

ANALYSIS THE COMPETITIVENESS OF TELECOMMUNICATION INDUSTRY AFTER THE ERA OF INTERNET OF THINGS (IOT)

Wiwiek Mardawiyah Daryanto
Annisa Nur Hasanah
Muhammad Arief Bilqisthi

ABSTRACT

The use of the Internet becomes massive and keeps growing, thus drives the telecommunication industry to enhance their performance through increasing services. These opportunities make internet service providers enhance their service quality towards customers in Indonesia. The rise of internet communication started in 2014 when start-up companies basically e-commerce were known by the public. This research aims to analyze the development of the four Telco companies using financial ratio analysis from 2014-2018. The method used in this research is a descriptive analysis. The result revealed that the financial performance of telecommunications companies in the 2014-2018 period based on liquidity ratios is Telkom, financial performance of Telecommunications is Excel, financial performance of Telecommunications Companies based on the activity ratio are EXCL in 2014 until 2017 and FREN in 2018, and financial performance of Telecommunications Companies are TLKM from 2014 to 2017 and ISAT in 2018.

Key words: Telecommunication, Financial Performance, Internet of Things

1. INTRODUCTION

Background

The era of technology drives people more dependent on technology. Applications and its platform from transportation to finance technology, even health in one hand, such as ride hailing, sharing investment, peer to peer, e-commerce, lending and many platforms contribute to people's ease of life. In light of the development of social media and e-commerce activity, it has become the largest share of internet users that drives the performance of the Telco industries (Sullivan and Frost, 2017). The use of internet data brings the telecommunication industry to offer the benefit to their customers. Related to the current need and the development of technology, telecommunication or the Telco industry has become one of the best future prospects. According to the Statista Research Department, the penetration of the internet in Indonesia is only 53.7 percent, lower than many countries in Asia Pacific, but one of the highest number of internet users in the world.

Stone (2015) revealed in her research that the telecommunications industry has evolved, driven by technological change and the consumer has benefited from this evolution. This condition also completely or partially destroyed the boundaries between the industries and changed the approach toward consumers to get the full benefit of this development. The decline of former services such as messaging and telephone calls caused the negative growth of the telecommunication industry. Therefore the price competition shifted into internet data providers that became firmer to win the market share when it will be the new prosperous service offered. On the other hand, several internet data providers offered lower quality services due to sharing networks as it makes the spectrum become smaller. This arises the competition as it happened when the price war occurred between internet data providers to offer the lower price than the competitors. According to The Insider Stories, in big countries such as Australia and the United States, the ideal number of telecommunications operators is between three and four operators. Indonesia has four public cellular operators companies, which are PT Indosat (Indosat), PT Smartfren Telecom (Smartfren), PT Telekomunikasi Indonesia (Telkom) and PT XL Axiata (XL). Asosiasi Penyelenggara Telekomunikasi Seluruh Indonesia (ATSI) estimates that the telecommunications industry will grow further in the following years.

Research Objective

Digital becomes the main note as the needs of internet data providers would rise in the following years. Based on this phenomenon the authors conduct the research to analyze the competition between telecommunication industries as reflected in their financial performance.

The objective of this study is to assess the effect of internet drivers on Telecommunication Company performance based on annual financial reports, which measured by the following:

1. Financial performance of telecommunications companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on liquidity ratio.
2. The financial performance of Telecommunications Companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on the solvency ratio.
3. The financial performance of Telecommunications Companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on the activity ratio.
4. The financial performance of Telecommunications Companies listed on the Indonesia Stock Exchange during the period 2014-2018 based on profitability ratio.

2. LITERATURE REVIEW

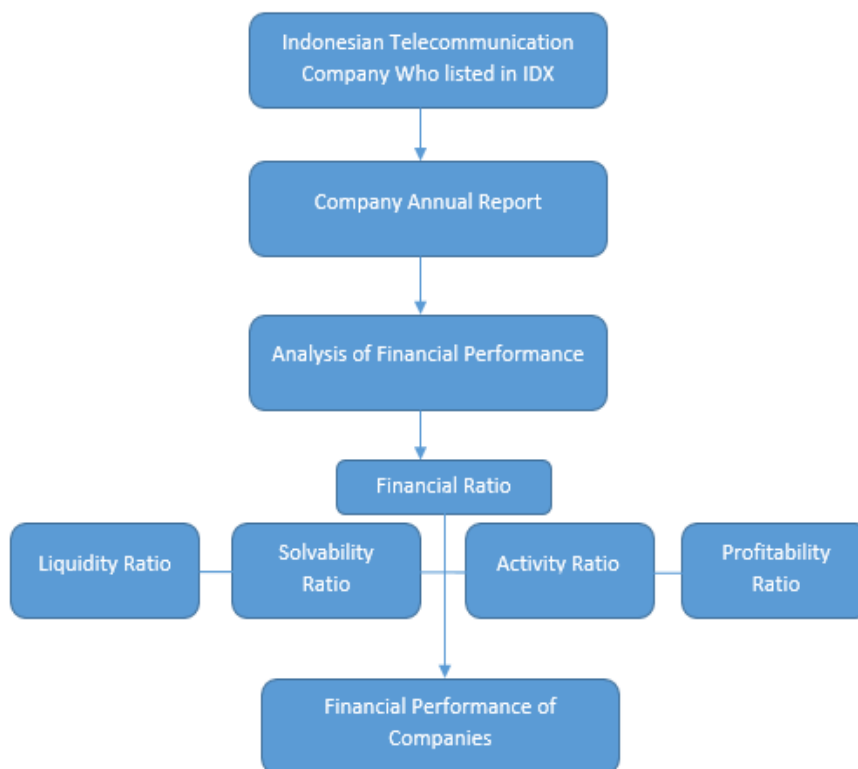
Anna (2019) stated that innovation and competitiveness have an interrelationship which in the digital age, innovation cycles are faster than in the past growing need for experimentation and personalization. Financial ratio analysis is a tool that used to evaluate the company's financial performance. Bloomenthal (2020) explained that ratio analysis could be used to reveal the company's performance in short-term and long-term periods. Financial ratios are numbers obtained by making comparisons of items in the financial statements. In general, financial ratios consist of liquidity ratios, solvency ratios, activity ratios, profitability ratios, growth ratios and valuation ratios. In this study, the authors only use several types of financial ratios namely, liquidity ratios, solvency ratios, activity ratios, and profitability ratios (Afriyeni, 2008).

Financial ratio has been used in many prior researches as one of methods to measure financial performance of companies. Jose´ M. Moneva and Eduardo Ortas measured environmental performance by using corporate financial performance by using financial ratios. It revealed that 230 European Companies which obtained higher rates of environment show better financial performance in the future. A prior study by Riana Christy Sipahelut, Sri Murni, Paulina Van Rate have been using financial ratio to measure financial performance in automotive companies listed on BEI. The result of this study indicates that PT Selamat Sempurna has a better financial performance compared to the other Automotive and Component Companies.

3. RESEARCH MODEL

This research model shows the process to measure the financial performance of telecommunication companies after the rise of internet data users in 2014.

Figure 3.1 Research Framework



Resource: personal development

3. METHODOLOGY AND OBJECT

Descriptive study is used to examine the effect of the internet and digital economy on the financial performance of the telecommunication companies. This study consists of systematic observation and description of the object characteristic with the objective to discover the relationship between financial ratio and the current condition of the company. Comparative and horizontal analyses are utilized to discover the performance of telecommunication companies. Secondary data is used in this study for a period of 5 years from 2014-2018 and obtained from the website of Indonesia Stock Exchange (IDX). Data collected is analyzed using ratio analysis to confirm the companies' financial performance. Four telecommunication companies are selected as the samples upon the criteria below:

1. Public listed Telecommunication Company in IDX during the observation period
2. Provide mass internet data services product in Indonesia

Therefore, four telecommunications companies are selected upon the criteria which are PT Indosat Tbk (IDX: ISAT), PT Smartfren Telecom Tbk (IDX: FREN), PT. Telekomunikasi Indonesia (Persero) Tbk (IDX: TLKM), and PT XL Axiata Tbk (IDX: EXCL). The variables used are listed in Figure 4.1 below:

Figure 4.1 Financial Ratios Formula

Liquidity Ratio	
Current Ratio	Current Asset/ Current Liabilities
Quick Ratio	Monetary Asset/ Current Liabilities
Cash Ratio	Cash and Equivalent/ Current Liabilities
Solvability Ratio	
DER	Total Debt/ Total Equity
DAR	Total Liabilities/ Total Asset
Activity Ratio	
WCT	Revenue / Working Capital
RTO	Revenue/ Average AR
Profitability Ratio	
NPM	Profit/ Revenue x100%
ROA	Net Income/ Total Assets x100%
ROE	Net Income/ Total Equity x100%

Source: Accounting Book and Cases by McGraw-Hill International Edition

5. RESULT AND DISCUSSION

5.1 Result

5.1.1 Result Liquidity Ratio

Table 5.1 Liquidity Ratio

Current Ratio (%)	2018	2017	2016	2015	2014	Quick Ratio (%)	2018	2017	2016	2015	2014
EXCL	44.9	47.2	47	64.5	86.44	EXCL	43.66	46.21	45.9	63.95	85.93
FREN	32.5	40.1	45.2	53.1	31	FREN	31.4	34.12	39.51	43.16	24.59
ISAT	40	60	42.3	53.1	40.63	ISAT	37	57.97	42	49	33.67
TLKM	93.5	104.8	120	135.3	106.1	TLKM	66.8	81.3	98.4	133.8	104.6
Average	52.73	63.03	63.63	76.5	66.04	Average	44.80	54.90	56.42	72.54	62.20

Cash Ratio (%)	2018	2017	2016	2015	2014
EXCL	6.66	16.12	9.67	21.03	45.14
FREN	6.61	6.86	4.08	2.34	11.06
ISAT	5	7	9.69	18	9.68
TLKM	40.5	60.2	78.6	87.4	63.3
Average	14.68	22.57	25.51	32.21	32.30

Source: Companies Annual Report (2014-2018)

Based on the data above, it can be seen that the average liquidity ratio in the company's annual report (2014-2018) has fluctuated. In 2014 on average, the current ratio was 66.04%, the quick ratio was 62.20%, and the cash ratio was 32.30%. In 2015, the current ratio was 76.05%, the quick ratio was 72.54%, and the cash ratio was 32.21%. In 2016, the current ratio was 63.63%, the quick ratio was 56.42%, and the cash ratio was 25.51%. In 2017 the current ratio was 63.03%, the quick ratio was 54.90%, and the cash ratio was 22.57%. And in 2018 it has a current ratio of 52.73%, quick ratio of 44.80%, and cash ratio of 14.68%.

5.1.2 Result of Solvability Ratio

Table 5.2 Solvability Ratio

Debt to Asset Ratio (%)	2018	2017	2016	2015	2014	Debt to Equity Ratio (%)	2018	2017	2016	2015	2014
EXCL	0.2	0.3	0.3	0.5	0.5	EXCL	0.7	0.7	0.7	1.9	2.1
FREN	50.6	61.7	74.3	66.9	77.4	FREN	102.6	160.8	288.6	202.3	342.8
ISAT	77	71	72.1	69.3	73.34	ISAT	177.00	132.00	143.00	179.09	164.00
TLKM	43.1	43.5	41.2	43.8	39.4	TLKM	38	32	30.1	37	27.3
Average	14.68	22.57	25.51	32.21	32.30	Average	79.58	81.38	115.60	105.07	134.05

Source: Companies Annual Report (2014-2018)

The highest debt asset ratio in 2014 is FREN at 77.4% and Indosat at 69.3% in 2015, 2016 and 2017 were FREN at 74.3% and 71%, and in 2018 the provider with the highest Debt Asset Ratio is Indosat. On average, total debt to asset ratio is relatively decreasing. On average, the smallest debt to equity ratio is in 2018 at 79.59%. While the biggest DER in 2018 is Indosat at 177% and the smallest is Excel at 0.7%. But in 2017, Smartfren led the DER at 160.8% and the other year in 2016 at 288.6%, 2015 at 202.3%, and 2014 at 342%. Excel remained the company which has the smallest debt to equity ratio in the observing years.

5.1.3 Result of Activity Ratio

Table 5.3 Activity Ratio

Receivable Turnover	2018	2017	2016	2015	2014	Working Capital Turnover	2018	2017	2016	2015	2014
EXCL	36.41	35.38	28	23	19	EXCL	-2.65	-2.84	-2.79	-4.1	-11.29
FREN	42	28	20	14	15	FREN	-1.33	-1.22	-1.29	-1.55	-0.65
ISAT	7	8	10	10	11	ISAT	1.76	4.45	2.65	4	1.80
TLKM	11.5	13.9	15.8	13.6	12.8	TLKM	-44	59	7.939	12.50	1.98
Average	24.13	21.30	18.37	15.16	14.44	Average	-11.55	14.85	1.63	4.21	-2.04

Source: Companies Annual Report (2014-2018)

Providers with the largest Receivable Turnover of 2014-2017 are EXCL of 19, 23, 28, and 35.58. In 2018 the FREN is 42 times. From the data, above it can be seen that the provider with the highest Working capital turnover in 2014-2017 is Telkom at 1.98, 12.50, 7.939, and 59. While in 2018, Indosat has the highest working capital turnover at 1.76 times.

5.1.4 Result of Profitability Ratio

Table 5.4 Profitability Ratio

Net Profit Margin (%)	2018	2017	2016	2015	2014	Return On Asset (%)	2018	2017	2016	2015	2014
EXCL	-14,37%	1,64%	1,76%	-0,11%	-3,79%	EXCL	-5,72%	0,67%	0,68%	-0,04%	-1,39%
FREN	-64,71%	-64,74%	-54,28%	-51,73%	-46,67%	FREN	-14,09%	12,53%	-8,66%	-7,55%	-7,76%
ISAT	-10,40%	3,80%	3,80%	-11,70%	-8,25%	ISAT	-4,50%	2,20%	2,20%	-5,10%	-3,73%
TLKM	13,79%	17,27%	16,64%	15,11%	16,30%	TLKM	8,75%	11,16%	10,80%	9,30%	10,20%
Average	-18,92%	-10,51%	-8,02%	-12,11%	-10,60%	Average	-3,89%	6,64%	1,26%	-0,85%	-0,67%

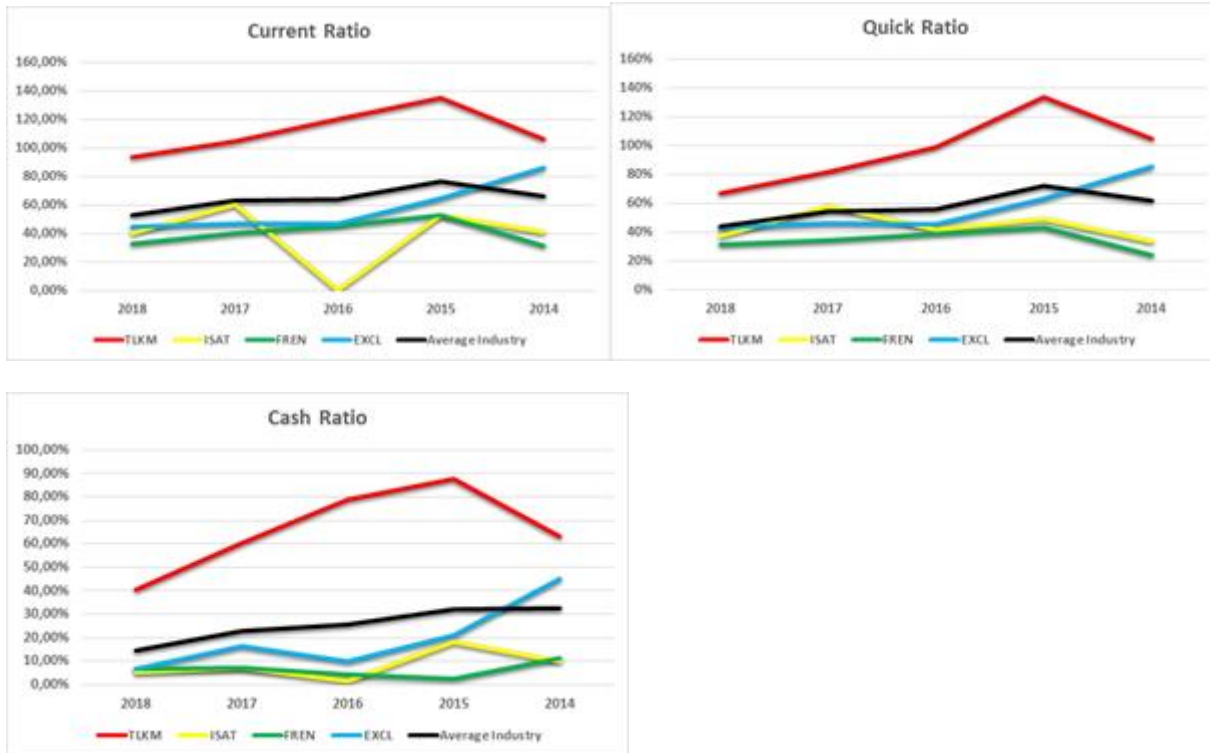
Return On Equity (%)	2018	2017	2016	2015	2014
EXCL	-17,97%	1,73%	1,77%	-0,17%	-6,38%
FREN	-28,54%	32,69%	-33,64%	-22,85%	-34,80%
ISAT	-21,50%	8,30%	8,30%	-17,20%	-14,71%
TLKM	15,37%	19,75%	22,90%	20,60%	21,40%
Average	-13,16%	15,62%	-0,17%	-4,91%	-8,62%

Source: Personal Development

From the above data, it can be seen that the highest NPM provider from 2014-2018 is Telkom with the respective amounts of 16.30%, 15.11%, 16.64%, 17.27% and 13.79%. The highest ROA was at Telkom providers from 2014 until 2016 with the following results 10.20%, 9.30% and 10.80%, respectively. In 2017, Smartfren took a lead with the highest ROA at 12.53% but Telkom regained its position with 8.75% in 2018. The highest ROE from 2014-2016 was taken by Telkom with a magnitude of 21.40%, 20.60%, and 22.90%, respectively. Same with the condition of ROA, Smartfren took the lead as the highest ROE in 2017 at 32.69% and in 2018 Telkom came back again at 15.37%.

5.2 Discussion

5.2.1 Discussion of Liquidity Performance



Source: Companies Annual Report (2014-2018)

From the graph above, it can be seen that the highest ratio of EXCL providers in 2015 was 21.03% and FREN with the highest ratio in 2014 was 11.06%. Indosat with the highest ratio in 2015 was 18%. And Telkom with the highest ratio in 2014 was 32.30%. Telkom has the highest liquidity ratio compared to 3 other providers. This shows that the current ratio of the four companies increased from 2014 to 2015 by 10.1%. But it decreased again in 2018 by 8.97%. In the following years experienced a decline and the highest amount of decline in 2018 was 10.3%. So it can be concluded that current assets that are converted into cash and current debt are corporate debt that must be paid in cash within one year or in the company's operational cycle experiencing ups and downs as well. In 2018, is the lowest ability of the company to pay off obligations and 2015 is the highest ability of the company.

The quick ratio of the four companies shows the same result as the current ratio before, which TLKM has a better performance in quick ratio. The quick ratio fluctuating up and down from 2014 increased 10.30%, down 6.21% in 2016. In 2015, it declined by 10.10%. So it can be concluded that the ability of a company to use current assets to cover its best current debt in 2015 and the lowest in 2018. Cash flow ratio is quite volatile and experiences ups and downs in the flow of cash flow. The highest in 2015 was 32.21% and the lowest was 14.68% in 2018. It can be concluded that the best financial condition of Indonesian telecommunication is in 2015 and in 2018 is the struggling year of communication companies. From the above data it can be seen that Telkom from 2014-2018 became a provider with current good cash and high compared to the other three providers.

5.2.2 Discussion of Solvability Ratio

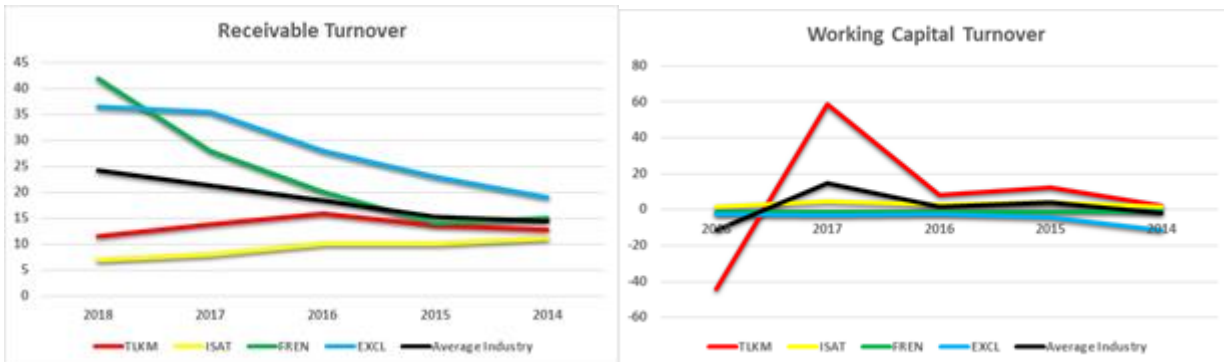


Source: Companies Annual Report (2014-2018)

From the graph above, we can see that Indosat and Smartfren are the two companies that have big debt compared with assets and equity. But compared with Indosat, Smartfren decreased its solvability starting in the year of 2015. While Indosat is relatively stagnant and increasing in 2018. Excel and Telkom are the two companies that have a better performance in managing the debt. These two companies manage the debt Debt to Equity Ratio with a low ratio means the company's condition is getting better because the portion of debt to capital is getting smaller. It means both of the providers keep their debt safe, so the company's condition remains healthy.

5.2.3 Discussion of Activity Performance

Figure 5.3 Activity Ratio Graph



Source: Annual Report (2014-2018)

Company providers with the largest 2014-2017 receivable turnover is EXCL of 19, 23, 28, and 35.58. In 2018 namely FREN of 42. It means EXCL shows better performance in collecting the receivables from its customers. From the above data it can be seen that the working capital of the operators is slowing down. Only TLKM in 2017 as it showed the line is soaring high, while working capital turnover of the other companies remained flat. But in the next year, TLKM continued to fall down. It can be concluded the Telkom cash cycle period in 2018 is slowing down due to the government policy to registration number that affected the sales of Telkom from the prepaid card component.

5.2.4 Discussion of Profitability Performance

Figure 5.4 Profitability Ratio Graph





Source: Annual Report (2014-2018)

From the graph above, we can see the NPM of Smartfren is at the lowest compared with the other companies. The ROA of Smartfren is at the highest in 2017. But in ROE Smartfren remained the lowest. With the discussion before, in the solvability section, we can know that Smartfren has a big total debt in general. It can be concluded that because of Smartfren commitment to increase their Base Transceiver Station (BTS) from 2010 until 2016, the debt of Smartfren remained high and it also flatten their profit. With the three ratios, Telkom takes the lead as the companies with the highest profit margin. It can be seen that the other ratio measured that Telkom has high profitability compared with others. Telkom has the biggest market share of internet providers with the diverse product make Telkom as the market leader of telecommunication industry in Indonesia.

6. CONCLUSION AND SUGGESTION

Conclusion

The growth of Information and Communication Technologies (ICT) is the driver of the telecommunication industry. The next generation of 5G including internet of things (IOT) became the advantages of this industry to foster the sales and generate income for the product and services provided. Based on the findings, the writers reveal the following:

1. The best financial performance of telecommunications companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on liquidity ratios is PT Telkom Indonesia.
2. The best financial performance of telecommunications companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on the solvency ratio is PT XL Axiata.
3. The best financial performance of telecommunications companies listed on the Indonesia Stock Exchange during the 2014-2018 period based on the activity ratio are PT XL Axiata in 2014 until 2017 and PT Smartfren Telecom in 2018.
4. The best financial performance of telecommunications companies listed on the Indonesia Stock Exchange during the period 2014-2018 based on profitability ratios are PT Telkom Indonesia from 2014 to 2017 and PT Indosat in 2018.

The findings indicate that the telecommunication industry competitiveness is fierce to win market competition yet still dominated by the certain player, particularly who has the largest market share, which is PT Telkom Indonesia. Innovation becomes crucial as it creates the product or services that excel in the market. Then the company's competitiveness becomes supreme and resists in any condition.

Suggestion

The expansive growth of the Telco Industry became the trigger to invest in the telecommunication sector. This sector is massive and has become the mass product that is needed for everyone. Even though the financial performance on average relatively shows the fluctuated value, the future of Information and Telecommunication still has a long journey. Telecommunication industry should improve their business model to adjust to the current condition and agile, quickly with the technology changes in the future.

Further research is needed to make better improvements in finding the competitiveness of the telecommunication industry in Indonesia. Telecommunication sector has become one of the most important infrastructures to support other sectors. These opportunities will make this sector grow in the following years. The next research which is based on telecommunication industries could measure the effectiveness of assets owned by companies or the growth after some infrastructure project has been accomplished.

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Wiwiek Mardawiyah Daryanto
Sekolah Tinggi Manajemen IPMI
Email: wiwiek.daryanto@ipmi.ac.id

Annisa Nur Hasanah
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
Email: annisa_hasanah@sbm-itb.ac.id

Muhammad Arief Bilqisthi
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
Email: muhammad_bilqisthi@sbm-itb.ac.id