6 measures within the enterprise autonomy aspect, the experts show a consensus on: (1) ”Deploy governance”, for which the effectiveness is 4.1 or 82%, which is one of the most effective means in this aspect; (2) ”Implement an internal audit thoroughly”, for which the effectiveness is 3.9 or 78 or 66%; (4) “Company charters specify a strict mortgage control mechanism”, for which the effectiveness is 3.9 or 78%; (9) ”Establish a fraud risk management mechanism to avoid and detect

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fraud", for which the effectiveness is 4.1 or 82%, which is one of the most effective means in this aspect; and (10) "Supervisors can appoint and dismiss accountants and heads of internal audits", for which the effectiveness is 3.3 or 66%。

Table 3: The Effectiveness of Measures that Show a Consensus in the First Round

<table>
<tr><td></td><td></td><td colspan="5">Least Most</td></tr>
<tr><td>No</td><td>Description</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td colspan="2">Government regulation</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>Listed companies must deploy governance.</td><td></td><td></td><td colspan="2">3.9</td><td></td></tr>
<tr><td>3</td><td>Listed companies must set an audit committee with an independent director.</td><td></td><td></td><td colspan="2">3.9</td><td></td></tr>
<tr><td>5</td><td>An audit committee must include a Forensic Accountant.</td><td></td><td></td><td colspan="2">3.7</td><td></td></tr>
<tr><td>6</td><td>Board decisions must be approved by an independent director.</td><td></td><td></td><td colspan="2">3.3</td><td></td></tr>
<tr><td>9</td><td>Regulate and reduce the percentage of board members share mortgage.</td><td></td><td></td><td colspan="2">3.7</td><td></td></tr>
<tr><td>10</td><td>Apply regulation so that supervisors cannot be board members or managers for operation or financial issues for the invested company.</td><td></td><td></td><td colspan="2">3.8</td><td></td></tr>
<tr><td>12</td><td>Increase Accountant penalties, including criminal, civil and administrative penalties.</td><td></td><td></td><td colspan="2">3.8</td><td></td></tr>
<tr><td>14</td><td>Set a law for company fraud.</td><td></td><td></td><td></td><td colspan="2">4.1</td></tr>
<tr><td>15</td><td>Establish an institution that is responsible for company fraud.</td><td></td><td></td><td></td><td colspan="2">4.2</td></tr>
<tr><td>16</td><td>Set a law to provide rewards and protection for informants.</td><td></td><td></td><td></td><td colspan="2">4.3</td></tr>
<tr><td>17</td><td>Increase government auditing frequency.</td><td></td><td></td><td colspan="2">3.8</td><td></td></tr>
<tr><td colspan="2">Accountant validation</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>Financial reports use analytical review procedures to audit if capital has been transferred.</td><td></td><td></td><td colspan="2">3.9</td><td></td></tr>
<tr><td>2</td><td>Accountants use a combined financial report for mutual investment to discover fake investment.</td><td></td><td></td><td></td><td colspan="2">4.2</td></tr>
<tr><td>3</td><td>Qualified opinion is further divided into mild, medium and severe.</td><td></td><td></td><td></td><td>4</td><td></td></tr>
<tr><td>4</td><td>Increase accountants' ability to discover fraud.</td><td></td><td></td><td colspan="2">3.2</td><td></td></tr>
<tr><td>5</td><td>Correct erroneous accounting procedures.</td><td></td><td></td><td colspan="2">3.8</td><td></td></tr>
<tr><td colspan="2">Enterprise autonomy</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>Deploy governance.</td><td></td><td></td><td></td><td colspan="2">4.1</td></tr>
<tr><td>2</td><td>Implement an internal audit thoroughly.</td><td></td><td></td><td colspan="2">3.9</td><td></td></tr>
<tr><td>3</td><td>Internal auditors regularly demand bank credit information.</td><td></td><td></td><td colspan="2">3.3</td><td></td></tr>
<tr><td>4</td><td>Company charters specify a strict mortgage control mechanism.</td><td></td><td></td><td colspan="2">3.9</td><td></td></tr>
<tr><td>9</td><td>Establish a fraud risk management mechanism to avoid and detect fraud.</td><td></td><td></td><td></td><td colspan="2">4.1</td></tr>
<tr><td>10</td><td>Supervisors can appoint and dismiss accountants and heads of internal audits.</td><td></td><td></td><td colspan="2">3.3</td><td></td></tr>
</table>

Measures that do not show a consensus are listed in Table 4. (1) In the government regulation aspect: 6 measures do not reach consensus, including "Establish a pre-warning system to monitor companies' operations", "Listed companies must deploy more than 50% independent directors", "Board members and important staff must insure responsibility", "Regulate and increase the minimum number of shares for board members", "Increase criminal penalties", "Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts". (2) In the Accountant aspect, 1 measure does not show a consensus: "Ensure that accountants have professional responsibility". (3) For enterprise autonomy, 4 measures do not show a consensus, including "Disclose the salaries of board members", "Monitor employee email", "50% of board members cannot be company stakeholders" and "Implement ethics".

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Table 4: Measures that do not show a Consensus in the First Round

No	Description	Quartile Deviation
	Government regulation	
2	Establish a pre-warning system to monitor companies' operations.	2
4	Listed companies must deploy more than 50% independent directors.	2
7	Board members and important staff must insure responsibility.	2.75
8	Regulate and increase the minimum number of shares for board members.	2.75
13	Increase criminal penalties.	2
16	Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and higher priority for government contracts.	2
	Accountant validation	
6	Ensure that accountant have professional responsibility.	2
	Enterprise autonomy	
5	Disclose the salaries of board members.	3
6	Monitor employee email.	2.75
7	50% of board members cannot be company stakeholders.	2
8	Implement ethics.	2

After the first round of the survey, the experts suggested extra measures and these are listed in Table 5: (1) Government regulation aspect: 5 measures are suggested, including "Code of conduct", "The selling of shares by board members is restricted", "Company information must be transparent", "Unlimited monetary penalties" and "Criminals must give back the spoils". (2) For the accountant validation aspect, 1 measure is suggested: "Company information must be transparent". (3) For the enterprise autonomy section: 4 measures are suggested, including "Check criminal records", "Free of previous convictions", "Good moral character" and "Supervisors cannot be yes men".

Table 5: Measures Suggested by Experts in the First Round

No	Description
	Government regulation
18	Other: Code of conduct.
19	Other: The selling of shares by board members is restricted.
20	Other: Company information must be transparent.
21	Other: Unlimited monetary penalties.
22	Other: Criminals must give back the spoils.
	Accountant validation
7	Other: Company information must be transparent.
	Enterprise autonomy
11	Other: Check criminal records.
12	Other: Free of previous convictions.
13	Other: Good moral character.
14	Other: Supervisors cannot be yes men.

4.2. Second Round Questionnaire

The 11 measures that do not show a consensus in the first round are combined with the 10 suggested measures and are formulated as the second questionnaire. To give expert feedback on the outcome of the first round survey, the second questionnaire showed the average and standard deviation of the expert opinion from the first round, so that each expert could understand the difference between opinions for reevaluation in the second round. After the second survey, questionnaires were collected and analyzed, and the results for consensus are: (1) In the government regulation aspect, 9 measures show a consensus and 1 measure does not and 1 measure is suggested. (2) In the accountant validation aspect, 2

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measures show a consensus and 1 measure is suggested. (3) In the enterprise autonomy aspect, 5 measures show a consensus and 3 measures do not and 1 measure is suggested.

Measures that show a consensus are listed in Table 6. In the government regulation aspect, the effectiveness of the 10 measures that show a consensus are: (2) ”Establish pre-warning system to monitor companies operations”, with an effectiveness of 4 or 80%; (4) “Listed companies must deploy more than 50% independent directors”, with an effectiveness of 3.1 or 62%; (7) ”Board members and important staff must insure responsibility”, with an effectiveness of 3.8 or 76%; (8) ”Regulate and increase the minimum number of shares for board members”, with an effectiveness of 4.1 or 82%; (13) ”Increase criminal penalties”, with an effectiveness of 4 or 80%; (16) ”Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and higher priority for government contracts”, with an effectiveness of 4 or 80%; (19) ”Other: Selling of shares by board members is restricted”, with an effectiveness of 4 or 80%; (20) ”Other: Company information must be transparent”, with an effectiveness of 4.2 or 84%; (21) ”Other: Unlimited monetary penalties”, with an effectiveness of 4 or 80% and (22) ”Other: Criminals must give back the spoils”, with an effectiveness of 4.8 or 98%, which is the most effective measure in the second round. The effectiveness of the two measures that show a consensus in the accountant validation aspect are: (6)”Ensure that accountants have professional responsibility”, with an effectiveness of 3.9 or 78%, and (7) ”Other: Company information must be transparent” with an effectiveness of 3.8 or 76%. The effectiveness of the 5 measures that show a consensus in the enterprise autonomy aspect are: (6) ”Monitor employee email”, with an effectiveness of 2.8 or 56%, which is regarded as a less effective means by experts, probably because of lack of appropriateness; (7) ”50% of board members cannot be company stakeholders”, with an effectiveness of 3.9 or 78%; (8) ”Implement ethics”, with an effectiveness of 3.9 or 78%; (11) ”Other: Check criminal records”, with an effectiveness of 3.7 or 74%, and (12) ”Other: Free of previous convictions”, with an effectiveness of 3.8 or 76%.

Table 6: The Effectiveness of Measures that show a Consensus in the Second Round

		Least				**Most**
No	**Description**	**1**	**2**	**3**	**4**	**5**
	Government regulation					
2	Establish a pre-warning system to monitor company operations.				4	
4	Listed companies must deploy more than 50% independent directors.			3.1		
7	Board members and important staff must insure responsibility.			3.8		
8	Regulate and increase the minimum number of shares for board members.				4.1	
13	Increase criminal penalties.				4	
16	Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts.				4	
19	Other: Selling of shares by board members is restricted.				4	
20	Other: Company information must be transparent.				4.2	
21	Other: Unlimited monetary penalties.				4	
22	Other: Criminals must give back the spoils.				4.8	
	Accountant validation					
6	Ensure that accountants have professional responsibility.			3.9		
7	Other: Company information must be transparent.			3.8		
	Enterprise autonomy					
6	Monitor employee email.		2.8			
7	50% of board members cannot be company stakeholders.			3.9		
8	Implement ethics.			3.9		
11	Other: Check criminal records.			3.7		
12	Other: Free of previous convictions.			3.8		

Measures that do not show a consensus in the second round are listed in Table 7. (1) In the government regulation aspect, 1 measure does not show a consensus: “Other: Code of conduct”, (2) all measures show a consensus in the accountant

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validation aspect; (3) 3 measures do not show a consensus, including ”Disclose salaries of board members”, “Good moral character” and “Other: Supervisors cannot be yes men”.

Table 7: Measures that do not show a Consensus in the Second Round

No	Description	Quartile Deviation
	Government regulation	
18	Other: Code of conduct.	1.5
	Accountant validation	
	Enterprise autonomy	
5	Disclose salaries of board members.	1.75
13	Good moral character.	1.25
14	Other: Supervisors cannot be yes men.	1.5

Measures that were suggested by experts in the second round are listed in Table 8. For (1) the government regulation aspect, 1 measure is suggested: “Provide rewards and protection for informants”. For (2) the accountant validation aspect, 1 measure is suggested: “Other: Specify accountant validation norms and responsibilities”. For (3) the enterprise autonomy aspect, 1 measure is suggested: “Regular training of board members on governance”.

Table 8: Measures that were Suggested by Experts in the Second Round

No	Description
	Government regulation
23	Provide rewards and protection for informants.
	Accountant validation
8	Other: Specify accountant validation norms and responsibilities.
	Enterprise autonomy
15	Other: Regular training of board members on governance.

4.3. Third Round Questionnaire

The 4 measures that do not show a consensus in the second round were combined with the 4 suggested measures to form the third questionnaire, which also showed the average and standard deviation of the expert judgments in the second survey, for reevaluation in the third round.

The results of the third questionnaire are: (1) government regulation aspect: 2 measures show a consensus; (2) accountant validation aspect: 1 measure shows a consensus; (3) enterprise autonomy aspect: 3 measures show a consensus and 1 measure shows a medium level of consensus with a quartile deviation of 0.75, which is slightly greater than 0.6. Measures that show a consensus are listed in Table 9. For the government regulation aspect, 2 measures show a consensus: (18) ”Other: Code of conduct”, for which the effectiveness is 3.9 or 78%, and (23) ”Provide rewards and protection for informants”, for which the effectiveness is 4.2 or 84%. 1 measure shows a consensus in the account validation aspect: (8)”Other: Specify accountant validation norms and responsibilities”, for which the effectiveness is 4.1 or 82%. 4 measures show a consensus in the enterprise autonomy aspect: (13) ”Other: Good moral character”, for which the effectiveness is 4 or 80; (14) ”Other: Supervisors cannot be yes men”, for which the effectiveness is 4 or 80%; (15) ”Other: Regular training of board members on governance”, for which the effectiveness is 4.8 or 96%, and (5) ”Disclose salaries of board members”, for which the effectiveness is 4.3 or 86%.

Table 9: The Effectiveness of Measures that show a Consensus in the Second Round

No	Description	Least				Most
		1	2	3	4	5
	Government regulation					
18	Other: Code of conduct.			3.9		
23	Provide rewards and protection for informants.				4.2	
	Accountant validation					
8	Other: Specify accountant validation norms and responsibilities.				4.1	
	Enterprise autonomy					
5	Disclose salaries of board members.				4.3	
13	Other: Good moral character.				4	

14	Other: Supervisors cannot be yes men.				4	
15	Other: Regular training of board members on governance.				4.8	

All measures show a consensus in the third survey and the experts do not suggest any new measures, so the Delphi questionnaire process ends.

The data in Table 10 combines the three rounds of questionnaires and prioritizes the effectiveness of the measures that are related to government regulation, accountant validation and enterprise autonomy. It is seen that two measures are ranked first: for the government regulation aspect, (22) “Other: Criminals must give back the spoils” and for the enterprise autonomy aspect, (15) ”Other: Regular training of board members on governance”. Two measures are placed second: for the government regulation aspect, (16) “Set laws to provide rewards and protection for informants” and for the enterprise autonomy aspect, (5) “Disclose salaries of board members”. The measures in first place deter fraudulent activity and the measures in second place encourage informants. The measures in third place are, for the government regulation aspect, ”Establish an institution that is responsible for company fraud”, “Other: Company information must be transparent” and ”Provide rewards and protection for informants”, for the accountant aspect, “Accountants use a combined financial report for mutual investment to discover fake investment”. The measures in fourth place are, for the government aspect, “Regulate and increase the minimum number of shares for board members”, “Set laws for company fraud”, for the enterprise aspect, “Establish a fraud risk management mechanism to avoid and detect fraud” and for the accountant aspect, “Other: Specify accountant validation norms and responsibilities”. The measures in fifth place are, for the government aspect, “Establish a pre-warning system to monitor company operations”, “Increase criminal penalties”, “Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts”, “Other: Selling of shares by board members is restricted” and ”Other: Unlimited monetary penalties”, for the accountant aspect, “Qualified opinion is further divided into mild, medium and severe”, and for the accountant aspect, “Other: Good moral character” and “Other: Supervisors cannot be yes men”. Careful examination of these five measures shows that, of the 21 measures, there are 13 government related measures, which is 62%, and four each of accountant and enterprise related measures, which is 19% each. For the top three measures, of the 8 measures, there are five government related measures, which is again 63%, one accountant related measure, which is 13%, and two enterprise related measures, which is 25 %. It is seen that the experts determine that government regulation plays the most vital role in preventing a listed company from being emptied. The details are listed in Table 10, wherein G, A and E in the No column respectively denote government regulation, accountant validation and enterprise autonomy.

Table 10: The Effectiveness of Measures to Prevent Fraud

Rank	No	Government /Accountant/Enterprise	Effectiveness
1	G22	Other: Criminals must give back the spoils.	4.8
	E15	Other: Regular training of board members on governance	
2	G16	Set laws to provide rewards and protection for informants.	4.3
	E5	Disclose salaries of board members.	
3	G15	Establish an institution that is responsible for company fraud.	4.2
	G20	Other: Company information must be transparent.	
	G23	Provide rewards and protection for informants.	
	A2	Accountants use a combined financial report for mutual investment to discover fake investment.	
4	G8	Regulate and increase the minimum number of shares for board members.	4.1
	E9	Establish a fraud risk management mechanism to avoid and detect fraud.	
	G14	Set a law for company fraud.	
	A8	Other: Specify accountant validation norms and responsibilities.	
5	G2	Establish a pre-warning system to monitor company operations.	4.0
	G13	Increase criminal penalties.	
	G16	Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts.	
	G19	Other: Selling of shares by board members is restricted.	
	G21	Other: Unlimited monetary penalties.	

	A3	Qualified opinion is further divided into mild, medium and severe.	
	E13	Other: Good moral character.	
	E14	Other: Supervisors cannot be yes men.	
6	G1	Listed companies must deploy governance.	3.9
	G3	Listed companies must set an audit committee with an independent director.	
	G18	Other: Code of conduct.	
	A1	Financial reports use analytical review procedures to audit if capital has been transferred.	
	A6	Ensure that accountants have professional responsibility.	
	E2	Implement internal audits thoroughly.	
	E4	Company charter specifies a strict mortgage control mechanism.	
	E7	50% of board members cannot be company stakeholders.	
	E8	Implement ethics.	
7	G7	Board members and important staff must insure responsibility.	3.8
	G10	Apply regulation that supervisors cannot be board members or managers for operation and financial issues for the invested company.	
	G12	Increase Accountant penalties, including criminal, civil and administrative penalties.	
	G17	Increase government auditing frequency.	
	A5	Correct erroneous accounting procedures.	
	A7	Other: Company information must be transparent.	
	E12	Other: Free of previous convictions.	
8	G5	Audit committee must include a Forensic Accountant.	3.7
	G9	Regulate and reduce the percentage of board members who share a mortgage.	
	E11	Other: Check criminal records.	
9	G6	Board decisions must be approved by an independent director.	3.3
	E3	Internal auditors regularly demand bank credit information.	
	E10	Supervisors can appoint and dismiss accountants and heads of internal audits.	
10	A4	Increase accountants' ability to discover fraud.	3.2
11	G4	Listed companies must deploy more than 50% independent directors.	3.1
12	E6	Monitor employee email.	2.8

5. CONCLUSION

Enterprise fraud is a critical economic problem for every government and major fraud events occur periodically. These affect the country and sometimes the regional economic zone, so enterprise fraud is a zero-tolerance legal

issue. This study uses a modified Delphi method and 30 experts to determine opinions about measures to prevent companies from being emptied. The opinions are categorized in terms of government regulation, accountant validation and enterprise autonomy. Three rounds of questionnaire are conducted and the results show that the most effective measures are, for the government regulation aspect, ”Other: Criminals must give back the spoils” and for the enterprise autonomy aspect, “Other: Regular training of board members on governance”. These two measures are suggested by experts, which shows the advantage of Delphi method's feedback feature. The second most effective measures are, for the government regulation aspect, “Set a law to provide rewards and protection for informants” and for the enterprise autonomy aspect, “Disclose salaries of board members”. The third most effective measures are, for the government regulation aspect, “Establish an institution that is responsible for company fraud, “Other: Company information must be transparent” and “Provide rewards and protection for informants”, and for the accountant validation aspect, “Accountants use a combined financial report for mutual investment to discover fake investment”. It is seen that government regulation is regarded by the experts as the most important measure in preventing fraud. The fourth most effective measures are, for the government regulation aspect, “Regulate and increase the minimum number of shares for board members”, “Establish a fraud risk management mechanism to avoid and detect fraud” and “Set a law for company fraud”, and for the account validation aspect, “Other: Specify accountant validation norms and responsibilities”. The fifth most effective measures are, for the government regulation aspect: “Establish a pre-warning system to monitor company operations”, “Increase criminal penalties”, “Establish a company evaluation mechanism to reward companies that have better performance with a lower tax rate and a higher priority for government contracts”, “Other: Selling of shares by board members is restricted” and ”Other: Unlimited monetary penalties”, and for the accountant validation aspect, ”Qualified opinion is further divided into mild, medium and severe” and for the enterprise autonomy aspect, “Other: Good moral character” and “Other: Supervisors cannot be yes men”. The experts agree

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that there is a need for significant measures to deal with fraudulent emptying of companies, the most important of which is government regulation, although the top five measures include 4 accountant and 4 enterprise related measures. Thorough execution of those measures relies on legislation, so the key role in preventing fraud of empty falls to government. Enterprise-related means, such as governance and ethics, are ranked at lower than sixth place, which implies that active government legislation is more effective than passive self-criticism within companies. The most important finding of this study is that the most effective measures for preventing companies from being emptied are government regulation, and then accountant validation, and enterprise autonomy ranks least important. The study contributes to the general knowledge base by identifying the relative importance of government regulation, accountant validation and enterprise autonomy and by prioritizing the execution of measures within each aspect and between all aspects. This study differs from previous works, wherein only possible measures are mentioned or listed without prioritization. The results of this study serve as a useful reference for legislative and judiciary bodies.

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