Valuation Report – 21 Feb. 2017

PT INDOSAT TBK. ★★★☆☆

TP: 6,900 (HOLD)

Exchange	Ticker	Last Close	1Y Chg	Market Cap.
JCI	ISAT	6,875 (21 Feb 2017)	+30.95%	36.95tn IDR
Beta	**Sh. Out.**	**Avg. Vol.**	**P/E ratio**	**Sector**
0.87	5.43bn	0.418mi	54.74	Telecommunication

SUMMARY

A target price of IDR 6900 and uncertainty pertaining to future regulations results in a **HOLD** recommendation. Although economic growth seemed mediocre, it does not dampen the demand for telecommunication services. Cellular growth, along with MIDI and fixed telecommunications, remained robust throughout the year. Although competition is fierce, ISAT is well positioned to capture the growing piece of the market. However, **issues in profitability prevent the company from being a stellar performer**. From industry's side of view, a **major network sharing regulation is underway**, which, if implemented, will benefit ISAT the most of the Big Three telco. ISAT's recent developments have been focused to raise competitiveness in the cellular market. Partnership with the Swedish music streaming service Spotify (2016 H1) aimed to increase value by delivering affordable music streaming services to customers. The company has also introduced a new Data Rollover program, which lets customers 'roll over' their remaining data to next month's quota, a feature not commonly seen in retail packages.

BUSINESS DESCRIPTION

PT Indosat Tbk. (ISAT) is an Indonesian company providing telecommunication networks and services and information technology (IT) services. ISAT operates through three segments: **cellular**, **fixed telecommunications**, and **MIDI** (Multimedia, Data Communication, Internet). ISAT provides basic telecommunication services as well as multimedia and Internet services, and is also engaged in mobile and fixed telecommunication networks. Furthermore, ISAT also provides payment transaction and money transfer services through its telecommunication networks. The company also provides corporate services to large, medium, and small enterprises.

Indosat was founded in 1967, over 49 years ago, and was designated PMA (investment from foreign entities) as per Indonesian regulations. In November 2015, Indosat was renamed Indosat Ooredoo after its controlling company Qtel, a Qatari telecommunications company, rebranded itself as Ooredoo.

MACROECONOMIC SUMMARY

Indonesia has been posting a rather lackluster economic growth, hovering around 5% GDP growth, though **demands for telecommunication services remained robust**. Increasing GDP per capita, as well as stable population growth, backs up the increasing adoption of smart-devices. This, combined with future infrastructure-focused development plans by the government allow for a steady organic growth of the industry. As a regulation-heavy industry, though, the telecommunication industry must be wary of the somewhat unstable political environment.

INDUSTRY AND KEY TRENDS

The Indonesian market for cellular services is the world's fourth largest, after China, India and the United States. Competition among cellular service providers in Indonesia is based on various factors, including pricing, network quality and coverage, the range of services, features offered, and customer service.

In general, telecommunication is an expensive business, with heavy reliance on capital and complex technologies which needs upgrading every few years. Companies need to be large enough to withstand the costs of managing and expanding their networks and services. Size matters in this industry; big companies are more apt to use their own extensive networks, while smaller competitors with lesser coverage must rely more on other networks' interconnection.

Indonesia has a moderate number of telecommunication companies, but three of them holds around 80% of the market. They are **Telekomunikasi Indonesia, Indosat, and XL Axiata** (TLKM, ISAT, EXCL, respectively). Combined, they are considered the 'Big Three' of Indonesia's telecommunication.

Ticker	Mkt Cap. (IDR)[1]
TLKM	398.16 tn
ISAT	34.64 tn
EXCL	31.00 tn
FREN	6.33 tn
BTEL	1.90 tn

Figure 1. Market capitalization of major players

Key Industry Trends

The following are trends that are shaping the industry's current landscape, as well as their perceived impacts.

Increasing smartphone adoption – Smartphone adoption is expected to reach 92 million users in 2019, up from 55 million in 2015. Furthermore, it is not uncommon for the more well-offs to have and use two or three mobile devices at the same time. Recent number shows the average

1 Calculated from 21 Feb. 2017 prices.

subscriber holds around 1.5 simcards concurrently. Advanced technologies available through smartphone are quickly diminishing the need for other telecommunication devices. Coupled with stable, albeit slower, economic growth, this trend does not look to be abating soon.

Increasing reliance to online contents – more consumer and business functions are starting to be available on the Internet, boosting the demand for devices, data packages, streaming services, and faster broadband connections.

Traditional voice & SMS activities in decline – along the lines of increasing reliance to chat and video calls, traditional talktime and messaging are in decline. As a result, revenue from this kind of product line is quickly being supplanted by revenues from data.

Data is the new source of growth – there has been increasing attention to data growth, which in 2014-15 has grown around five to nine times revenue growth. It is perceived that data will drive the majority of telecommunication's business in the near future. Revenue per Megabyte of data, though, remains low as competitors try to out-price one another, leading to plummeting levels of revenue per subscriber. Recently, ISAT aims to remedy this by increasing price supported by improved value propositions and cutting extra quotas given to customers for free. Although this has somewhat remedy the problem, it remains to be seen whether other competitors are willing to indulge in this strategy. If not, then data yields will remain low for the foreseeable future.

New regulation can potentially shake up the game – a new push of a network sharing regulation is underway. Previously, all carriers have the option to share network capacity and infrastructure. New rulings may make sharing mandatory. ISAT, which has the highest holding of older equipment, is poised to benefit the most if the rulings are passed because it can then 'piggyback' on other's infrastructure, saving hefty amounts of capital expenditures in the process. So far, there are 5 models proposed: CME Sharing, Multi Operator Radio Access Network (MORAN), Multi Operator Core Network (MOCN), Roaming, and Mobile Virtual Network Operator (MVNO).

Porter's Five Forces Analysis

Further discussion on the nature of the industry will make use of Porter's Five Forces framework. They are, in order of perceived importance, as follows.

HIGH *Industry Competition*

Internal competition is fierce, and leads to a somewhat depressed pricing particularly in the retail cellular market. The "Big Three" dominates the market, but lesser competitors have tried to compete with innovative marketing and data packages.

LOW *Threats of New Entrants (Barriers to Entry)*

High capital and advanced financing needed in this industry poses a very significant challenge to potential newcomers. Expensive fixed assets and limited licensing opportunities have proved effective in restricting the number of players in Indonesia's telecommunication market. If anything, foreign telecommunication companies may deserve more attention, since it is not uncommon for acquisitions to take place.

LOW *Threats of Substitute Products*

In Indonesia, mobile data service is the primary method of Internet access, caused by the underdevelopment of public data access infrastructure such as Wifi hotspots. This makes many Internet-related products and services very hard to be substituted, a fact which contributes to carriers' strong hold on pricing. There are, however, some concerns on cannibalization of the revenue from telephone minutes, since some customers have begun to opt for VoIP (Voice over IP) as primary means of verbal communication.

LOW *Power of Buyers*

Sale of cellular services, which comprises the majority of this sector's revenue, is mainly obtained through continual subscriptions from a large and varied number of individual customers. The customer base is very fragmented, and it is not uncommon for one individual to have subscriptions to two or more carriers. This allows carriers to easily dictate the terms and pricing of their product services. Sales to corporate and business customers is, in general, dependent on the nature of the services required, but no buyer has any significant bargaining power over the carriers.

NEUTRAL *Power of Suppliers*

BTS (Base Transceiver Stations), the main equipment required to deliver services, are transacted on a rent-basis, and one device can serve multiple frequencies. To obtain antennae locations, carriers extend offers to land owners deemed to have strategic locations, most of which are individual entities.[2] This ensures high availability, predictable expense streams, and manageable transactions.

COMPANY ANALYSIS

ISAT earned the bulk of its revenue through its cellular division (81.8%), followed by MIDI (14%) and fixed telecommunication (4.2%). Cellular contribution has remained stable in recent years, while MIDI is generally rising and fixed telecommunication falling. Robust smartphone usage patterns ensures that there is ample space for further growth. Currently, ISAT's strategy can be said to entail the following: **network**

2 It is not uncommon for landowner him/herself to advertise a space as 'BTS-optimal' or 'BTS-ready' in an effort to attract the carriers' development teams.

modernization, aggressive marketing campaign, and debt restructuring.

	2011	2012	2013	2014	2015
Cellular	81.4%	82.5%	81.2%	80.9%	81.8%
MIDI	12.5	13.0	13.7	14.6	14.0
Fixed	6.1	4.6	5.1	4.6	4.2

Figure 2. ISAT's revenue breakdown

Company's Profitability

From profitability's point of view, things are not looking so well. **ISAT posted negative earnings from year 2013 to 2015, although there are some signs of reversal**. Falling margins further exacerbate this problem. There are signs of weakening in gross margin and EBITDA, but none as bad as operating margin: latest annual report numbers reveal that it has fallen about one-fourth from its 2011 level.

	2011	2012	2013	2014	2015
ROE	4.61%	2.02%	(15.88%)	(13.48%)	(10.04%)
ROA	1.59	0.70	(5.07)	(3.72)	(2.41)
Margins					
Gross Margin	63.13	60.28	58.26	56.78	58.11
EBITDA	45.74	47.01	43.50	41.40	42.73
Operating Margin	13.75	10.11	5.94	7.24	9.97

Figure 3. ISAT's profitability ratios

In 2016 however, ISAT managed to post IDR 7.6 tn of revenue in Q3, continuing a streak of positive earning from Q1. This is mainly the result of good organic growth combined with lesser volatility from its foreign currency exposure. The company has decreased its USD-denominated bonds to USD 186.4mi (-63% yoy) while increasing IDR-denominated bonds to IDR 14.5tn (+34% yoy). This change in liability structure helps to guard against mounting uncertainty in the American currency. This is doubly important considering that ISAT is not currently using any sort of hedging; a sudden unfavorable fluctuation in exchange rate can be catastrophic to the company's bottom line.

A Sustained Focus in Marketing

As a major player, ISAT is one of the leader in pricing. The recent partnership with the Swedish music streaming service Spotify is aimed to bolster the company's value proposition to its customers, particularly to those sufficiently comfortable in accessing the Internet for various services (the number of which is growing). There are, however, gaps in the quality of

ISAT's service, most notable one being that it is not known for good overall signal coverage (overall coverage champion is TLKM, which, in turn, is notorious for its relatively high data service prices).[3]

Near-Obsolete Equipment Could be a Challenge

Among the Big Three, ISAT currently has the most amount of depreciated equipment. Renewing these equipment to match the competition may prove difficult considering the constrained capital expenditure headspace.

	2011	2012	2013	2014	2015
Net Fixed Assets	42,573.4	41,964.8	42,190.1	40,775.9	41,821.7
→ Gross Fixed Assets	82,102.4	88,319.0	96,966.7	103,217.5	112,549.4
→ Acc. Depreciation	39,529.0	46,354.2	54,776.6	62,441.6	70,727.7
A/D to Gross F/A	*48%*	*52%*	*56%*	*60%*	*63%*
As % of Total Asset					
Net Fixed Assets	81.6%	76.0%	77.3%	76.5%	75.5%
→ Gross Fixed Assets	157.4%	159.9%	177.7%	193.8%	203.2%
→ Acc. Depreciation	75.8%	83.9%	100.4%	117.2%	127.7%

Figure 4. ISAT's accumulated aepreciation

Accumulated Depreciation to Gross Fixed Asset ratio increased every year, culminating to 63% in 2015. This is a result of heavy depreciation and not aggressive enough capital expenditure. ISAT must race to get this under control, or risk being outmatched by its competitors. New rulings regarding the network sharing regulation may help alleviate this though, since infrastructure sharing (mostly towers and BTSes) will greatly help ISAT to cope, and slowing down the need for immediate and expensive capex.

Risk Profile with Regards to Industry Conditions

Risks to profitability with regards to industry conditions is as follows.

Threats to profitability	Degree	Summary
Industry Rivalry	High	Generally, somewhat depressed pricing as result of competition. Robust value propositions are needed to compete effectively.
Threats of New Entrants	Low	High barriers to entry preserve industry's 'pie size' as a whole.
Threat of Substitutes	Low	Current products and services are hard to substitute.
Bargaining Power of Suppliers	Neutral	Little bargaining power from suppliers. Significant challenges revolve mostly around keeping tabs on expenses.

3 See Appendix for coverage map.

Threats to profitability	Degree	Summary
Bargaining Power of Buyers	High	High bargaining caused by fierce competitions. 'Churn rate'[4] must be vigilantly monitored.

Figure 5. Porter's Five Forces impact to profitability

Based on the analysis, it suffices to say that **industry competition remains the most significant challenge faced by ISAT**. This is manifested by a high bargaining power of buyers, since the competitive nature of the market means that buyers will have myriads of choice when purchasing a product.

As telecommunication industry grows, it will become more complex, requiring greater technical expertise from the companies. ISAT's future outlook is, although not bleak, remains mediocre if it cannot soon catch up in market share, operations, and profitability.

4 The rate at which customers leave for a competitor. The telecommunication industry has one of the highest churn rates of any industry; this is mainly due to the fierce competition.

APPENDIX

Attached are extra information for review.

I. Company's Info Sheet as per its annual report.

Name of the organization	PT Indosat Tbk, known as "Indosat Ooredoo"
Primary brands, products and/or services	• Postpaid and Prepaid Cellular Services under the Mentari, Matrix and IM3 brands • Fixed data services, which include multimedia, data communications and Internet (MIDI) services marketed primarily to business customers. We also offer satellite-based services such as transponder leasing and VSAT services and IT services, such as Disaster Recovery Center, Data Center services, and Indosat Ooredoo Cloud Services with infrastructure-as-a-service. We provide these services directly and through our subsidiaries, Lintasarta and IM2. • Fixed telecommunications (voice) services. • Digital services.
Location of the organization's headquarters	Jakarta, Indonesia
Operational area and markets served	Indosat Ooredoo serves both retail, Small Medium Enterprise (SME) and large enterprise customers across the Republic of Indonesia.
Nature of ownership and legal form	Publically listed Indonesian legal entity
Scale of the company Number of cellular subscribers Number of permanent employees Number of BTS Revenues in 2015 Total assets as of December 31, 2015	 69.7 million 3,178 (not including subsidiaries) 50,687 Rp26,768.5 billion Rp55,388.5 billion
Identity and percentage of largest shareholders	Ooredoo Asia Pte Ltd. is the largest shareholder with 65% ownership.
Significant changes in size or ownership, or supply chain	No significant changes took place during the reporting period with regard to ownership or share capital structure. Certain assets/ facilities were strategically closed while new ones were upgraded, but the scale of the overall organization did not change materially during the year, nor did its supply chain.

II. Smartphone growth in Asia Pacific

Indonesia is one of the fastest growing market for Internet-enabled smartphones in the region.

No. of smartphone users (mil.)	2015	2016E	2017F	2018F	2019F
China	525	563	599	640	687
India	167	204	243	279	317
Indonesia	**55**	**65**	**74**	**83**	**92**
South Korea	33	34	35	36	37
Phillipines	26	29	33	36	39

Source: http://www.indonesia-investments.com/zh_cn/news/todays-headlines/internet-smartphone-penetration-in-indonesia-estimated-to-grow-strongly/item7010, taken 2017-02-06.

III. Coverage Map for the "Big Three" Major Carriers

Note: The thicker the green, the better.

Telkomsel (TLKM)

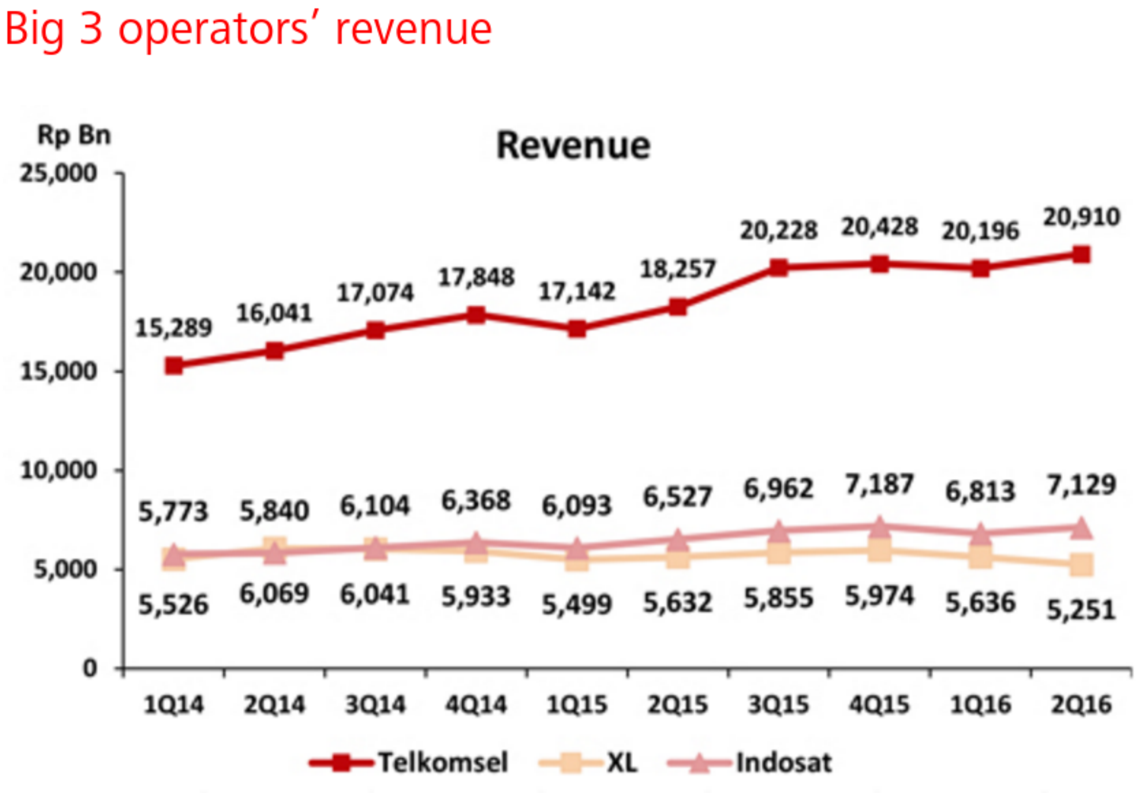
Indosat (ISAT)

Excelindo (EXCL)

Source: https://opensignal.com/networks/indonesia, taken 2017-02-05.

V. Big Three operators' revenue

TLKM outpaces both ISAT and EXCL. EXCL shows signs of faltering in recent quarters.



Source: DBS, taken 2017-02-06.

VI. Network Sharing plans

So far, there are 5 models proposed: CME Sharing, Multi Operator Radio Access Network (MORAN), Multi Operator Core Network (MOCN), Roaming, and Mobile Virtual Network Operator (MVNO).

VII. Financial Statement Projections

i. Projected Income Statement

In Billions of IDR except Per Share	**FY 2014**	**FY 2015**	**2016E**	**2017F**	**2018F**	**2019F**	**2020F**	**2021F**
Revenue	24,085	26,769	30,223	34,222	38,852	44,213	50,419	57,604
- Cost of Revenue	10,409	11,214	12,020	13,610	15,452	17,584	20,052	22,910
	43%	42%	40%	40%	40%	40%	40%	40%
Gross Profit	13,676	15,555	18,203	20,612	23,400	26,629	30,367	34,695
- Operating Expenses	11,932	12,886	14,815	16,775	19,045	21,673	24,715	28,237
	87%	83%	81%	81%	81%	81%	81%	81%
Operating Income or Losses	1,744	2,669	3,388	3,836	4,356	4,957	5,652	6,458
- Interest Expense	2,396	2,780	2,202	2,494	2,831	3,222	3,674	4,198
	137%	104%	65%	65%	65%	65%	65%	65%
- Foreign Exchange Losses (Gains)	395	1,599	34	38	44	50	57	65
	23%	60%	1%	1%	1%	1%	1%	1%
- Net Non-Operating Losses (Gains)	915	75	241	273	310	353	402	460
	52%	3%	7%	7%	7%	7%	7%	7%
Pretax Income	(1,962)	(1,786)	911	1,031	1,171	1,332	1,519	1,736
- Income Tax Expense (Benefit)	(84)	(622)	228	258	293	333	380	434
	4%	35%	25%	25%	25%	25%	25%	25%
Income Before XO Items	(1,878)	(1,163)	683	774	878	999	1,140	1,302
- Extraordinary Loss Net of Tax	-	-	-	-	-	-	-	-
- Minority/Non Controlling Interests (Credits)	130	147	150	150	150	150	150	150
Net Income/Net Profit (Losses)	(2,008)	(1,310)	533	624	728	849	990	1,152

ii. Projected Statement of Financial Position

In Billions of IDR except Per Share	FY 2014	FY 2015	2016E	2017F	2018F	2019F	2020F	2021F
Assets								
+ Cash & Near Cash Items	3,480	3,623	2,981	2,095	1,947	2,299	2,153	2,824
+ Short-Term Investments	-	-						
+ Accounts & Notes Receivable	2,092	2,730	1,856	1,920	1,987	2,042	2,117	2,126
+ Inventories	49	39	40	40	40	40	40	40
+ Other Current Assets	2,969	3,526	2,730	2,779	2,775	2,819	2,816	2,881
Total Current Assets	**8,591**	**9,919**	**7,607**	**6,834**	**6,749**	**7,199**	**7,126**	**7,871**
+ LT Investments & LT Receivables	-	38	-	-	-	-	-	-
+ Net Fixed Assets	40,776	41,822	41,848	40,350	38,326	35,778	32,704	29,106
+ Gross Fixed Assets	103,217	112,549	121,049	128,549	136,049	143,549	151,049	158,549
- Accumulated Depreciation	62,442	70,728	79,201	88,200	97,723	107,771	118,345	129,443
+ Other Long-Term Assets	3,903	3,610	3,269	3,531	4,313	5,658	8,111	11,260
Total Long-Term Assets	**44,679**	**45,470**	**45,117**	**43,880**	**42,639**	**41,436**	**40,815**	**40,366**
Total Assets	**53,270**	**55,389**	**52,724**	**50,714**	**49,389**	**48,635**	**47,941**	**48,237**
Liabilities & Shareholders' Equity								
+ Accounts Payable	691	764	517	506	502	484	504	538
+ Short-Term Borrowings	11,797	7,586	5,672	4,638	3,810	3,148	2,118	1,695
+ Other Short-Term Liabilities	8,661	11,703	12,000	12,000	12,000	12,000	12,000	12,000
Total Current Liabilities	**21,148**	**20,053**	**18,189**	**17,143**	**16,312**	**15,632**	**14,623**	**14,233**
+ Long-Term Borrowings	14,981	10,775	8,620	6,896	5,517	4,413	3,531	2,825
+ Other Long-Term Liabilities	2,842	11,297	12,000	12,000	12,000	12,000	12,000	12,000
Total Long-Term Liabilities	**17,823**	**22,072**	**20,620**	**18,896**	**17,517**	**16,413**	**15,531**	**14,825**
Total Liabilities	**38,971**	**42,125**	**38,809**	**36,039**	**33,829**	**32,045**	**30,153**	**29,058**
+ Total Preferred Equity	-	-	-	-	-	-	-	-
+ Minority Interest	681	781	899	1,036	1,192	1,373	1,581	1,820
+ Share Capital & APIC	2,090	2,090	2,090	2,090	2,090	2,090	2,090	2,090
+ Retained Earnings & Other Equity	11,528	10,393	10,926	11,549	12,278	13,127	14,117	15,269
Total Equity	**14,299**	**13,264**	**13,915**	**14,675**	**15,560**	**16,590**	**17,788**	**19,179**
Total Liabilities & Equity	**53,270**	**55,389**	**52,724**	**50,714**	**49,389**	**48,635**	**47,941**	**48,237**

iii. Statement of Cash Flow

In Billions of IDR except Per Share	FY 2014	FY 2015	2016E	2017F	2018F	2019F	2020F	2021F
Cash From Operating Activities								
+ Net Income	-2008	-1310	533	624	728	849	990	1152
+ Depreciation & Amortization	8226	8769	8473	8998	9523	10048	10573	11098
+ Other Non-Cash Adjustments	1154	826	807	-437	-416	-349	-1452	-1586
Cash From Operations	7372	8285	9814	9185	9836	10549	10111	10664
Cash From Investing Activities								
+ Disposal of Fixed Assets	41	261	731	257	267	312	322	378
+ Capital Expenditures	-6432	-7345	-8500	-7500	-7500	-7500	-7500	-7500
+ Increase in Investments	0	0	0	0	0	0	0	0
+ Decrease in Investments	1379	0	0	0	0	0	0	0
+ Other Investing Activities	-15	-82	-47	-52	-61	-71	-68	-60
Cash From Investing Activities	-5027	-7166	-7816	-7295	-7294	-7258	-7246	-7182
Cash from Financing Activities								
+ Dividends Paid	0	0	0	0	0	0	0	0
+ Change in Short-Term Borrowings	-650	600	-1000	-1000	-1000	-1000	-1000	-1000
+ Increase in Long-Term Borrowings	4166	14689	6623	7347	8227	9039	7909	7829
+ Decrease In Long-Term Borrowings	-4524	-16326	-8155	-8986	-9844	-10908	-9825	-9544
+ Increase in Capital Stocks	0	0						
+ Decrease in Capital Stocks	0	0						
+ Other Financing Activities	-90	61	-108	-137	-73	-70	-96	-97
Cash from Financing Activities	-1099	-976	-2640	-2776	-2690	-2939	-3011	-2811
Net Changes in Cash	1246	143	-642	-886	-148	352	-146	671

VIII. Other forecasts and calculations

i. Per Segment Revenue Forecast

(in bn, except when noted otherwise)	2013A	2014A	2015A	2016E	2017F	2018F	2019F	2020F	2021F
Cellular									
Revenue	19,375	19,480	21,896	25,350	29,349	33,979	39,340	45,546	52,732
Depreciation and Amortization	7,561	7,277	7,794	7,589	7,317	6,950	6,488	5,931	5,278
Capital Expenditures	-8,085	-5,896	-8,358	-6,935	-6,935	-6,935	-6,935	-6,935	-6,935
Number of Subscribers (EOP, thousands)	59,600	63,200	69,700	75,276	81,298	87,802	94,826	102,412	110,605
Revenue per Subscriber (IDR)	325,078	308,235	314,142	336,761	361,007	387,000	414,864	444,734	476,755
Multimedia, Internet, & Data Communication									
Revenue	3,266	3,509	3,753	3,753	3,753	3,753	3,753	3,753	3,753
Depreciation and Amortization	874	831	853	857	827	785	733	670	596
Capital Expenditures	-1,173	-857	-1,537	-1,094	-1,094	-1,094	-1,094	-1,094	-1,094
Fixed Telecommunication									
Revenue	1,215	1,096	1,119	1,119	1,119	1,119	1,119	1,119	1,119
Depreciation and Amortization	523	119	122	254	245	233	217	199	177
Capital Expenditures	-113	-85	-163	-110	-110	-110	-110	-110	-110
Total Revenue	23,855	24,085	26,769	30,223	34,222	38,852	44,213	50,419	57,604
EBIT % of Revenue	5.90%	7.20%	10.00%	12.51%	14.42%	14.00%	14.00%	14.00%	14.00%
EBIT	1,407	1,734	2,677	3,781	4,936	5,439	6,190	7,059	8,065
Total Depreciation and Amortization	8,958	8,226	8,769	8,701	8,389	7,969	7,439	6,800	6,052
Total Capex	-9,371	-6,838	-10,058	-8,500	-7,500	-7,500	-7,500	-7,500	-7,500

ii. Capex and Depreciation Attribution

(from BS)	2013A	2014A	2015A	Mean	2016E	2017F	2018F	2019F	2020F	2021F
Total Net Fixed Asset	**42,190**	**40,776**	**41,822**		**41,848**	**40,350**	**38,326**	**35,778**	**32,704**	**29,106**
Total Depreciation	**8,422**	**7,665**	**8,286**		**8,473**	**8,998**	**9,523**	**10,048**	**10,573**	**11,098**
Total Capex	**-8,648**	**-6,251**	**-9,332**		**8,500**	**7,500**	**7,500**	**7,500**	**7,500**	**7,500**
Cellular										
Depreciation and Amortization attributed	7,561	7,277	7,794		7,589	7,317	6,950	6,488	5,931	5,278
pct depre of net fixed asset	18%	18%	19%	18%	18%	18%	18%	18%	18%	18%
pct depre of total depre	90%	95%	94%	93%						
Capital Expenditures attributed	-8,085	-5,896	-8,358		-6,935	-6,935	-6,935	-6,935	-6,935	-6,935
pct capex of total asset	93%	94%	90%	92%						
Multimedia, Internet, & Data Communication										
Depreciation and Amortization attributed	874	831	853		857	827	785	733	670	596
pct depre of net fixed asset	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
pct depre of total depre	10%	11%	10%	11%						
Capital Expenditures attributed	-1,173	-857	-1,537		-1,094	-1,094	-1,094	-1,094	-1,094	-1,094
pct capex of total asset	14%	14%	16%	15%						
Fixed Telecommunication										
Depreciation and Amortization attributed	523	119	122		254	245	233	217	199	177
pct depre of net fixed asset	1%	0%	0%	1%	1%	1%	1%	1%	1%	1%
pct depre of total depre	6%	2%	1%	3%						
Capital Expenditures attributed	-113	-85	-163		-110	-110	-110	-110	-110	-110
pct capex of total asset	1%	1%	2%	1%						

iii. Cellular Revenue

	2013A	2014A	2015A	2016E	2017F	2018F	2019F	2020F	2021F
Cellular									
Revenue	**19,375**	**19,480**	**21,896**	**25,349.99**	**29,349.21**	**33,979.34**	**39,339.92**	**45,546.18**	**52,731.55**
Number of Subscribers (EOP, thosands)	59,600	63,200	69,700	75,276.00	81,298.08	87,801.93	94,826.08	102,412.17	110,605.14
Growth		6.0%	10.3%	8%	8%	8%	8%	8%	8%
Revenue per subscribers (in IDR)	325,077.82	308,235.21	314,142.35	336,760.60	361,007.37	386,999.90	414,863.89	444,734.09	476,754.94
				7%	7%	7%	7%	7%	7%
Assumptions:									
Growth rate of subscriber:	8.0%								
Growth rate of revenue/sub:	7.2%								

iv. FCFF Calculation

year	2017	2018	2019	2020	2021
period	1	2	3	4	5
EBIT	4,936	5,439	6,190	7,059	8,065
(-) Tax rate (25%)	(1,234)	(1,360)	(1,547)	(1,765)	(2,016)
(+) Non-cash	8,389	7,969	7,439	6,800	6,052
(-) FCInv	(7,500)	(7,500)	(7,500)	(7,500)	(7,500)
(-) deltaNWC	(629)	(629)	(629)	(629)	(629)
FCFF Terminal					76,025
FCFF	3,963	3,920	3,953	3,965	79,996
PV FCFF	3,537	3,123	2,811	2,517	45,335
Value of Firm	57,323.64				
MV Debt (bank loan BV)	20,055.00				
Equity value	37,268.64				
Shares out.	5.43				
Price/share	**6,863.47**				

**) FCFF calculations are combined with relative valuations. See calculation file for detail.*

DISCLAIMER

This research report is made for Prasetiya Mulya University as part of grading consideration for *Security Analysis* class. It is in no way intended to be used as financial advice, and does not represent the views of Prasetiya Mulya University.

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