The Impact of Audit Market Concentration and Market Power on Audit Fees:
A Comparison of Indonesia and Singapore

(Impak Penumpuan Pasaran Audit dan Kekuatan Pasaran terhadap Yuran Audit:
Perbandingan Indonesia dan Singapura)

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ABSTRACT

This study aims to investigate the effect of audit market concentration and market power on audit fees in Indonesia (high audit market concentration) and Singapore (low audit market concentration). The sample is listed companies from 2012-2015. Market concentration was calculated by the Herfindahl–Hirschman Index, while market power is the difference in market share between one audit firm and another audit firm that has the closest market share. Regression result found that the effect of market concentration on audit fees depends on the level of market competition in the country. In countries where the level of competition is low (such us Singapore), if market concentration increases, the rivalry will decrease. The remaining audit firm is not worried about losing clients because the number of players in the market has decreased and eventually dare to increase audit fees. In contrast, countries that have a high rivalry (such us Indonesia), when the market concentration increases, the competition among the remaining audit firms is still high (because there are many audit firms). As a result, the remaining audit firm gives a discounted price to win the competition and thus audit fee will decrease. However, if there are stringent regulations and strong law enforcement (like Singapore), audit fees could not be altered by market concentration, especially by market power in a form of monopoly. Audit market rivalry in Indonesia is relatively high. Hence, robust supervision and monitoring are required from authority to ensure that unfair audit fees will not emanated from the competitive audit market. Additionally, regulators need to pay attention on this topic due to the fact that unhealthy competition may create biased audit pricing that affect audit quality.

Keywords: Audit fees; audit market concentration; audit market power; audit market competition; law enforcement

ABSTRAK

Kajian ini bertujuan untuk mengkaji pengaruh penumpuan pasar audit dan kekuatan pasar terhadap yuran audit di Indonesia (penumpuan pasar audit tinggi) dan Singapura (penumpuan pasar audit rendah). Sampel terdiri daripada syarikat tersenarai dari 2012-2015. Penumpuan pasaran dikira menggunakan Indeks Herfindahl - Hirschman, sementara kekuatan pasaran adalah perbezaan bahagian pasaran antara satu firma audit dan firma audit lain yang memiliki bahagian pasaran terdekat. Hasil regresi mendapati bahawa kesan penumpuan pasaran terhadap yuran audit bergantung pada tahap persaingan pasaran di negara ini. Di negara-negara yang mempunyai tingkat persaingan rendah (seperti Singapura), jika penumpuan pasaran meningkat, persaingan akan menurun. Firma audit yang selebihnya tidak bimbang kehilangan pelanggan kerana jumlah pemain di pasaran telah menurun dan akhirnya berani menaikkan yuran audit. Sebaliknya, di negara-negara yang memiliki persaingan yang tinggi (seperti Indonesia), ketika penumpuan pasaran meningkat, persaingan di antara baki firma audit masih tinggi (kerana ada banyak firma audit). Hasilnya, firma audit yang tinggal memberikan potongan harga untuk memenangi pertandingan dan dengan itu yuran audit akan menurun. Namun, jika terdapat peraturan yang ketat dan penguatkuasaan undang-undang yang kuat (seperti Singapura), yuran audit tidak dapat diubah oleh penumpuan pasaran, terutama oleh kekuatan pasaran dalam bentuk monopoli. Persaingan audit pasaran di Indonesia relatif tinggi. Oleh itu, pengawasan dan pemantauan yang ketat diperlukan dari pihak berkuasa untuk memastikan bahawa yuran audit yang tidak adil tidak akan dikeluarkan dari pasaran audit yang kompetitif. Selain itu, pengawal selia perlu memberi perhatian terhadap topik ini kerana persaingan yang tidak sihat dapat menimbulkan harga audit yang berat sebelah yang mempengaruhi kualiti audit.

Kata kunci: Yuran audit; audit konsentrasi pasar; audit kekuatan pasar; audit persaingan pasar; penguatkuasaan undang-undang

INTRODUCTION

In Indonesia, there is an interesting phenomenon where the average audit fee of non-financial public companies in 2014 fell by 1% compared to 2013 (Mardina & Anggraita 2016). Meanwhile due to the implementation of IFRS and ISA, the average audit fee in the world in 2014 rose by 3.4% (CFO 2015). Hence, it is interesting

to investigate the reason behind the declining audit fees in Indonesia while on average global audit fees rise. In Indonesia, there are many small-sized audit firms that resulted in a very competitive audit market. This condition increase the auditor's incentive to compete in attaining clients by providing a fee discount which may cause poor audit quality.

The results of the existing studies vary widely. Some find that audit market concentration has a positive correlation with audit fee, while others find a negative relationship. According to the perspective of classical micro-economic theory, as audit markets become more concentrated to only some firms, client's choices become more limited. Thus, it could increase the market power of the remaining suppliers. They are not worried about losing clients because the numbers of competitors have decreased. Hence, audit firms have the courage to increase audit fees (Gettler 2004; Oxera 2006; European Commission 2010, Huang e al. 2016). On the other hand, increasing the audit market concentration can reduce audit fee because of economies of scale or competitive rivalry amongst the remaining audit firms (Pearson & Trompeter 1994; Danos & Eichenseher 1986; Numan & Willekens 2012; Huang et al. 2016).

Government in several developed countries is concerned with the potential impact of the concentrated audit market on audit fee and audit quality. Hence, it would strengthen the the auditor's market power and encourage satisfaction among the auditors, which in turn results in higher audit fee but lower audit quality. Therefore, this research will also examine the effect of market power on audit fees.

Huang et al. (2016) said that strong institution might be able to prevent the declining audit quality due to increased market concentration, but the results will be different from countries where the legal environment is still weak. This theory needs to be investigated further to prevent undesirable consequences from regulations. In addition, this research will investigate the effect of concentration on audit fees in countries where there are significant differences in competition (high and low) and legal environment (strong and weak). Hence, we choose two countries that have contrast condition in ASEAN; Indonesia and Singapore. Indonesia was chosen as a country with a high level of audit market competition but weak legal institutions, compared to Singapore where the level of audit market competition was lower but the legal institutions were stronger. Huang et al. (2016) conducted research in one country (China). This research compares two countries with different levels of market concentration and different levels of law enforcement.

Owing to the fact that the concentration of the audit market in Indonesia is still relatively low, this study will compare Indonesia to another ASEAN country particularly Singapore. Based on Thomson Reuters Eikon, the number of companies listed on the Indonesia stock exchange were 521 in 2015, while the number of accounting firms that audited these companies from 2012

to 2015 were 64. In contrast, Singapore had more listed companies and fewer accounting firms that audited those companies (774 listed companies and 24 accounting firms). Table 1 shows the audit market concentration in Indonesia and Singapore in each industry from 2012-2015.

The average audit market concentration for all industry in Indonesia is 0.224, lower than audit market concentration in Singapore (0.329). It means that rivalry in Indonesia is higher than in Singapore. Hence, it is entrancing to study the effect of audit market concentration on audit fees in both countries.

Numan & Willekens (2012) states that in addition to the magnitude of market concentration, market power will also have an effect on the amount of audit fees. Market power is the ability of a company to influence the level of prices on the market. The dominant company can raise prices and earn very high profits. Market power is the difference in market share value between one audit firm and another audit firm that has the closest market share. Hence, the effect of market power on audit fees is also an important factor to study. Additionally, Carson (2012) found similar findings that audit fees are positively correlated by the market power audit firm.

This study refers to Numan and Willekens (2012) and Mardiana and Anggraita (2016) which examine the factors that affect audit fee based on the market concentration and market power. However, both studies use sample only in one country, while this study compares Indonesia and Singapore with the aim of comparing the effect of market concentration on audit fees in developing and developed countries. Indonesia as a developing country with an immature audit market characterized by many audit firms has a lower market concentration, compared to Singapore as a developing country with a higher level of audit market concentration (lower competition). Market concentration and audit fee behavior could have different impacts in these two countries. In addition, this research add specialization as a control variable.

The sample chosen in this study were public companies in Indonesia and Singapore for the following reasons:

1. Until now, research about audit market concentration's impact on the audit fees that focuses on ASEAN countries is still very limited. One of the ASEAN Economic Community (AEC) agendas is the integration of the ASEAN capital market which will have an impact on the increasing need for high-quality audits. One of the determinants of audit quality is the amount of audit fees. Then it is interesting to further examine the impact of audit market concentration on audit fees.

2. As a developed country, the percentage of institutional investor ownership in Singapore is more than in Indonesia. Ali, Ben & Lesage (2013) found a positive correlation between institutional ownership

TABLE 1. Audit market concentration in Indonesia and Singapore (2012–2015)

Industrial Sector	Indonesia				Average	Singapore				Average
	2012	2013	2014	2015		2012	2013	2014	2015	
Consumer discretionary	0,29	0,27	0,26	0,26	0,27	0,39	0,31	0,22	0,32	0,31
Consumer staples	0,23	0,24	0,25	0,24	0,24	0,45	0,45	0,40	0,47	0,44
Energy	0,21	0,26	0,25	0,22	0,24	0,24	0,25	0,24	0,27	0,25
Health care	0,31	0,29	0,29	0,28	0,29	0,53	0,43	0,42	0,37	0,44
Industrials	0,15	0,16	0,16	0,17	0,16	0,37	0,35	0,35	0,40	0,37
Information technology	0,21	0,29	0,32	0,32	0,29	0,30	0,29	0,27	0,28	0,29
Materials	0,23	0,18	0,19	0,15	0,19	0,19	0,13	0,14	0,15	0,15
Real estate	0,13	0,14	0,13	0,13	0,13	0,35	0,33	0,31	0,31	0,33
Telecomunication	0,50	0,66	0,43	0,46	0,51	0,85	0,86	0,84	0,86	0,85
Utilities	0,94	0,97	0,98	0,98	0,97	0,23	0,22	0,30	0,3	0,26

Source: the data is processed by researchers

and audit fees. Because institutional investors need high-quality earnings information, they demand high audit quality (Kane & Velury 2004). Mitra et al. (2007) also found that companies are encouraged to present high quality audits to provide positive perceptions about the quality of financial reporting in order to attract investment from institutional investors. Therefore, companies are willing to pay far up audit fee in country with high institutional investor ownership.

3. The governance quality of countries in ASEAN varies significantly. Based on the governance index published by the World Bank (2015), Singapore is considered among the best in the world, while Indonesia have governance index that is below the world average. Law enforcement in Singapore is better than in Indonesia, hence it will affect audit quality and audit fee. This high variation in governance quality provides an avenue to discuss the impact audit market concentration on audit fee.

This research is expected to give an overview of the audit services market in Indonesia and Singapore as well as to provide input for regulators in determining appropriate regulations related to the determination of audit fees. This finding is necessary to ensure that the audit fee reflects the quality of the audit provided and not only based on the bargaining process conducted by audit firm and client. An understanding of the level of audit market concentration could be an input for regulators in governing the behaviour of market participants.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In Indonesia, accounting firms follow the guidelines set by the Indonesian Institute of Certified Public Accountants (IAPI) to set audit fee for their clients. The IAPI states that a reasonable method to determine audit fee is to base it on the professionalism of the audit services provided. In addition, the Financial Services Authority of Indonesia (OJK) requires all listed companies to disclose information about fees. However, many companies listed on the Indonesia Stock Exchange during 2012–2015 have not fully disclosed the audit fee in the financial statements. However, Singaporean authorities have issued amendments to rulings disclosure of audit fees for public companies listed on the Singapore Exchange (SGX).

In 2008, Indonesia implemented regulation about mandatory audit partner rotation every 3 years and audit firm rotation every 6 years. This regulation could reduce the concentration of audit markets. The lower level of the audit market concentration, indicates a higher level of competition, so that it can cause increased opportunities for clients to change auditors with different audit fees (Anggraita et al. 2012). Desta and Anggraita (2016) found that in Indonesia, market power and market concentration had a significant positive effect on audit fees. In 2015, regulation regarding audit firm rotation in Indonesia abolished. While in Singapore, there was no mandatory audit firm rotation, only audit partner rotation.

AUDIT FEE

Multiple studies have been conducted to model the correlation between audit fees and various characteristics of the client, attributes of the auditor and also related factors specific to that audit engagement (Carson et al. 2014). Among client attributes are client's size, the complexity of client's operation (number of segments, multinational operation, and/or IFRS adoption), the possibility of client to have financial difficulties, and client's industry itself (AL-Mutairi & Naser 2017; Gunn 2019, Hay, Knechel & Li 2006; Huang et al. 2007; Low, Tan & Koh 1990; Mardiana 2016; Rusmanto & Waworuntu 2015; Simunic 1980; Zhang, Ke & Li 2020). Several other studies consider the level of corporate governance in auditee and ownership structure. Wu

(2012) and Tsui, Jaggi and Gul (2001) found that firms with independent corporate boards are having lower audit fees, but Zaman, Hudaib and Haniffa (2011) found that effective audit committees ask wider audit scope, so audit fees is higher. Nelson and Mohamed-Rusdi (2015) found that audit fee is higher for firms with larger foreign ownership and government ownership.

Another aspect that may determine audit fee is the supply side, which is auditor's characteristics, such size of auditor, specialization, seasonality of audit, and audit tenure. The Big Four audit firms are regarded as being better audit services and providing insurance against reputational risks (Malis & Brozovic 2015), thus ask premium audit price. Scott and Gist (2012) said that auditor's knowledge of their client's industry enhances their professional skepticism. Hiring specialist is, for sure, not cheap (AL-Qadasi et al. 2019). It is economically reasonable that firms will charge higher price in busy season when the demand surge. Audit tenure will influence audit fee. Ghosh and Siriviriyakul (2018) found that fees for Big 4 audit firms increase noticeably over the audit firm's tenure. In reverse, non-Big 4 audit firms' fees decline as tenure lengthens.

AUDIT MARKET CONCENTRATION

Several studies have found that there is audit market concentration in most developed countries (De Beelde 1997). Beattie at el. (2003) found that in UK, as of April 2002, the Big 4 audit firms have 90% of the market. Simon et al. 1992 in Ishak, Mansor and Maruhun. (2013) found that in Malaysia, Big 6 audited 68%, Hong Kong 78%, and Singapore 83%. Malis and Brozovic (2015) suggested that in Croatia, audit market for listed companies is moderately to highly concentrated, with a decrease in the five-year period (2013 compared to 2008). Nevertheless, audit market in China are characterized by small-sized audit firms who compete for clients by giving discount, thus lowering audit quality (Huang, Chang & Chiou 2016).

Globally, authorities are concerned with the concentration of the Big 4, and the possible impacts of such concentration to competition, audit fee, and audit quality (Gunn 2019). Increased market concentration meant fewer choices for users (Beattie et al. 2003), thus creating dominance in the audit market and increase audit fee.

The effect of increased concentration to rivalry and audit quality is still debatable, although some evidence suggests that such concentration of audit services may reduce market competition. Evans and Schwartz (2014) found that increased in audit market concentration has no effect to audit fees for small clients, while it has a positive correlation with audit fees for large ones. Mardiana (2016) found that higher market concentration of audit services had a positive relationship with audit fees. Beattie et al. (2003) stated that horizontal mergers by big public accounting firms tended to increase audit

services market concentration and lead to higher barriers to entry. These conditions lead to monopolistic market power, which increases the audit fee charged by the auditor. A study in Australian audit market for listed company during the period 2000–2011 by Carson et al. (2014) found that audit market is both highly segmented and supplier concentrated. It is evidenced that audit fees have increased over the period in Australia. Conversely, lower audit costs for large companies may be resulted by the increasing audit market concentration. The cost declines because the increase in market concentration results in increased specialization of an accounting firm, and the economies of scale from this could reduce the audit fees (Simunic 1980; Beattie et al. 2003; Chaney, Jeter & Shivakumar 2004; Carson et al. 2014).

Gunn et al. (2019) conducted cross country study on the impact of market concentration on audit fee and audit quality with client's size and complexity as moderating variables. When the barriers to entry by competing auditors are higher consequently audit fees are increasing. This barriers to entry are determined by client size, international operations, and IFRS usage and in the same time audit quality is decreasing in Big 4 market concentration for those types of engagements. It implies that reduced competition in concentrated market may lower quality of audit given by the auditors. Huang et al. (2016) in China audit market found that market concentration indirectly improves audit quality via higher audit fee.

According to Huang et al. (2016) the effect of audit market concentration is twofold on audit fees, which can have either a positive or negative effect. First, according to the perspective of classical micro-economic theory, a rising audit market concentration in some audit firms can cause a reduction in audit firm choices for clients. This can lead to increased market power of other audit firms. Then other audit firms dare to increase audit fees, they are not worried about losing clients because competitors in the audit market have decreased (Gettler 2004; Oxera 2006; European Commission 2010). The second argument regarding the effect of market concentration on audit fees is related to economies of scale and the intense competition among the remaining audit firms. If the audit market concentration increases, the audit fee will decrease due to the high competition among the remaining audit firm and economies of scale (Pearson & Trompeter 1994; Danos & Eichenseher 1986; Numan & Willekens 2012). The first argument is appropriate for conditions in Singapore and the second argument suitable for conditions in Indonesia.

In Indonesia the audit market competition is very high, the market is not concentrated, and the audit market is unmature which is distinguished by many small audit firms. This condition increases the auditor's incentive to compete by giving discounts on audit fees. So the audit market concentration has a negative impact on audit fee. In Singapore, because market concentration is higher only few audit firms, according micro-economic theory,

if market concentration increase, audit fees will also increase. Based on the above research, the hypothesis of this study are:

H_{1a} In Indonesia, audit market concentration negatively associated with the audit fee.

H_{1b} In Singapore, audit market concentration positively associated with the audit fee.

MARKET POWER

Economists state that a company have market power when the company is able to influence the price of the products they sell (Lipsey et al. 2008). One of the best ways to estimate market power into account the market share the company has in a market (Massey 2000). The higher the market power of a company, will resulted in the higher ability to determine the price level above its marginal cost and vice versa. However, the reputation and market power of the audit firm will not last long in the long run. A strong market position without high quality of services is temporary since the market will be able to detect this wrong reputation and auditor will be punished soon. (Chen et al. al. 2007).

Willekens and Achmadi (2003) used an audit firm's market share assessment, to examine the effect of the market power audit firm on audit fees. The decrease in the number of big audit firms in the audit market is expected to increase the market power of the big audit firm that is able to maintain its position as an audit firms and the consequence is to generate high premium audit fees (Carson et al. 2012).

Study conducted by Numan and Willekens (2012) states that the difference between the audit firm's market share, and its nearest competitor, can affect the audit fee charged by an audit firm to its clients. Audit firm with the biggest market share , show its market power in an industry.

According to Numan and Willekens (2012), an audit firm has market power, because the audit firm competes in the market with product differentiation (industry specialization). This will reduce rivalry among competitors, so that the audit firm can set an audit fee above its marginal cost. In addition, client also have willingness to pay premium audit fees to audit firms that are more specialized and in accordance with the characteristics of the company. Thus, it will make an audit firm that has market power to be the price leader in an industry, and has bargaining power to determine audit fees for clients. This argument is suitable for Singapore and Indonesia conditions. Based on the above argument, the hypothesis of this study is:

H_2 In Indonesia and Singapore, market power positively associated with audit fees.

METHODOLOGY

The model in this study is as follows:

$$FEE_{it} = \alpha_0 + \alpha_1 CONCEN_{it} + \alpha_2 MPOWER_{it} + \alpha_3 SIZE_{it} + \alpha_4 INVREC_{it} + \alpha_5 CATA_{it} + \alpha_6 QUICK_{it} + \alpha_7 LEV_{it} + \alpha_7 ROTA_{it} + \alpha_9 LOSS_{it} + \alpha_{10} OPINION_{it} + \alpha_{11} BIG4_{it} + \alpha_{12} SPEC_{it} + \varepsilon + \alpha_{11} OPINION_{it} + \alpha_{12} BIG4_{it+\varepsilon}$$

Where:

FEE: Audit fee charged by the auditor to certain clients in a certain year. CONCEN: market concentration, calculating with the Herfindahl Hirschman Index; MPOWER: Market power audit firm, measured based on the absolute distance of the audit firm's market share with other closest audit firms in one specific industry in a given year; SIZE: Company size based on the total assets of the client company; INVREC: Total inventory and receivables divided by total assets; CATA: The ratio of current assets to total assets; QUICK Current asset ratio (minus inventory) per current debt; LEV: Long-term debt ratio per total asset; ROTA Ratio of income before tax and interest per total asset; LOSS Dummy variable, 1 if the company has a loss in the financial year, and 0 otherwise; OPINION Dummy variable, 1 if the company gets a modified opinion, and 0 otherwise; BIG4 Dummy variable, 1 if the company uses Big 4 and 0 otherwise; SPEC: Dummy variable, 1 if the company uses an audit firm that has a market share of more than 20% and 0 otherwise.

VARIABLE OPERATIONALIZATION

DEPENDENT VARIABLE

Fee

Following Numan et al.(2012), Bills et al. (2015), Huang et al. (2016) and Gunn et al. (2019), data of audit fee is converted to Ln (natural logarithm) format with the aim of eliminating or minimizing violations of the assumption of normality and classical regression assumptions. The value of this variable is very large compared to other variables. Audit fee information for Indonesia's sample companies were taken from the notes to financial statements and from Thomson Reuters Eikon. Audit fee information for Singapore's sample companies were taken from Thomson Reuters Eikon.

INDEPENDENT VARIABLES

Concen

This imply to the market share of accounting firms in a particular industry. The market share for each accounting

firms is calculated by taking the total client assets of each accounting firm summed by industry type in accordance with the Global Industry Classification Standard (GICS) classification, divided by the total assets of audit clients in the industry. The data used in the calculation is the total assets data of listed companies in Indonesia and Singapore obtained from Thomson Reuters Eikon. This measurement follows Afriansyah and Siregar (2007) and Anggraita et al. (2012), who use the Herfindahl Hirschman Index measured in each industry sector annually.

Mpower

The market power of audit firms is obtained by calculating the difference in market share between audit firms that has closest market share position/nearest market share percentages (Carson et al., 2012). The market power of accounting firms is measured to know the price leadership and bargaining power of accounting firms and thus establish the audit fees charged to clients. In other words, an audit firm have market power if it has significant gap relative to its closest competitors.

CONTROL VARIABLES

The audit fee model that is used in this research apprehends the main fee determinants as derived from previous related research. These variables are deployed to calculate the following categories of determinants: client size, client risk, client complexity, and audit characteristics (Simunic 1980; Hay 2011; Carson, 2010).

Client Size (SIZE)

Client Size is calculated using the log of total assets that is expected to be positively correlated with audit fees. Hay et al. (2006), Chen et al. (2007), Carson et al. (2012) and Evans and Schwartz (2014) use firm size to control client size.

Client Complexity

The client's business complexity expected to be positively associated with audit fees. This variable is measured by the ratio of inventories and receivables to total assets (INVREC), the ratio of current assets to total assets (CATA).

Client Risk

The client risk are expected to be negatively related to audit fees. This variable is calculated short-term financial risk (QUICK) and current year's financial performance (ROTA). Prior year's loss (LOSS) and long-term financial risk (LEV) are expected to be positively related to audit fees. LEV shows the company's liabilities vis-à-vis its assets (Xie et al. 2010). High leverage indicates an increased risk of fulfilling a company's obligations and will result in financial distress. This will increase audit risk and audit fees. Fleischer and Goettsche (2012) use LOSS for the financial distress experienced by clients. Their findings show that for small clients, the auditor charges a high audit fee, indicating high audit risk in companies that suffer losses in the financial year. It is postulated that the higher the risk, the bigger the audit fees because of the rising audit work tied to modified opinions (OPINION), it is expected that fees to be higher for companies that get modified opinions. A modified opinion is an audit opinion other than an unqualified, qualified, adverse opinion or disclaimer. Carson et al. (2012) found that greater audit efforts are required for the client with modified audit opinion. Therefore, it is expected that a larger audit fee will be charged to the company receiving a modified opinion.

Auditor Size

Auditor size proxied by BIG 4 ans SPEC. Wang et al. (2014) found that the BIG 4 had a significant and positive correlation with audit fees due to the fact that the Big 4 accounting firms provide value for audit services that cannot be provided by local accounting firms. SPEC is a dummy variable, 1 if the company uses an audit firm that has a market share of more than 20%.

DATA AND SAMPLE

This study covers two countries in the Southeast Asia region, Indonesia and Singapore. The population of this study are all non-financial companies listed on the Indonesia Stock Exchange (IDX) and the Singapore Exchange (SGX). The data acquired from various sources such as IDX's website, SGX's website, company's website, Thomson Reuters Eikon. The sample was selected by purposive sampling with the following criteria: non-financial companies listed on the exchange of each country in the period 2012-2015, audit fee data available, data for all variables available. The research period is only until 2015 because in 2015 in Indonesia there are new rule that abolish mandatory audit firm rotation. The final samples is presented in Table 2.

Table 3 shows that the average audit fee (FEE) in Indonesia is lower than in Singapore. In Indonesia, the average audit fee is USD 126,172, that start from USD 3,421 to USD 983,292. While the average audit fee in Singapore is USD 331,451 with a minimum of USD 2,372 and a maximum of USD 3,598,442. Average audit market concentration (CONCEN) in Indonesia, which amounted to 0.224 (22.4%), is lower than in Singapore which amounted to 0.329 (32.9%). High market concentration shows a low level of competition. The figure above depicts shows that the level of market competition in Indonesia is higher than Singapore. This is because the ratio of the number of client to the number

TABLE 2. Sample selection

Criteria	Indonesia				Singapore			
	2012	2013	2014	2015	2012	2013	2014	2015
The number of listed companies	449	479	503	521	544	568	616	774
(-) Financial Companies	71	78	82	83	17	18	18	29
Population	378	401	421	438	527	550	598	745
(-) Companies that do not disclose audit fees	300	272	319	331	24	5	30	297
(-) Companies that do not have data for all variables	2	0	3	7	6	0	52	45
Sample per year	76	129	99	100	497	545	516	403
Total sample	404				1961			

TABLE 3. Descriptive Statistics: Indonesia and Singapore

		INDONESIA						SINGAPORE			
No.	Variable	Mean	Std Dev	Min	Max	No.	Variable	Mean	Std Dev	Min	Max
1.	FEE (USD)	126,172	165,726	3,421	983,292	1.	FEE (USD)	331,451	553,759	2,372	3,598,442
2.	MPOWER	0.078	0.119	0.000	0.527	2.	MPOWER	0.088	0.116	0.000	0.470
3.	CONCEN	0.224	0.076	0.128	0.544	3.	CONCEN	0.329	0.082	0.133	0.630
4.	SIZE (USD)	833,000,000	1,180,000,000	4,356,540	5,590,000,000	4.	SIZE (USD)	1,150,000,000	3,060,000,000	256,104	17,500,000,000
5.	INREV	(0.000)	0.228	(0.306)	1.116	5.	INREV	0.309	0.229	0.000	0.964
6.	CATA	0.000	0.239	(0.469)	0.490	6.	CATA	(0.000)	0.273	(0.535)	0.465
7.	QUICK	1.969	5.045	0.012	59.977	7.	QUICK	2.297	4.534	0.009	66.286
8.	LEV	0.1121	0.138	0.000	0.539	8.	LEV	0.106	0.133	0.000	0.547
9.	ROTA	0.084	0.084	(0.130)	0.355	9.	ROTA	0.006	0.251	(3.876)	0.827

		Dummy Variable					Dummy Variable		
No.	Variable		Dummy	%	No.	Variable		Dummy	%
1	LOSS	Loss in current years	1	18.56	1.	LOSS	Loss in current years	1	27.99
		Non loss in current years	0	81.44			Non loss in current years	0	72.41
2	BIG4	Big 4	1	52.48	2	BIG4	Big 4	1	65.99
		Non-Big	0	47.52			Non-Big	0	34.01
3	OPINION	Get modified opinion	1	0.25	4	OPINION	Get modified opinion	0	3.01
		Not Get modified opinion	0	99.75			Get modified opinion	0	96.99

N: 404

N: 1961

of audit firms in Indonesian Stock Exchange is higher than of the Singapore Stock Exchange.

Detailed market concentration in each industry has been presented in table 1. As can be seen from Table 1, in Indonesia, industries with the largest market concentration in 2012–2015 were the telecommunication services and utilities industry. The fact that only a few companies operate in these sectors create high barriers to entry which require audit specialization in these sectors. In Singapore, industries with the largest market concentration in 2012–2015 were consumer staples, healthcare, and telecommunication services, services with only a few accounting firms audited Singapore-listed firms from 2012 to 2015. High audit concentration in several industries means that auditing in these markets require for special knowledge and experience.

The average market power (MPOWER) in Indonesia is 0.078 (7.8%) while in Singapore it is higher at 0.088 (8.8%). The market power is obtained by calculating the difference in market share between audit firms that has closest market share position/nearest market share percentages. The market power shows price leadership and bargaining power of an audit firm. In other words an audit firm have market power if it has significant gap relative to its closest competitors. Table 4 shows the detailed of market power in Indonesia and Sigapore in each industry from 2012-2015.

PANEL DATA, ASSUMPTIONS, AND STATISTICAL TEST

Table 5 and 6 (Pearson correlation table) shows that there is no multiconierity in the model. This study uses the Pooled Least Square model. Based on the significance tests (F-statistic) given in Table 7, Indonesian and Singapore companies yielded p-values of below 0.01. It means that we can say with 99% confidence that the independent and control variables in this model simultaneously and significantly influenced the dependent variable. The result of the R-squared test in Table7 shows that Indonesian companies have R-squared of 0.653, and Singapore companies have R-squared of 0.589. These results reflect how much variation in the dependent variables can be explained by the independent variables.

RESULTS

Regression result at table 7 shows that in Indonesia, market concentration (CONCEN) has negative significant impact to the audit fee. These results are in accordance with hypothesis 1a that in Indonesia, audit market concentration has a negative effect on audit fees because the audit market competition is very high and the market is not too concentrated. The level of competition is quite high because there are too many audit firms. This condition increases the auditor's incentive to compete by giving discounts on audit fees. Hende, the audit market concentration has a negative effect on the audit fee. This outcome is in line with Huang's (2016) findings that the effect of audit market concentration on audit fees can be positive and negative (due to high competition that triggered many, many audit firms give discounts).

Table 7 also shows that in Indonesia, the market power of accounting firms (MPOWER) is positively associated with audit fees. It means, the higher the market power, the higher the audit fee. According to Numan and Willekens (2012), audit firms acquire market power by employing product differentiation. Thus, they can set the audit fee above their marginal cost.

In Singapore, the market concentration (CONCEN) has no notable effect to the audit fee. This means that hypothesis 1b is not proven . This researchs finding is not in line with Evans & Schwartz (2014) and Mardiana & Anggraita (2016), which found a positive association between audit market concentration and audit fees. It is also not in line with the studies conducted by Pearson and Trompeter (1994) and Willekens and Achmadi (2003), which found a negative correlation between increased audit market concentration and audit fees. In Singapore, beside CONCEN, the MPOWER variable also has no significant effect on audit fees. This means that hypothesis 2 is not proven in Singapore. This is because the regulations regarding pricing of audit fees in Singapore are very strict. Code of Professional Conduct And Ethics For Public Accountants and Accounting Entities Singapore said that audit firms must disclose audit fees to those who are charged with governance (TCWG) of the client, the nature of the services provided and the extent of fees charged. Fee determination must be transparent and objective that convey audit fee must be related to the auditors' effort. Because of that, the audit fee cannot be influenced by market concentration, especially by market power (monopoly). This also relates to the high law enforcement in Singapore, thus auditors and clients must obey the rules that have been set.

Almost all control variables in Singapore are proved to significantly affected audit fees, , except the specialization variable. This result shows that the audit fee is determined by the client size, client risk, client complexity, and auditor characteristics. The larger the client size, the more complex and the greater the client's risk, and hence the greater the audit fee charged by the auditor to the client. This relates to the effort that must be done by the auditor. Big 4 is also charges a higher audit fee than non-big 4.

In Indonesia, not all control variables are proved significant, only client size and audit firm size. The greater the size of the client produced, the higher the audit fee. The greater the client risk that measured by LOSS and ROTA, the greater the audit fee.

TABLE 4. Audit Market Power in Indonesia and Singapore (2012–2015)

| | | Indonesia | | | | Singapore | | | |
Year	Industrial Sector	Rank	Public Accounting Firm	Target Market (%)	Mpower (%)	Rank	Public Accounting Firm	Target Market (%)	Mpower (%)
2012	Consumer Discretionary	1	Tanudiedja, Wibisana & Rekan (PWC)	46.29	24.81	1	Pricewaterhousecoopers	59.17	47.56
2013		1	Tanudiedja, Wibisana & Rekan (PWC)	44.56	24.25	1	Pricewaterhousecoopers	50.07	30.67
2014		1	Tanudiedja, Wibisana & Rekan (PWC)	43.41	20.94	1	Pricewaterhousecoopers	51.92	32.39
2015		1	Tanudiedja, Wibisana & Rekan (PWC)	43.23	19.75	1	Pricewaterhousecoopers	50.94	31.09
2012	Consumer Staples	1	Purwantono, Suherman & Surja (EY)	40.94	23.37	1	Ernst & Young	65.24	53.46
2013		1	Purwantono, Suherman & Surja (EY)	41.90	26.10	1	Ernst & Young	65.28	53.40
2014		1	Purwantono, Suherman & Surja (EY)	42.68	26.85	1	Ernst & Young	60.15	46.95
2015		1	Purwantono, Suherman & Surja (EY)	41.09	25.66	1	Ernst & Young	66.67	56.51
2012	Energy	1	Tjiendradjaja & Handoko Tomo (Mazars)	24.60	11.35	1	Ernst & Young	38.17	12.23
2013		1	Tanudiedja, Wibisana & Rekan (PWC)	41.45	16.92	1	KPMG	29.12	16.70
2014		1	Tanudiedja, Wibisana & Rekan (PWC)	42.76	24.15	1	KPMG	27.21	11.19
2015		1	Tanudiedja, Wibisana & Rekan (PWC)	39.11	23.35	1	Ernst & Young	41.74	17.91
2012	Health Care	1	Purwantono, Suherman & Surja (EY)	51.38	35.52	1	Pricewaterhousecoopers	70.82	57.83
2013		1	Purwantono, Suherman & Surja (EY)	48.89	33.76	1	Pricewaterhousecoopers	60.74	39.18
2014		1	Purwantono, Suherman & Surja (EY)	49.36	35.00	1	Pricewaterhousecoopers	60.47	39.98
2015		1	Purwantono, Suherman & Surja (EY)	47.57	33.52	1	Pricewaterhousecoopers	54.17	30.25
2012	Industrials	1	Purwantono, Suherman & Surja (EY)	14.98	7.26	1	Pricewaterhousecoopers	55.53	35.94
2013		1	Purwantono, Suherman & Surja (EY)	17.60	11.89	1	Pricewaterhousecoopers	53.82	33.93
2014		1	Purwantono, Suherman & Surja (EY)	17.66	10.87	1	Pricewaterhousecoopers	53.91	34.58
2015		1	Osman Bing Satrio & Eny (Deloitte)	24.33	12.25	1	Pricewaterhousecoopers	59.14	40.72
2012	Information Technology	1	Purwantono, Suherman & Surja (EY)	24.99	14.35	1	Ernst & Young	31.26	22.41
2013		1	Purwantono, Suherman & Surja (EY)	46.37	21.70	1	Ernst & Young	30.53	23.45
2014		1	Purwantono, Suherman & Surja (EY)	37.74	30.15	1	Ernst & Young	33.03	25.47
2015		1	Aryanto, Amir Jusuf, Mawar & Saptoto (RMS)	38.76	29.95	1	Ernst & Young	36.17	29.01

cont.

Year	Sector		Audit Firm				Auditor		
2012		1	Tjiendradjaja & Handoko Tomo (Mazars)	30.53	15.10	1	Ernst & Young	35.97	20.38
2013	Materials	1	Purwantono, Suherman & Surja (EY)	23.43	12.04	1	Ernst & Young	23.15	7.80
2014		1	Purwantono, Suherman & Surja (EY)	20.08	13.17	1	Ernst & Young	25.09	7.39
2015		1	Tjiendradjaja & Handoko Tomo (Mazars)	18.06	6.06	1	Ernst & Young	25.81	8.31
2012		1	Tanubrata Sutanto Fahmi & Rekan (BDO)	9.44	3.36	1	KPMG	51.15	24.99
2013	Real Estate	1	Purwantono, Suherman & Surja (EY)	20.45	3.97	1	Pricewaterhousecoopers	25.75	14.34
2014		1	Aryanto, Amir Jusuf, Mawar & Saptoto (RMS)	15.00	5.49	1	KPMG	46.89	21.32
2015		1	Aryanto, Amir Jusuf, Mawar & Saptoto (RMS)	14.44	4.87	1	KPMG	46.88	22.97
2012		1	Purwantono, Suherman & Surja (EY)	68.56	56.08	1	Deloitte & Touch LLP	91.91	87.68
2013	Telecommunication	1	Tjiendradjaja & Handoko Tomo (Mazars)	3.08	2.11	1	Ernst & Young	2.76	2.26
2014	Services	1	Purwantono, Suherman & Surja (EY)	61.80	43.36	1	Deloitte & Touch LLP	91.50	87.12
2015		1	Purwantono, Suherman & Surja (EY)	65.56	49.77	1	Deloitte & Touch LLP	92.68	88.61
2012		1	Purwantono, Suherman & Surja (EY)	97.02	94.04	1	Ernst & Young	28.96	13.37
2013	Utilities	1	Purwantono, Suherman & Surja (EY)	98.40	96.90	1	RSM Chio Lim LLP	14.04	8.82
2014		1	Purwantono, Suherman & Surja (EY)	98.86	97.73	1	Ernst & Young	18.93	14.37
2015		1	Purwantono, Suherman & Surja (EY)	99.17	98.35	1	Ernst & Young	27.63	25.30

TABLE 5. Pearson correlation - Indonesia

	lnfee	concen	spec10	spec20	spec30	mpower	size	invrec	cata	quick	lev	rota	loss	opinion	big4
lnfee	1														
concen	0.2071* 0.0000	1													
spec10	0.5269* 0.0000	0.1350* 0.0066	1												
spec20	0.4015* 0.0000	0.2414* 0.0000	0.6369* 0.0000	1											
spec30	0.4523* 0.0000	0.4513* 0.0000	0.3947* 0.0000	0.6198* 0.0000	1										
mpower	0.5041* 0.0000	0.6512* 0.0000	0.5074* 0.0000	0.6151* 0.0000	0.8313* 0.0000	1									
size	0.7174* 0.0000	0.2673* 0.0000	0.4957* 0.0000	0.4679* 0.0000	0.3530* 0.0000	0.4406* 0.0000	1								
invrec	-0.3178* 0.0000	-0.1951* 0.0000	-0.1610* 0.0000	-0.1161* 0.0000	-0.1283* 0.0000	-0.1894* 0.0000	-0.4155* 0.0000	1							
cata	-0.2583* 0.0000	-0.1435* 0.0038	-0.1368* 0.0059	-0.0916* 0.0658	-0.0948* 0.0569	-0.1598* 0.0013	-0.2863* 0.0000	0.8346* 0.0000	1						
quick	-0.1578* 0.0015	-0.0134 0.7886	-0.1069* 0.0316	-0.0526 0.2913	-0.0262 0.5991	-0.0587 0.2395	-0.1282* 0.0099	0.0474 0.3416	0.1074* 0.0309	1					
lev	0.3385* 0.0000	0.2284* 0.0000	0.2257* 0.0000	0.2081* 0.0000	0.1008* 0.0430	0.2382* 0.0000	0.4710* 0.0000	-0.5031* 0.0000	-0.5307* 0.0000	-0.1226* 0.0137	1				
rota	0.2526* 0.0000	0.1927* 0.0001	0.2521* 0.0000	0.2362* 0.0000	0.2584* 0.0000	0.2843* 0.0000	0.1576* 0.0015	0.09 0.0707	0.2315* 0.0000	-0.0681 0.1718	-0.0527 0.2911	1			
loss	-0.0234 0.6392	0.0049 0.9223	-0.1504* 0.0024	-0.1225* 0.0137	-0.1152* 0.0206	-0.0946 0.0575	0.0031 0.9503	-0.1522* 0.0022	-0.2707* 0.0000	0.0331 0.5071	0.2015* 0.0000	-0.5223* 0.0000	1		
opinion	-0.0043 0.9319	-0.0209 0.6749	-0.0573 0.2508	-0.0365 0.4647	-0.0226 0.6505	-0.0301 0.5461	-0.0295 0.5542	-0.0274 0.5829	0.0616 0.2170	0.0763 0.1258	-0.0433 0.3850	0.0408 0.4130	-0.0238 0.6336	1	
big4	0.5212* 0.0000	0.1810* 0.0003	0.6637* 0.0000	0.4472* 0.0000	0.4187* 0.0000	0.4944* 0.0000	0.3628* 0.0000	-0.1750* 0.0004	-0.1602* 0.0012	-0.0726 0.1450	0.1229* 0.0135	0.2916* 0.0000	-0.1065* 0.0323	-0.0523 0.2939	1

TABLE 6. Pearson correlation - Singapore

	lnfee	concen	spec10	spec20	spec30	mpower	size	invrec	cata	quick	lev	rota	loss	opinion	big4
lnfee	1														
concen	0.2071* 0.0000	1													
spec10	0.5269* 0.0000	0.1350* 0.0066	1												
spec20	0.4015* 0.0000	0.2414* 0.0000	0.6369* 0.0000	1											
spec30	0.4523* 0.0000	0.4513* 0.0000	0.3947* 0.0000	0.6198* 0.0000	1										
mpower	0.5041* 0.0000	0.6512* 0.0000	0.5074* 0.0000	0.6151* 0.0000	0.8313* 0.0000	1									
size	0.7174* 0.0000	0.2673* 0.0000	0.4957* 0.0000	0.4679* 0.0000	0.3530* 0.0000	0.4406* 0.0000	1								
invrec	-0.3178* 0.0000	-0.1951* 0.0000	-0.1610* 0.0000	-0.1161* 0.0000	-0.1283* 0.0000	-0.1894* 0.0000	-0.4155* 0.0000	1							
cata	-0.2583* 0.0000	-0.1435* 0.0038	-0.1368* 0.0059	-0.0916* 0.0658	-0.0948* 0.0569	-0.1598* 0.0013	-0.2863* 0.0000	0.8346* 0.0000	1						
quick	-0.1578* 0.0015	-0.0134 0.7886	-0.1069* 0.0316	-0.0526 0.2913	-0.0262 0.5991	-0.0587 0.2395	-0.1282* 0.0099	0.0474 0.3416	0.1074* 0.0309	1					
lev	0.3385* 0.0000	0.2284* 0.0000	0.2257* 0.0000	0.2081* 0.0000	0.1008* 0.0430	0.2382* 0.0000	0.4710* 0.0000	-0.5031* 0.0000	-0.5307* 0.0000	-0.1226* 0.0137	1				
rota	0.2526* 0.0000	0.1927* 0.0001	0.2521* 0.0000	0.2362* 0.0000	0.2584* 0.0000	0.2843* 0.0000	0.1576* 0.0015	0.09 0.0707	0.2315* 0.0000	-0.0681 0.1718	-0.0527 0.2911	1			
loss	-0.0234 0.6392	0.0049 0.9223	-0.1504* 0.0024	-0.1225* 0.0137	-0.1152* 0.0206	-0.0946 0.0575	0.0031 0.9503	-0.1522* 0.0022	-0.2707* 0.0000	0.0331 0.5071	0.2015* 0.0000	-0.5223* 0.0000	1		
opinion	-0.0043 0.9319	-0.0209 0.6749	-0.0573 0.2508	-0.0365 0.4647	-0.0226 0.6505	-0.0301 0.5461	-0.0295 0.5542	-0.0274 0.5829	0.0616 0.2170	0.0763 0.1258	-0.0433 0.3850	0.0408 0.4130	-0.0238 0.6336	1	
big4	0.5212* 0.0000	0.1810* 0.0003	0.6637* 0.0000	0.4472* 0.0000	0.4187* 0.0000	0.4944* 0.0000	0.3628* 0.0000	-0.1750* 0.0004	-0.1602* 0.0012	-0.0726 0.1450	0.1229* 0.0135	0.2916* 0.0000	-0.1065* 0.0323	-0.0523 0.2939	1

TABLE 7. Regression result

Variable	Indonesia				Singapore			
	Pred	Coef	Prob	Sign	Pred	Coef	Prob	Sign
Independent Var								
CONCEN	-	-2,468	0.0590	**	+	0.058	0.4735	
MPOWER	+	1,935	0.0005	***	+	-0.186	0.2020	
Control Variable								
SIZE	+	0.430	0.000	***	+	0.459	0.000	***
INVREC	+	0.310	0.1485		+	0.228	0.0110	***
CATA	+	-0.474	0.0560	*	+	0.216	0.0090	***
QUICK	-	-0.006	0.1640		-	-0.009	0.0040	***
LEV	+	-0.040	0.4510		+	-0.433	0.0005	***
ROTA	-	1,513	0.0020	***	-	-0.408	0.000	***
LOSS	+	0.147	0.0845	*	+	0.123	0.0005	***
OPINION	+	0.813	0.1185		+	0.178	0.0020	**
BIG4	+	0.539	0.000	***	+	0.204	0.000	***
SPEC20	+	-0.221	0.0452	**	+	0.073	0.1085	
CONS		1,144	0.000			1,231	0.000	
D_YEAR			YES				YES	
D_INDUSTRY			YES				YES	
Adj R-squared		0.653				0.589		
Prob F		0.000					0.000	
Number of obs		404				1961		

***, **, * significant at 1%, 5%, 10%

SENSITIVITY TEST

Some studies use several specialization measurements, some 10%, 20% and 30%. The main model using specialization at 20 %. Then, the sensitivity test was carried out using 10% and 30%. Regression test gives the same results as the main test. In Indonesia, market concentration has a negative effect on audit fees and market power has a positive effect on audit fees. While in Singapore, market concentration and market power do not affect audit fees.

CONCLUSION

In Indonesia, market concentration and market power are proven to affect audit fees, but in Singapore, market concentration and market power have not been attested to impact audit fees. This is possible because regulations regarding audit fees pricing in Singapore are very strict. In the Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities Singapore, audit firms must disclosed audit fees to those who are charged with governance (TCWG) of the client, the nature of the services provided and the extent of fees charged. Fee determination must be transparent and objective. That convey audit fee must be related to the risk and effort that the auditor must carry out.

Due to the fact that there is strict regulation and strong law enforcement in Singapore, audit fees cannot be influenced by market concentration, especially by market power (monopoly).

The effect of market concentration on audit fees depends on the level of market competition in the country. In countries where the level of competition is low and if market concentration increases, consequently, the rivalry will decrease. The remaining audit firm is not worried about losing clients because the number of players in the market has decreased and eventually dare to increase audit fees. In contrast, countries that have a high rivalry, when the market concentration increases, the competition among the remaining audit firms is still high (because there are many audit firms). As a result, the remaining audit firm gives a discounted price to win the competition and thus audit fee will decrease. However, if there are stringent regulations and strong law enforcement, audit fees could not be altered by market concentration, especially by market power in a form of monopoly.

The limitation of this study is this study has only compared two countries, further research can use a larger sample of countries. The calculation of market concentration only used totals asset. This allows for distortions in market shares generated by firms with high total assets. Further research could used number of client as proxy for market concentration. The sample is only

TABLE 8. Regression result – Sensitivity test using 10 % dan 30 % Specialization

Variable	Pred	Indonesia						Pred	Singapore					
		SPEC 10			SPEC 30				SPEC 10			SPEC 30		
		Coef	Prob	Sign	Coef	Prob	Sign		Coef	Prob	Sign	Coef	Prob	Sign
Independent Var														
CONCEN	-	-2,491	0.058	**	-2.530	0.056	*	+	0.005	0.498		0.047	0.958	
MPOWER	+	0.131	0.009	***	1,075	0.094	*	+	0.163	0.188		0.019	0.937	
Control Variable														
SIZE	+	0.411	0.000	**	0.410	0.000	**	+	0.459	0.000	**	0.460	0.000	***
INVREC	+	0.254	0.199		0.258	0.194		+	0.229	0.011	***	0.224	0.025	**
CATA	+	-0.438	0.072	*	-0.443	0.070	**	+	0.206	0.012	**	0.214	0.019	**
QUICK	-	-0.006	0.159		-0.007	0.155		-	-0.009	0.004	***	-0.009	0.007	***
LEV	+	-0.087	0.396		-0.077	0.408		+	-0.433	0.001	***	-0.438	0.001	***
ROTA	-	1,491	0.003	***	1,482	0.003	**	-	-0.405	0.000	***	-0.406	0.000	***
LOSS	+	0.158	0.071	*	0.158	0.070	**	+	0.123	0.001	***	0.123	0.001	***
OPINION	+	0.832	0.115		0.835	0.114		+	0.187	0.015	**	0.183	0.034	**
BIG4	+	0.529	0.000	***	0.529	0.000	***	+	0.225	0.000	***	0.207	0.000	***
SPEC	+	-0.005	0.959		0.074	0.353			-0.068	0.179		-0.000	0.994	
CONS		11.43	0.000		11.434	0.000			12.320	0.000		12.314	0.000	
D_YEAR		YES			YES				YES			YES		
D_INDUSTRY		YES			YES				YES			YES		
Adj R-squared		0.649			0.649				0.590			0.589		
Prob F		0.000			0.000				0.000			0.000		
Number of obs		404			404				1961			1961		

***, **, * significant at 1%, 5%, 10%

non-financial companies, further research can include financial companies as samples.

IMPLICATIONS

This research provides an overview of the conditions of competition in the audit market in Indonesia and Singapore, as well as providing input for regulators to determine appropriate regulations related to the determination of audit fees. This is needed to ensure that the audit fee reflects the quality of the audit provided and not only based on the bargaining process conducted by the audit firm and client. An understanding of the level of market concentration can be input in determining policies to regulate the behavior of market participants.

This results show that the audit market competition in Indonesia is relatively high, therefore supervision is needed from regulators who are authorized to ensure that tight rivalry does not cause audit fees to be unfair in particular too low, which has the the potential to reduce the quality of audits produced. To prevent improper audit fees, the Indonesian government can follow Singapore where audit fee pricing in Singapore are very strict. Disclosure of audit fees to TCWG of the clients, the nature of the given services, and the extent of fees charged must be informed by audit firms in Indonesia. The fees calculation must be transparent and objective which means it must according to auditor's risk and effort.

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