

The Effect of the HPP Law on Market Reaction: A Study on the Indonesian Stock Exchange



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ABSTRACT: This study aims to examine the market reaction to tax reform. Tax reform was carried out by the government on the issue of post-covid economic recovery and responding to environmental changes. This policy has a new tax regulation policy in Indonesia in the form of a carbon tax, an increase in VAT, and an increase in income tax. This research is event study research. The population of this study is companies listed on the Indonesia Stock Exchange on October 7, 2021. The data are taken from Yahoo Finance, totalling 753 companies. The sampling method used is the purposive sampling method, with the sample in the form of the Kompas 100 index and each company sector listed on the Indonesia Stock Exchange with a total of 9 sectors with an observation period of 10 days, 5 days, and 3 days before and after the ratification (-10.10), (-5.5), and (-3.3). The market reacted to the tax reform, and there was a significant abnormal return (p -value < 0.05). Companies in the agricultural and mining sectors are companies that are of interest to investors. In contrast, companies in the financial, trade, services, and investment sectors are not attractive to investors with negative cumulative abnormal returns.

KEYWORDS: Undang-Undang Harmonisasi Peraturan Perpajakan, tax reform, carbon tax, tax policy, market reaction, abnormal return

I. INTRODUCTION

Countries worldwide have had a tough year due to the Covid-19 pandemic (Deng et al., 2022; Iqbal & Bilal, 2022; Pan et al., 2021; Y. Zhang et al., 2021). More than 213 countries and millions of people have been economically affected by the coronavirus (Deng et al., 2022). No country is ready for a pandemic. The government's steps in taking policies are needed in order to create state stability. The government is faced with a difficult choice between preventing the virus from spreading but having an economic impact and the option of keeping the economy running but having an effect on the spread of the virus, which is getting faster considering the virus is spread through social interaction.

The government's policy in general in suppressing the reduction of the transmission of the virus was chosen by implementing social restrictions. The existence of regulations causes excessive investor fear. Investors in developed countries such as America, Australia, Germany, and England reacted to the capital market that was exaggerated by the pandemic (Jin et al., 2022). Developing countries on the African continent also have the same reaction (Udeaja & Isah, 2022). The market reaction in Indonesia was seen by the withdrawal of capital by investors. As a result, the Indonesian capital market index underwent a significant correction from 6,200 to 3,990 in the first quarter of 2020.

The government made various efforts to stimulate the market and policies through laws and regulations to attract investors' interest in the capital market. In October 2020, the government passed the Job Creation Law which was considered pro against investors and workers. Those who are against the Job Creation Law, such as students, responded in the form of demonstrations against the ratification of the Job Creation Law. Massive demonstrations were carried out in various regions, both big and small cities in Indonesia could not be avoided, but with the passage of the law causing significant abnormal returns for companies on the Indonesia Stock Exchange (Indriani & Mariana, 2021), investors responded well to the existence of policies that. Regarding the passage of the Job Creation Law, the composite stock price index has slowly started to creep up to a level of 5,700 after falling to 3,990 in March 2020.

Along with improving economic conditions, the issue of climate change has become a serious discussion. Organizations concerned with the environment are also pressing this issue through state forums. Governments in various countries, through their policies, make great efforts to prevent global warming through multiple mechanisms, one of which is a tax on carbon emissions (Choi et al., 2010; Conefrey et al., 2013; Murray & Rivers, 2015; Peng et al., 2017; Xie et al., 2018; Z. Zhang et al., 2017).

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Various studies have found that companies are experiencing increasing pressure to reduce their carbon emissions. Among them is research from (Comyns, 2016; Daddi et al., 2018; Helfaya et al., 2019; Liesen et al., 2015). This shows that the main concern regarding global warming is carbon emissions from the company's operational activities. Various related steps were then organized to encourage companies to be more based on eco-responsibility principles. An example is the Carbon Disclosure Project (CDP), an international non-profit organization whose main activity is promoting and encouraging companies and cities worldwide to disclose carbon.

The Indonesian government also responded to this condition with various systematic efforts. The government is faced with the following conditions: (1) post-covid-19 economic recovery; (2) prevention of transmission of the covid-19 virus; and (3) commitment to protecting the environment from climate change due to global warming. Through various schemes, the government has begun to reduce social restrictions by accelerating the vaccine program so that the economy recovers quickly. Investor sentiment toward the pandemic has also started to wane along with the vaccine program (Anastasiou et al., 2022). Responding to the issue of climate change and increasing income, the government issued a tax reform policy by passing the Law on the Harmonization of Tax Regulations (UU HPP). This law contains a carbon tax, an increase in value mining tax (VAT), and an increase in income tax (PPH) on specific criteria. This effort has pros and cons, considering the economic conditions have not fully recovered from the effects of the pandemic. This policy is considered pro because it will help the state recover the budget deficit through the tax sector. On the contrary, ratification is carried out when the economy is recovering, not when the economy is good, considering that companies need government intervention in the form of assistance, subsidies, or tax reductions. The existence of a tax reduction is considered to be able to improve financial performance (Dongyang, 2021). Through the minister of finance, the government believes that tax reform will not burden the people (Adhitya, 2021b). The World Bank also expressed the opinion that Indonesia needs to carry out tax reforms to increase the value of tax revenues (Adhitya, 2021a) This becomes interesting to study by assessing the response of investors to tax reform amid conditions of economic recovery.

Based on the results of data from Yahoo Finance, the Jakarta Composite Index (IHSG) experienced an increase after the passage of the HPP Law was carried out. Investors are generally interested in this law, as evidenced by the buying action on the capital market, causing price increases. The increase seems progressive, starting 10 days before the ratification and 10 days after the HPP Law was ratified. The JCI on September 23, 2021, showed a value of 6,142 and rose to 6,643 on October 22, 2021, with an increase of 501 points. Fluctuations were also seen on October 1, 20201, which fell 58 points from 6,286 to 6,228, and on October 5, 2021, which fell 54 points from 6,342 to 6,288 but continued with a progressive increase to the level of 6,643 on October 22, 2021. The following is a graph of the Index Composite Stock Price (IHSG) for 1 month before ratification and 10 active days after ratification:

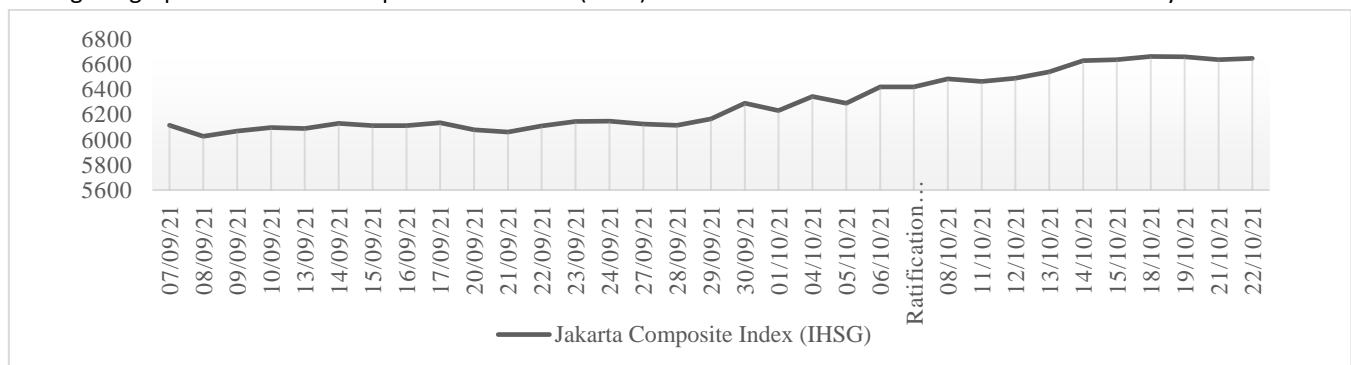


Figure 1. Composite Stock Price Index (before and after the ratification of the HPP Law)

Indonesia has carried out five tax reforms. The first tax reform was carried out in 1983-1985 by introducing a self-assessment system. Subsequent tax reforms were carried out in 1994 to improve the taxation system. The third reform was carried out in 1997 which had the same goal as the 1994 tax reform. The next tax reform was carried out in 2000, and the fifth in 2008. The HPP Law became the sixth tax reform with an increase in VAT, Income Tax, and Carbon Emissions Tax.

Research on investor response to tax policies in Indonesia has yielded mixed results. Furthermore, research on market reactions to taxation policies in Indonesia did not find any surprising market reactions (shock effect). This is because, in previous years, tax policy was more on tax amnesty and not massive tax reforms so that investors did not react too much. Indonesia implemented a tax amnesty in 2016 known as a tax amnesty, through research conducted (Prihastini & Suprasto, 2017; Winarto & Gandakusuma, 2020) with a sample of LQ 45 stocks showing the results did not have a significant effect on the tax amnesty policy. The same findings were also presented by (Wibowo & Sukmaningrum, 2020), which stated that there was no significant effect on the companies included in the Islamic company index (ISSI). The same thing was also conveyed by (Fernando & Suryantini, 2018) that the tax amnesty volume II on LQ 45 shares did not have a significant effect. The research conducted (Ardiyanti, 2017)

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argues that during the tax amnesty volumes I, II, and III of 2016, there was no significant difference in abnormal returns in banking sector companies. Other findings suggest different results. (Amiruddin & Arifin, 2012) found a significant difference in the abnormal return on the 2008 tax reform policy. (Wulaningrum & Suyudi, 2019) also found a substantial difference in the abnormal return on company shares in the property sector in the 2016 tax amnesty policy. Findings the same were stated (Suryadi, 2017) for mining sector companies which showed a significant effect on the fourth and fifth days after the announcement of the tax amnesty. Research conducted by (Wulandari & Sudrajat, 2018) on banking companies that received tax amnesty ransoms showed significant results on the tax amnesty policy. Research renewal, namely in the study of events and a more considerable number of samples, to deliver more accurate results. Previous research examined short-term tax policies and the number of models in specific sectors. At the same time, in this study, we wanted to investigate the events of the HPP Law tax reform with a sample of all industries on the Indonesia Stock Exchange.

This study aims to examine investor opinion by measuring the market reaction to the passage of the HPP Law. The HPP Law brought new policies in Indonesia in the form of a carbon emission tax and an increase in coal VAT. Research conducted (Alsaifi et al., 2020) in the UK as the most significant carbon-emitting country (Haque, 2017) shows that carbon disclosure does not positively impact the perception of market reactions. Investors tend to be disinterested in carbon disclosure in terms of market reactions (Alsaifi et al., 2020). Another finding made by (Derwall et al., 2005) suggests that companies with high social responsibility (Eco-Efficiency) tend to provide higher returns. The policy of implementing a carbon tax has also been carried out in Australia in 2009 and 2014, during policy changes related to climate change showing that companies with green tendencies, namely those with more significant concern for the environment, have higher returns as well (Qian et al., 2020). Carbon emission taxes are a concrete step to reduce carbon emissions (Choi et al., 2010; Conefrey et al., 2013; Murray & Rivers, 2015; Peng et al., 2017; Xie et al., 2018; Z. Zhang et al., 2017). The benefits of this research for stakeholders make evaluation material and consideration for stakeholders in making better investment decisions. Several factors must be done and not done to increase investment that benefits stakeholders effectively and efficiently and become a consideration for the company in managing reports of the company's financial performance to improve the company's image that is more transparent about its supporting environment. The theoretical contribution enriches the literature on disclosing a company's carbon emissions in Indonesia with one that uses empirical studies that may have never been done in Indonesia, revealing the relationship between disclosure of corporate carbon emission taxes and investor behavior. The existence of this research is expected to be able to provide information regarding investors' views on new policies in tax reform in general and, specifically, is expected to be able to become a reference in researching carbon taxes and carbon incentives that apply in Indonesia. Carbon taxes are used to reduce or suppress carbon emissions.

Based on signaling theory suggests that information with positive value can make investors as stakeholders react (Hartono, 2017). According to (Brigham & Houston, 2014), signal theory explains management's perception of the company's growth in the future, which will affect the response of potential investors to the company. Information that has been submitted by the company and received by investors will be interpreted and analyzed first to determine whether the information is considered a positive signal (good news) or a negative signal (awful news) (Hartono, 2017). The opinion expressed (Spence, 1973) explains that the sending party (management) provides a signal or signal in the form of information that reflects the condition of a company that is beneficial to the receiving party (investor).

Investors are motivated to invest in increasing value (capital gain) or in the form of dividend distribution (Hartono, 2017). The existence of information circulating at any time can affect investors' decisions in buying, holding, or selling their shares, thereby affecting the demand and supply curves for a claim. As a result, stock prices continuously fluctuate, indicating that investors are eyeing a stock. Information that is considered ordinary will not make investors make big decisions. Still, on information regarded as material, the decision can be taken immediately, and this causes the demand and supply curves to meet a new equilibrium point. The price of a stock may decrease to the lower limit or rise upwards suddenly because of information.

The HPP Law is considered to influence the Indonesian capital market significantly. This assessment is based on an increase in the Jakarta Composite Index, which was initially around 6,142 and then increased to 6,643 for 10 days before and after the ratification by the House of Representatives (DPR) on October 7, 2021. With an increase in the index, it is considered that the HPP Law contains material information that makes. Investors are interested in entering the capital market. This information is related to the recently passed carbon tax in Indonesia. This assessment is challenged by findings made by (Ardiyanti, 2017; Fernando & Suryantini, 2018; Prihastini & Suprasto, 2017; Wibowo & Sukmaningrum, 2020; Winarto & Gandakusuma, 2020) on the tax amnesty policy. The result is that the tax amnesty policy does not show significant changes in abnormal returns. This finding is further strengthened because the research was conducted on companies listed on LQ45. Apart from the LQ45 index, research on the Sharia Index (ISSI) and the banking financial sector showed similar results. Research related to the Job Creation Law, which is classified as a law passed by the DPR in 2020, also does not significantly influence market reaction to the companies in the index (Hansuma & Witono, 2021; Kristiastuti & Sari, 2021). Based on these findings, the first hypothesis in this study is as follows:

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H_0 = The HPP Law had no effect on market reactions

Another study (Amiruddin & Arifin, 2012) on the 2008 tax reform found a significant effect on abnormal returns before and after the law's enactment. This finding is felt to have different information than tax amnesty because of the events taken during the tax reform. Research conducted (Suryadi, 2017) by taking tax amnesty events in mining sector companies showed a significant effect on the fourth and fifth days after the announcement of the tax amnesty and research conducted (Wulandari & Sudrajat, 2018) on banking companies that received tax amnesty ransoms showed significant results on the tax amnesty policy. Apart from reforming tax policies, the information contained in the HPP Law related to carbon taxes is also considered to have material information. Studies in Australia from 2009 to 2014 that the carbon tax policy applied also strengthened the opinion that the existence of this policy provides a market reaction (Qian et al., 2020). Based on these findings, the hypothesis in this study is as follows:

H_1 = The HPP Law had an effect on market reactions

II. RESEARCH METHOD

This research is an event study research. The population of this study is companies listed on the Indonesia Stock Exchange on October 7, 2021. The data was taken from Yahoo Finance, a total of 753 companies. The sampling method used is the purposive sampling method, with the sample being the Kompas 100 index and each company sector listed on the Indonesia Stock Exchange with a total of 9 sectors. The estimation window is carried out for 100 active trading days before (+ 6 months) the event up to 20 days before the event with the sample observation period following the research from (Setiawan et al., 2021) carried out for 10 active days before the announcement and 10 days busy after the announcement (-10,+10). The observation period was also carried out for 5 days (-5,+5) and 3 days (-3,+3) before and after the event to see the shock effect resulting from the event. The selection of the observation period was carried out 10 days before and after the validation was carried out to avoid information bias. It is also common to observe periods of 5 and 3 days before and after to see the shock effect, even 1 day before and after to see the market's reaction (Chen et al., 2022; Setiawan et al., 2021).

We carry out a market reaction test using the standard event study method. The initial statistical test uses descriptive statistics and continues with hypothesis testing. Hypothesis testing was initially carried out by calculating the return on the estimation and observation window. The observation window was carried out for 10 days, which was considered ideal to avoid research bias. Return calculation is performed using a single index model. October 7, 2021, was chosen as the date of the event (t_0) because, at that time, the DPR was passing the HPP Law.

Based on research conducted (Setiawan et al., 2021) by following the model from (MacKinlay, 1997), we used the authors to use the following equation to estimate abnormal returns (ARs) using the Single Index Model:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})$$

In the Single Index Model, average returns depend on α_i , β_i , and market returns ($R_{m,t}$) calculated over the estimated payback period. Our second measure specification for estimating abnormal returns is the historical average model that follows (Brown & Warner, 1985). According to this model, the stock's historical average return represents the expected typical performance without the conditions shown below:

$$E(R_{i,t}|X_t) = \mu_i$$

In each model, we estimate the cumulative abnormal return by summing the abnormal returns for each event window (-10,10), (-5,5), and (-3+3). After average returns are calculated, we obtain the aggregation of cross-sectional ARs (AAR) using the following formula:

$$AAR_t = \frac{1}{N} \sum_{t=1}^N AR_{i,t}$$

Cumulative abnormal return (CAAR) for the sector I during the event window around ($t_1:t_2$) event days $t = 0$, calculated as follows:

$$CAAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AAR_t$$

Under the null hypothesis, we posit that the average cumulative abnormal return around the date of the event, the announcement of the passage of the HPP Act, is equal to zero. Therefore, we use the t-statistic to test our hypothesis of whether the estimated CAR in a certain time interval is equal to zero.

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III. RESULTS AND DISCUSSION

Descriptive statistics facilitate this research, making the data used easy to understand (Ghozali, 2018). Descriptive statistics are very general because they contain average data collection, data mode, median value or median, and standard data deviation. These statistics facilitate the available description of data so that the data is easier to analyze. The following table shows the results of descriptive statistics on abnormal return data for 10 days before and after the passage of the HPP Law.

Table 1. Descriptive Statistics of HPP Law on Market Reaction

Periode	N	Minimum	Maximum	Mean	Std. Deviation
t-10	753	-0,0894309	0,3473684	0,0031696	0,0432478
t-9	753	-0,0698529	0,3400000	-0,010175	0,0379179
t-8	753	-0,0980392	0,3425926	-0,0001804	0,0411574
t-7	753	-0,978261	0,3093525	-0,0025814	0,0403967
t-6	753	-0,0958904	0,2191781	0,0007397	0,0346702
t-5	753	-0,0833333	0,2500000	0,0041313	0,0332303
t-4	753	-0,0699301	0,2500000	-0,0008813	0,0343501
t-3	753	-0,122807	0,3450704	0,0060851	0,0368758
t-2	753	-0,0982143	0,3454545	-0,0042358	0,0370366
t-1	753	-0,0811881	0,3482143	0,0064014	0,0354967
t0	753	-0,0765306	0,3376623	-0,001446	0,036641
t+1	753	-0,0696721	0,3478261	0,0055675	0,0346323
t+2	753	-0,0804598	0,2500000	0,0012471	0,0354452
t+3	753	-0,086758	0,2478632	0,0004135	0,0336966
t+4	753	-0,7943989	0,2479339	-0,0047664	0,0429577
t+5	753	-0,1000000	0,3491124	0,0042182	0,033682
t+6	753	-0,0854701	0,248227	0,0030594	0,0327515
t+7	753	-0,0695652	0,3400000	0,0091542	0,0391765
t+8	753	-0,1000000	0,3493151	0,0042629	0,0391272
t+9	753	-0,0695658	0,3403141	-0,0008663	0,0400299
t+10	753	-0,0697674	0,3469388	0,0035944	0,0406047

Source: IDX stock data processed with Stata 14.0

Based on the results of the descriptive statistical test shows that the minimum return value is found at t_{+2} of -0.0695652. In contrast, the highest return value is found at t_{+8} 0.3493151. The lowest average return value on t_{+8} is -0.0001804, while the highest average return value is on t_{+7} which is 0.009154.

Table 2. Average Return before the HPP Law was enacted

No	Sector Industry	N	H-10	H-9	H-8	H-7	H-6	H-5	H-4	H-3	H-2	H-1	H
1	All Sector	753	0.0032	-0.0001	-0.0002	-0.00026	0.0007	0.00042	-0.00009	0.00061	-0.00042	0.00064	-0.00014
2	Agriculture	27	0.0023	0.00049	0.00019	0.00008	0.00023	0.00005	0.00064	-0.00033	0.00008	0.00094	0.00097
3	Mining	50	0.0052	0.000159	0.00067	0.00015	-0.00019	0.00049	0.00026	0.00029	0.00006	0.00079	0.00033
4	Property, Real Estate, and	101	0.0099	0.00015	-0.0004	-0.00007	-0.00006	0.00016	0.00092	0.00001	-0.00065	0.00032	0.00009

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	Building Construction												
	Consumer Goods	66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Industry		49	023	06	59	35	57	39	07	5	6	92
6	Basic Industry and Chemicals	84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			7	013	12	51	58	02	36	24	8	68	67
7	Infrastructure, Utilities, and Transportation	83	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
			12	077	82	17	24	08	33	47	99	84	52
8	Trade, Service, and Investment	191	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			15	009	18	73	25	39	52	42	67	6	15
9	Miscellaneous Industry	56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			54	025	41	54	44	25	16	21	79	12	08
10	Finance	95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
			26	061	45	9	16	21	26	72	12	88	61

Source: processed stock data

Table 3. Average Return after the Ratification of the HPP Law

No	Sector Industry	N	H	H+1	H+2	H+3	H+4	H+5	H+6	H+7	H+8	H+9	H+10
1	All Sector	753	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.003
			14	56	12	04	47	42	31	91	43	09	6
2	Agriculture	27	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.008
			97	27	26	03	34	31	07	85	75	34	4
3	Mining	50	0.02	0.01	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.010
			33	33	17	33	12	04	7	35	22	48	5
4	Property, Real Estate, and Building Construction	101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.014
			09	65	21	41	28	84	22	51	66	46	4
5	Consumer Goods Industry	66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.001
			92	83	05	84	64	51	36	66	08	61	9
6	Basic Industry and Chemicals	84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.006
			67	69	29	02	01	2	35	19	68	56	5
7	Infrastructure, Utilities, and Transportation	83	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.001
			52	38	05	52	96	37	54	03	67	02	1
8	Trade, Service, and Investment	191	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.003
			15	46	09	21	51	17	14	91	48	41	7
9	Miscellaneous Industry	56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000
			08	2	26	26	15	11	16	45	57	08	1
10	Finance	95	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.008
			61	35	59	41	49	23	61	79	15	2	4

Source: processed stock data

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Based on Tables 3, 4, and Figure 2 regarding the average returns before and after the passage of the HPP Law, we find an interesting picture. In this discussion, we only attempt to describe the state of return on average, and there is no significant calculation. This calculation only uses the average return for each sector by adding all returns on companies with the same sector, then dividing by the number of companies in that sector. We categorized based on the industry for 20 days, with 10 days before and after (-10,10) the passage of the HPP Law. In this description, we focus only on companies in four sectors, namely mining; agriculture; finance; and trade, services, and investment, because in our findings, it is a company with the highest and lowest CAR using the Single Index Model and the Historical Mean Model. We see that companies in the mining sector experience exciting fluctuations in the average return. It can be seen that this company is the company with the largest average positive return, namely 0.04146562 (4.1%) on the 7th day before the passage of the HPP Law (t_{-7}). Companies in the mining sector also have the lowest negative returns, namely -0.023295 (-2.3%) at the time of the passage of the HPP Law (t_0). Companies in the agricultural sector also experience fluctuations in their average returns. It can be seen from the observation 10 days before the ratification (-10) this company tends to have positive returns ranging from 0% -2%. Agricultural companies also experienced a decrease in their average returns on the validation day, the same pattern experienced by companies in the mining sector. The following day (t_{+1}) both of these business sectors experienced a positive trend. Companies in the financial industry tend to have a negative average return. It can be seen in Figure 2 that it is sloping below the number 0, but towards the end of the observation (t_{+7}) is experiencing a positive trend. Companies in the trade, service, and investment sectors tend to be sloping with an average return of -0.1 to 0.1.

Table 4. UU HPP terhadap Abnormal Return

Sector	Historical Mean Model			Single Index Model		
	[-10,10]	[-5,5]	[-3,3]	[-10,10]	[-5,5]	[-3,3]
Index Kompas 100 (100 securities)	12.30%***	9.82%***	6.47%***	2.84%***	1.38%***	1.78%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Agriculture (27 securities)	11.86%***	6.99%***	2.47%***	8.14%***	3.68%***	0.61%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Mining (50 securities)	12.59%***	5.97%***	5.21%***	7.59%***	1.49%***	2.70%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Basic Industry and Chemicals (84 securities)	3.38%***	-	-	-	-3.96%	-2.12%
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0.0013)	(0.5879)	(0.3050)
Miscellaneous Industry (56 securities)	-2.15%***	-	-	-	-5.37%**	-2.77%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0.0000)	(0.0244)	(0.0001)
Consumer Goods Industry (66 securities)	5.76%***	5.60%***	4.14%***	2.43%***	2.62%***	2.49%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)	(0,0000)
Property, Real Estate, and Building Construction (101 securities)	5.63%***	3.28%***	1.65%***	1.56%***	-	-0.38%***
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0,0000)	0.36%***	(0.0036)
Infrastructure, Utilities, and Transportation (83 securities)	3.62%***	1.29%***	1.39%***	-	-	-0.47%*
<i>p-value</i>	(0,0000)	(0,0000)	(0,0000)	(0.0000)	(0.0005)	(0.0548)
Finance (95 securities)	-1.03%***	-	-	-7.01%	-6.52%	-3.29%
<i>p-value</i>	(0,0000)	(0,0000)	(0,0003)	(0.2130)	(0.3902)	(0.9423)
Trade, Service, and Investment (191 securities)	-2.25%***	-	-	-	-	-1.91%***
<i>p-value</i>	(0.0001)	(0.0001)	(0.0001)	(0,0001)	(0,0000)	(0,0000)

*** p-value < .01, ** p-value < .05, * p-value < .1

Source: IDX stock data processed with Stata 14.0

Based on table 5, we find interesting results. We test the ratification of the HPP Law on market reactions measured by abnormal returns using the Single Index Model and the Historical Mean Model. First, we tried to test the Kompas 100 index as the index with the most number of companies. The results of this test indicate that the market reacted (p-value < 0.05) on the 10 days before

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and after testing (-10.10), and positive cumulative abnormal returns occurred. We also tested 5 days before and after (-5.5) and 3 days before and after (-3.3) to see if there was a shock effect. As a result, this test shows that the market reacts (p -value < 0.05).

Apart from the Kompas 100 Index, we also test each sector to see the sector's significance. We found that companies in the agricultural industry are the business sectors that have the highest cumulative abnormal returns in terms of percentage increases. The ratification of the HPP Law invited investors to be interested in companies in this sector, thereby increasing share prices. When examined further, this is an exciting phenomenon; when it is connected with the recently passed carbon tax, agricultural sector companies are also inseparable from the production process, which is not far from carbon emissions. An example of a farming company is a palm oil production company whose production activities cannot be separated from heavy equipment and machinery.

Companies in the mining sector that have various heavy equipment with challenging business fields are also of interest to investors. Based on the table above, calculations using the historical mean model show that mining sector companies have the highest cumulative abnormal returns during the 10-day observation period before and 10 days after the incident (-10.10). When viewed using the shock effect (-3.3), companies in this sector have the highest percentage using the historical mean model and the single index model compared to other business sectors. Furthermore, this finding is interesting to study more deeply by linking it to carbon disclosure.

Based on table 3, companies in the financial and trade, service, and investment sectors have the lowest cumulative abnormal return values in each model. Financial sector companies become companies abandoned by investors when viewed using a single index model during observation (-10.10). The cumulative abnormal return for this company reaches -7.01%, which means that cumulatively with a total observation range of 20 days, companies in this sector do not provide positive returns. Tests using different tests on the single index model also show no significant abnormal returns in this sector. Using the historical mean model, companies in the trade, service, and investment sectors, comprising 191 companies also cumulatively, give the lowest percentage return (-2.25%). This indicates that investors are not interested in companies in this sector.

The discussion by linking the average return and hypothesis testing finds exciting findings. Hypothetically, companies in the agricultural and mining sectors have the highest positive CAR, and significant abnormal returns occur. It can also be seen in Figure 2 that companies in this sector have graphs that tend to be positive. Still, these two sectors experienced a negative average return when the HPP Law was passed. This could happen because investors are taking profit (TP). Still, this finding is more enjoyable when associated with carbon disclosure because it has tremendous potential for carbon taxes. Companies in the financial and trade, service and investment sectors tend to trend downward. Companies in the financial industry have a positive average return trend towards the end of the observation period. Regarding carbon taxes, companies in the financial sector do not have much potential to produce carbon. The potential for tax increases exists from income taxes because their main business is in the service sector. The extent of the discussion regarding the HPP Law and not only focusing on carbon taxes is an interesting issue to study more deeply about why investors are attracted to companies in the agricultural and mining sectors.

IV. CONCLUSION

This research concludes that the market is fully reacting to the ratification of the Law on the Harmonization of Tax Regulations (UU HPP). The details of the conclusion are as follows:

1. The market generally reacted fully to the ratification of the HPP Law during the observation period of 10 days before and after ratification, 5 days before and after ratification, and 3 days before and after ratification with a proven p -value < 0.01.
2. There are 8 out of 9 business sectors on the Indonesia Stock Exchange have reacted significantly to the ratification of the HPP Law. The 8 sectors are as follows: agriculture; mining; consumer goods industry; property, real estate, and construction; trade, services, and investment; various industries; infrastructure, utilities, and transportation; as well as primary and chemical industries, which only 10 days before and after; while the financial sector did not have a significant change in abnormal returns after the approval.
3. Companies in the agriculture and mining sectors are companies with significant changes in abnormal returns and the highest increase in cumulative abnormal returns compared to the other 8 sectors. In comparison, the financial industry does not experience significant changes to abnormal returns and the highest decrease in cumulative abnormal returns compared to 8 other corporate sectors.
4. This research was conducted in conjunction with data collection on the disclosure of carbon emissions in 2019 and 2020. On average, agricultural and mining companies have more available sustainability reports when compared to other companies.

We realize there are limitations in this research by discussing only the market reaction to the ratification of the HPP Law. In general, the market responded positively to the HPP law. This is an exciting topic for further study because the passage of the law, which is an additional burden on companies, has responded positively in the form of a cumulative increase in stock prices in the

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carbon emission sector. The discussion on the HPP Law is interesting to continue on the topics of research on carbon emissions, carbon incentives, value-added tax, income tax, environmentally friendly investor behavior, and personal income tax

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