

19 OCTOBER 2021

THAILAND / ICT

ADVANCED INFO SERVICE

ADVANC TB

BUY

UNCHANGED

TARGET PRICE	THB220.00
CLOSE	THB190.00
UP/DOWNSIDE	+15.8%
PRIOR TP	THB220.00
CHANGE IN TP	UNCHANGED
TP vs CONSENSUS	-1.5%

No towerco, no problem

Low possibility of a towerco to be established

While we believe that a towerco is a great choice for mobile network operators (MNOs) to unlock their asset value, due to various factors and limitations in the Thai industrial and geographical landscape, we think there is a low possibility that a towerco will emerge in Thailand. If a towerco can actually be established, there may be low value creation for the company's fair value, in our view.

Having the upper hand during dividend season in 1Q22

ADVANC continues to be our preferred dividend investment play in the mobile sector. We suggest investing in ADVANC before 1Q22, as 1Q is the dividend season for the company. We have found that ADVANC has had one of the highest numbers of positive returns on its share price in 1Q among MNOs. Since 2010, ADVANC, which has always paid a solid dividend yield, had eight years (out of ten years – excluding the Covid years in 2020 and 2021) where its share price provided positive returns. We believe this is because 1Q is the quarter when the company pays its final dividend.

No towerco, no problem

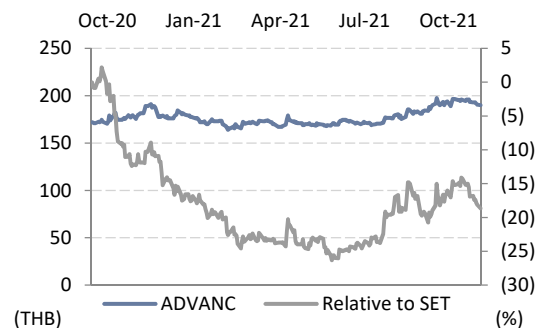
As mentioned in our previous note on ADVANC, "[Advanced Info Service \(ADVANC TB\) - Numerous opportunities await](#)", the possibility of a towerco is just one of five potential catalysts that we think ADVANC has in the future. If no towerco is established, we believe that the other catalysts will have a greater likelihood of occurring, including 1) the potential to pay a higher dividend; 2) likely new projects with Gulf Energy Development (GULF TB, BUY, TP THB56); 3) growth in the enterprise sector; and 4) growth in the digital services business, which should be a key driver for the company.

Maintain BUY with TP of THB220

Although we believe there is a low possibility that ADVANC will spin off its assets into a towerco, we still like ADVANC and choose it as our top pick in the mobile sector in Thailand. In our view, a towerco is not the sole catalyst for the company. There are still plenty of drivers for ADVANC, especially the decent dividend that it should be able to pay to shareholders, which we estimate at over 4% p.a. Maintain BUY with our DCF-based TP of THB220. A towerco could be an upside risk to our TP.

KEY STOCK DATA

YE Dec (THB m)	2020	2021E	2022E	2023E
Revenue	172,890	174,298	179,257	184,409
Net profit	27,352	26,312	28,240	30,592
EPS (THB)	9.20	8.85	9.50	10.29
vs Consensus (%)	-	(0.4)	0.5	(2.1)
EBITDA	89,398	90,277	92,273	95,136
Core net profit	27,105	26,312	28,240	30,592
Core EPS (THB)	9.12	8.85	9.50	10.29
Chg. In EPS est. (%)	-	-	-	-
EPS growth (%)	(15.1)	(2.9)	7.3	8.3
Core P/E (x)	20.8	21.5	20.0	18.5
Dividend yield (%)	3.6	3.7	3.6	4.3
EV/EBITDA (x)	7.2	7.0	6.6	6.2
Price/book (x)	7.5	7.0	6.4	5.9
Net debt/Equity (%)	102.7	77.1	50.5	30.3
ROE (%)	37.4	33.6	33.2	33.3



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(2.1)	11.4	9.5
Relative to country (%)	(3.2)	5.5	(19.5)
Mkt cap (USD m)			16,886
3m avg. daily turnover (USD m)			48.2
Free float (%)			36
Major shareholder		Intouch Holdings (40%)	
12m high/low (THB)			201.00/164.00
Issued shares (m)			2,973.55

Sources: Bloomberg consensus; FSSIA estimates



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Investment thesis

ADVANC is the biggest mobile operator in Thailand with more than 45% of the market share. The company aims to be the number one 5G service provider. It also has the healthiest financial position in the sector, as well as a fair and consistent dividend yield at around 3.9% p.a.

We think the company has various catalysts waiting in the future, including 1) the potential to pay a higher dividend; 2) potentially utilising its assets in an infrastructure fund; 3) likely new projects with GULF; 4) growth in the enterprise sector; and 5) growth in its digital services business.

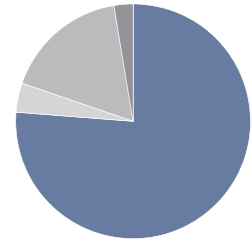
Company profile

ADVANC operates a telecommunications business, including mobile network services, fixed broadband services, and digital services.

investor.ais.co.th

Principal activities (revenue, 2020)

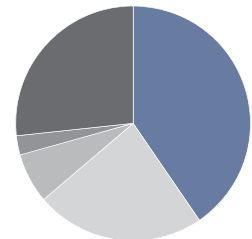
- Mobile - 76.2 %
- Fixed broadband - 4.0 %
- Sale of goods - 17.1 %
- Others - 2.6 %



Source: Advanced Info Service

Major shareholders

- Intouch Holdings - 40.5 %
- Singtel Strategic Investment PTE - 23.3 %
- Thai NVDR - 6.9 %
- Social Security Office - 2.6 %
- Others - 26.7 %



Source: Advanced Info Service

Catalysts

- Upcoming 5G technology should be a key driver for ADVANC, which aims to be the number one 5G operator;
- Consistent earnings which could lead to a consistent dividend yield at around 3.9% p.a.

Risks to our call

The key downside risks to our DCF-based TP are stronger-than-expected competition in the mobile market and the slower-than-expected adoption of 5G use cases.

Event calendar

Date	Event
Nov 2021	3Q21 results announcement

Key assumptions

Key assumption	2020	2021E	2022E	2023E
Total subscribers (m)	41.4	43.9	45.0	45.5
Blended ARPU (THB/sub/mth)	245	228	230	234
Fixed broadband				
FBB subscribers (m)	1.2	1.6	2.0	2.3
ARPU (THB/sub/mth)	489	456	447	440

Source: FSSIA estimates

Earnings sensitivity

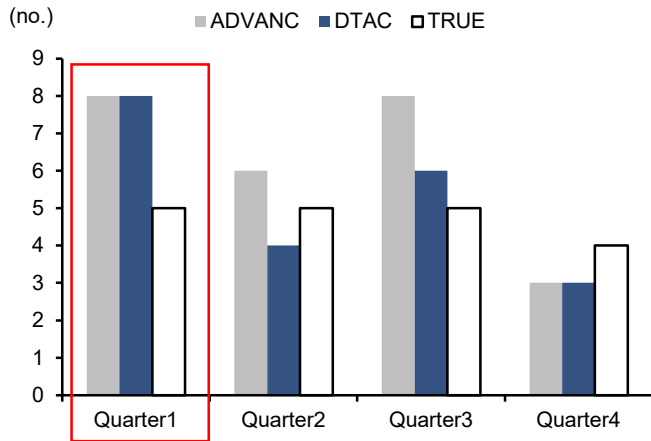
- For every 1% increase in mobile blended ARPU, we project 2021 earnings to rise by 2.2%, and vice versa, all else being equal.
- For every 1% increase in mobile subscribers, we project 2021 earnings to rise by 2.1%, and vice versa, all else being equal.

Source: FSSIA estimates

Dividend play

Since 2010 (12 years), ADVANC has had a sustainable net profit and its share price has provided positive returns eight times in 1Q. Moreover, if we exclude the impact of Covid in 1Q20 and 1Q21, which pressured the SET Index and most companies, ADVANC would have offered positive returns 8 times out of 10 (80%) in 1Q during 2010-19. Therefore, we believe that there is a high chance that investing in ADVANC during 1Q can provide positive returns.

Exhibit 1: No. of positive returns, quarterly



Sources: Bloomberg; FSSIA's compilation

Exhibit 2: No. of positive returns, quarterly

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
ADVANC	8/12	6/12	8/11	3/11
DTAC	8/12	4/12	6/11	3/11
TRUE	5/12	5/12	5/11	4/11

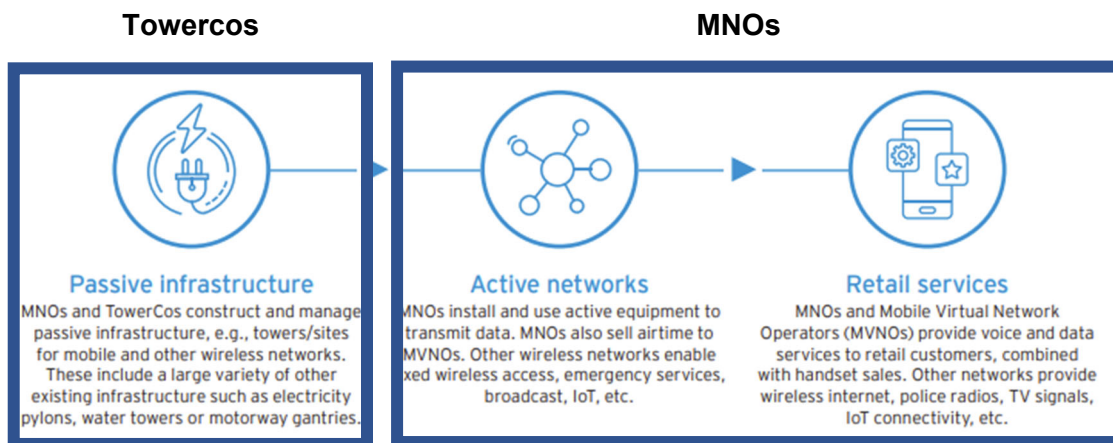
Sources: Bloomberg; FSSIA's compilation

We believe the reason why ADVANC has had mostly positive returns in 1Q is because it announces its payment of the final dividend and investors receive dividends during Feb. This motivates many investors to put more weight on companies with good dividend payouts. In addition, 3Q has been the second highest quarter for ADVANC to offer positive returns. This is the quarter when the company typically announces the payment of an interim dividend.

Can a towerco really be established in Thailand?

Wireless infrastructure (towers) provides an important element for the operation of wireless network services, including mobile networks and fixed wireless access broadband. Towercos are the privately owned towers and related assets of a company. They are infrastructure landlords, providing the site and site infrastructure to tenants. In a typical towerco deal, a third party buys an existing tower from an MNO and leases it back to the MNO, signing off on a long-term contract for the operation and maintenance of the site and its infrastructure. Tenants usually include a mix of the original operator, other established players, and newer, small entrants who don't have the funds to roll out a new network of their own. Towercos are relatively new to the mobile and wireless industries, but are playing an important role in mobile rollouts. A huge number of mobile sites is required to support the current 4G services and future 5G rollouts.

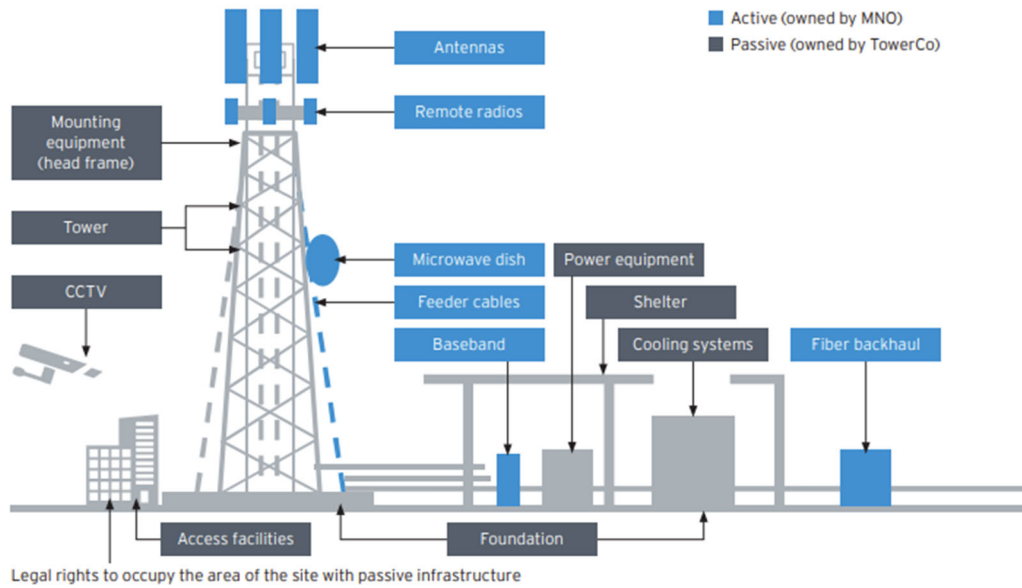
Exhibit 3: Value chain for wireless network services



Source: EY-Parthenon, European wireless infrastructure report

According to the “European wireless infrastructure report” by EY-Parthenon, towercos develop, acquire and operate mobile network towers. They invest in mobile network towers, small cell networks and associated utility and real estate rights for the purpose of providing wholesale access to MNOs and other network operators on a shared basis. This provides an alternative to MNOs managing their own passive infrastructure. For MNOs, outsourcing passive wireless infrastructure to towercos helps to free up capital.

Exhibit 4: Illustration of active and passive equipment on a typical tower site



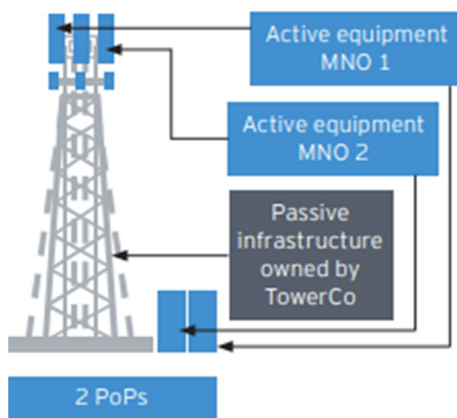
Sources: EY-Parthenon, European wireless infrastructure report

There are two principal types of towers – ground-based towers and rooftop towers. Ground-based towers are typically freestanding structures and are more prevalent in less densely populated areas. Rooftop towers are usually set up on pre-existing buildings. Ground based towers normally have a higher instalment cost than rooftop towers. Tower sharing under the towerco model mainly consists of ground-based towers.

Where MNOs can share passive infrastructure, there is less need to build multiple towers at the same geographical location. Towercos operate the passive infrastructure and can accommodate multiple MNOs, which then focus on operating the active equipment at the site.

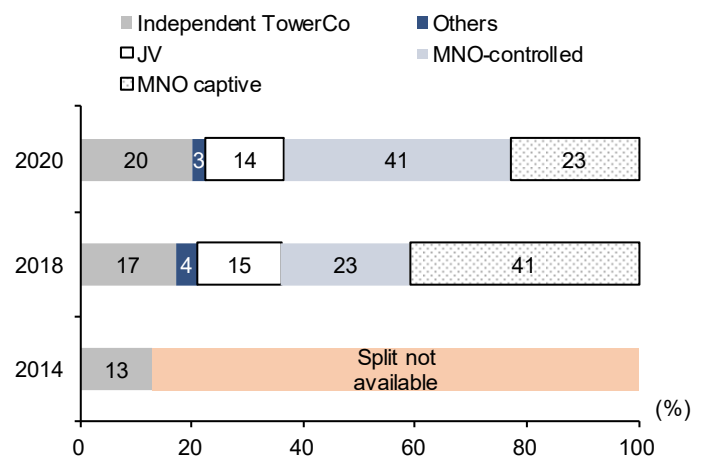
Towercos can be divided into three categories: 1) a joint venture towerco by forming a JV company with an MNO and a third-party company; 2) an MNO-controlled towerco – a towerco whose equity is owned by the MNO; and 3) an independent towerco.

Exhibit 5: Infrastructure sharing concept



Sources: EY-Parthenon, European wireless infrastructure report

Exhibit 6: Share of towers helped by towercos in Europe, 2020 (%)



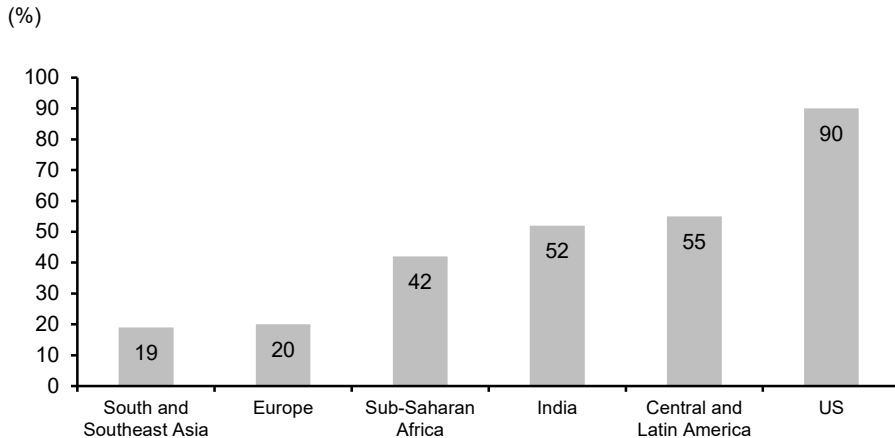
Sources: TowerXchange, European Wireless Infrastructure Association (EWIA) members, broker reports, EY-Parthenon analysis, July 2020

Towercos are in a growth trend

Based on data from TowerXchange, the number of towers owned by MNOs is in a decreasing trend in Europe. The contribution of towercos has increased from 59% in 2018 to 77% in 2020.

On average, towercos have a co-location ratio of 2.8 on ground-based towers and 1.5 on rooftop towers, with an overall co-location ratio of 2.4. In contrast, MNOs have an average co-location ratio of 1.5 on ground-based towers and 1.1 on rooftop towers, with an overall co-location ratio of 1.3.

Exhibit 7: Share of towers held by independent towercos



Sources: EWIA member companies, analyst reports, TowerXchange, Ernst & Young (EY) professional interviews, research and analysis

Benefit of towercos for MNOs

Towercos are a win-win model. The MNOs free up cash from their assets, enabling them to focus on their core business (service to customers) and expand their network coverage in a more cost-effective way, while at the same time hosting their active assets on the passive infrastructure of the towerco.

1. **Investment in capacity and coverage.** Sales of towers to independent towercos frees up capital for investment in existing networks and new services. The economics of network rollouts mean that urban areas tend to benefit from the best coverage, while rural areas can be left behind. This is particularly relevant to the rollout of new technologies, which starts in the most densely populated areas before extending to other parts of the country.

Independent towercos can reduce the cost of delivering infrastructure, which enables faster and cheaper rollouts to areas and households in rural areas. Outsourcing can also free up capital for MNOs to invest in improving coverage.

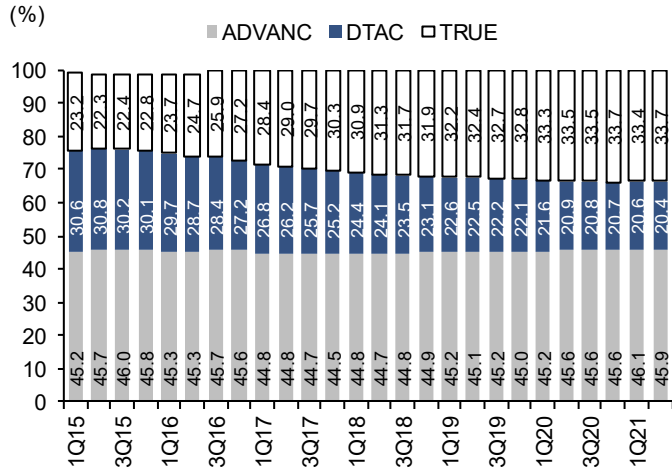
2. **Capital released.** Sales of towers to independent towercos releases capital for investment in existing networks and new services. Upgrading towers to provide more capacity also involves high fixed costs. By lowering the costs of infrastructure, outsourcing to independent towercos can make upgrades more economic, improving the service quality for consumers.

Reducing the cost of networks but also the network quality advantage

We believe that the competition in the mobile sector has existed for a decade. It can be divided into two categories: network competition and service competition. A prime example of network competition was when Total Access Communication (DTAC TB, HOLD, TP THB42) lost a significant number of mobile subscribers in 2017 due to the expiration of its spectrum license in 2018. The company had network quality and perception problems. Customers experienced a weaker network quality vs peers', leading to a huge subscriber loss. Hence, we believe that competition over network quality is a key competitive aspect for the industry.

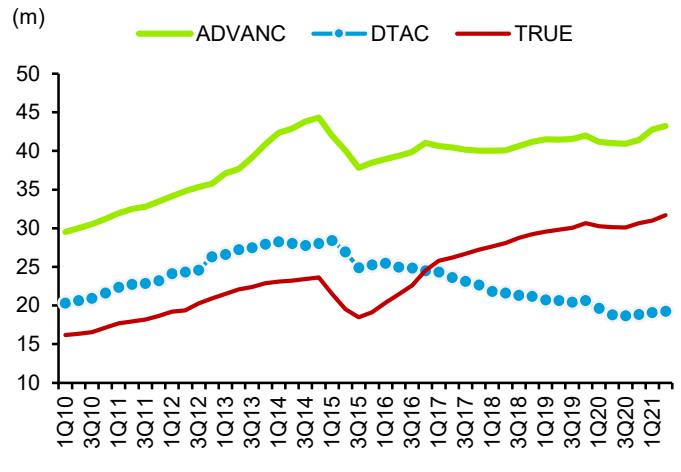
In our view, the establishment of a towerco would mean that MNOs would spin off their tower assets to a third party and share the infrastructure with their competitors, helping their competitors to have better network service quality. Towercos may be a win-win solution for MNOs in terms of operating cost reduction, but having a similar network quality as the rest of the industry may not benefit the operator that currently has a better service than its peers.

Exhibit 8: Mobile subscription market share



Sources: ADVANC; DTAC; TRUE; FSSIA's compilation

Exhibit 9: Mobile subscribers



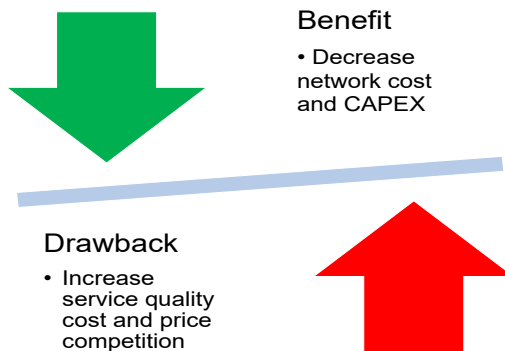
Sources: ADVANC; DTAC; TRUE; FSSIA's compilation

Decreasing network service competition but increasing commercial service competition

Although a towerco could help MNOs reduce the cost of network operations and depreciation, we believe it would lead to more intense commercial service competition. Meaning that, if all MNOs in Thailand were to have a similar network quality and no strategic network area, there would be no competitive advantage on the MNO network service side. Therefore, the only way for MNOs to acquire more subscriber market share, in our view, would be for them to improve and differentiate their commercial service quality side instead.

The methodology of improving mobile service quality can include 1) reducing mobile package price plans; and 2) investing in more content (for example, True Corporation (TRUE TB, HOLD, TP THB4.2) has TrueID while ADVANC has AIS Play and Disney+).

Exhibit 10: Decreasing network service competition but increasing commercial service competition



Source: FSSIA estimates

Limitation of having towercos

At this moment, the market is talking about how a towerco could benefit MNOs. However, if we look at another side of the story, we see that it might not be feasible to have a big towerco operator in Thailand for four key reasons:

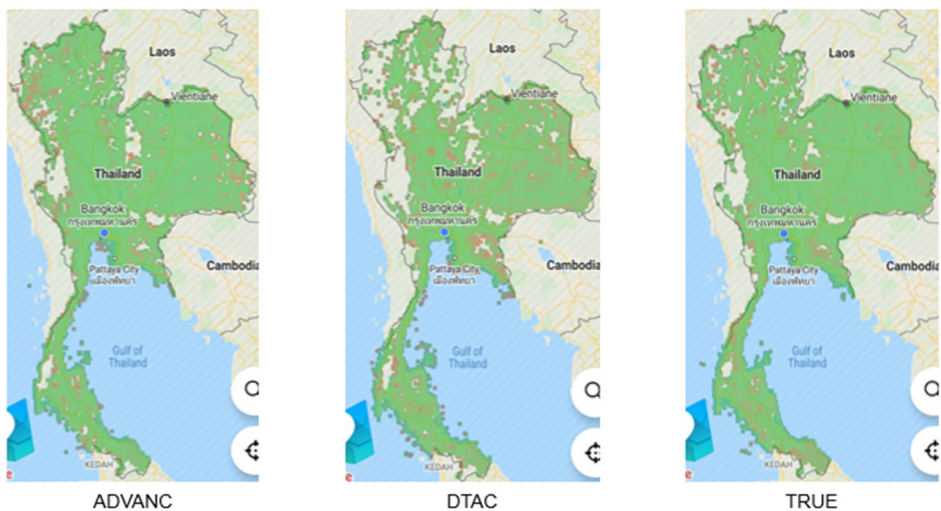
1. Thailand is one of the top countries in terms of tower numbers;
2. Duplication of specific areas;
3. Not the right timing;
4. Who would the towerco's customers be?

1. Thailand is one of the top countries in terms of tower numbers

According to data from Opensignal, mobile network coverage by three operators in Thailand, especially in 3G and 4G, covers almost every area in Thailand already. This means that cell sites are already installed in most areas. This reflects a lower requirement for a huge increase in ground-based towers in the future.

TRUE seems to be the company that has the largest mobile coverage in Thailand. It also owns and leases towers from the Digital Telecommunications Infrastructure Fund (DIF TB, NR). We believe TRUE has the lowest potential to join the towerco bandwagon. In comparison, DTAC has the lowest mobile network coverage in the market, while ADVANC still owns almost 26,000 towers under its balance sheet. If a towerco really is established in Thailand, we think these two companies would have the highest possibility of joining the scheme.

Exhibit 11: Mobile network coverage by operator



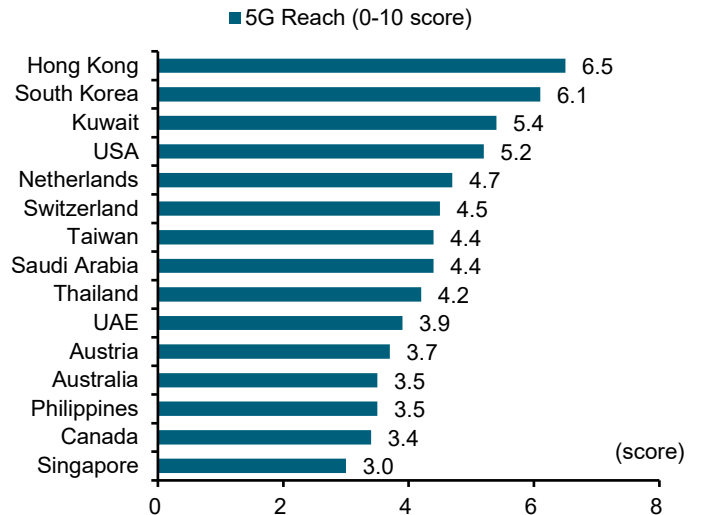
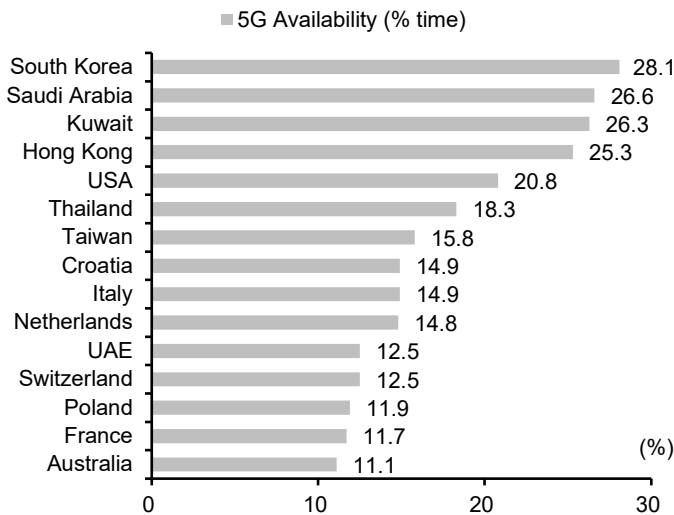
Source: Opensignal

Thailand ranked sixth in terms of 5G availability

According to Opensignal, Thailand ranks sixth in terms of 5G availability. Opensignal has compared the extent of 5G coverage according to two measures: the share of time in which 5G users spend connected to a 5G service (5G availability) and the share of locations in which 5G users have experienced a 5G connection (5G reach). Its findings indicate that the connection quality of Thailand's mobile network is already one of the best in the world without a towerco scheme.

Exhibit 12: Global 5G availability

Exhibit 13: Global 5G reach

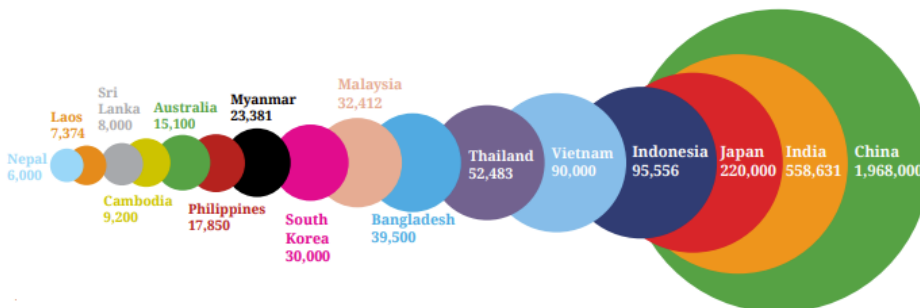


Source: Opensignal

Source: Opensignal

According to TowerXchange, in 1Q20, Thailand ranked sixth in terms of the number of towers, which was 52k towers in total. This number may increase to around 55k towers in 2021, as ADVANC has indicated that it has deployed 1,000 more towers in 2021. If we compare the number of towers with the country’s population, Thailand ranks fifth with a ratio of 1 tower per 1,330 people. This indicates that Thailand already has a reasonable number of towers to sustain its network quality.

Exhibit 14: Asian tower market size comparison (1Q20)



Source: TowerXchange

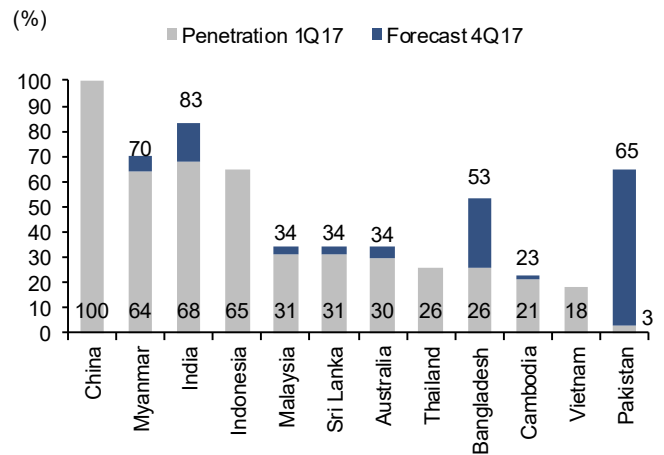
Moreover, if we look at the historical data (2016) from TowerXchange, the countries with high towerco penetration rates were countries that still had a low number of towers and weak tower to population ratios (except China), which required a significant increase in the number of towers. Hence, we think towercos can be a great strategy for those countries, but not Thailand.

Exhibit 15: Tower to population ratio in each country

	No. of towers (no.)	Population (m)	Tower to population ratio (population/tower)
Japan	220,000	125.8	572
China	1,968,000	1402	712
Malaysia	32,412	32.37	999
Vietnam	90,000	97.34	1,082
Thailand	52,483	69.8	1,330
Australia	15,100	25.69	1,701
South Korea	30,000	51.8	1,727
Myanmar	23,381	54.41	2,327
India	558,631	1380	2,470
Indonesia	95,556	273.5	2,862
Bangladesh	39,500	164.7	4,170
Philippines	17,850	109.6	6,140

Sources: TowerXchange; World Bank

Exhibit 16: Towerco penetration in Asia in 1Q17 and forecast for 4Q17



Source: TowerXchange

2. Duplication of specific areas

Tower duplication

As previously mentioned, competition over network service quality is another key competitive aspect of the mobile sector which is not less important than the competition in commercial service quality. This has long led MNOs in Thailand to remain independent in terms of tower rollouts. We believe that each MNO has the intention to build their own towers for their own benefit, and are not considering tower sharing or a towerco at the moment. We believe that there is a high possibility that most of the ground-based towers owned by MNOs will have similar locations, which would be of smaller benefit to a future towerco operator in Thailand, making it difficult to find other tenants besides the MNOs which would have previously owned those towers.

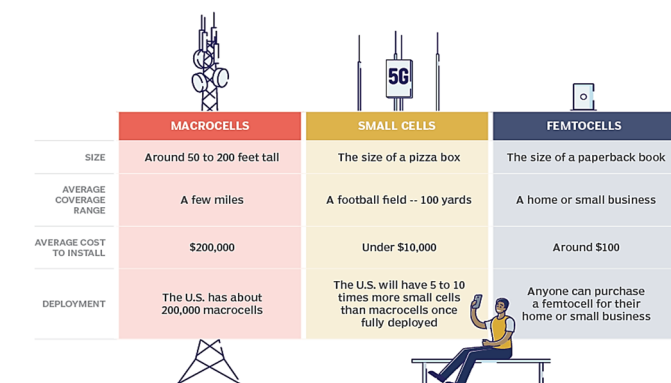
3. Not the right timing

5G tends to go for small cell installations

A small cell installation consists of small radio equipment and antennas that can be placed on structures, such as streetlights, the sides of buildings, or poles. They are essential for transmitting data to and from a wireless device. Small cells look completely different than the wireless infrastructure we have seen in the past – the macro cells that include ground-based and rooftop towers.

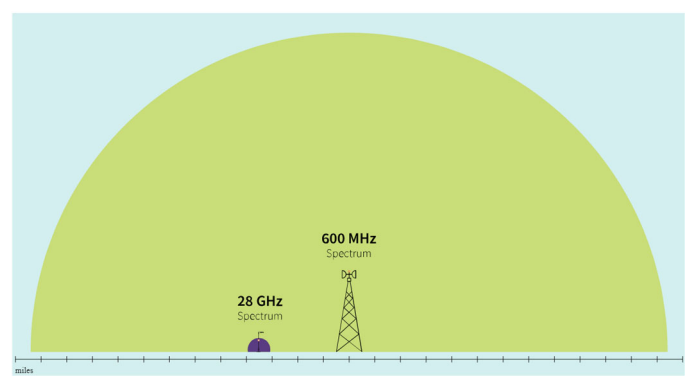
Small cell deployment has shifted toward large-scale densification, which increases the capacity in operator networks across an array of locations and addresses rising consumer and enterprise mobile broadband needs. 5G will make the challenge of densification even more daunting due to the number of small cell deployments required to meet all 5G use cases effectively.

Exhibit 17: Macrocells vs small cells vs femtocells



Source: TechTarget

Exhibit 18: Low vs high-band spectrum network coverage



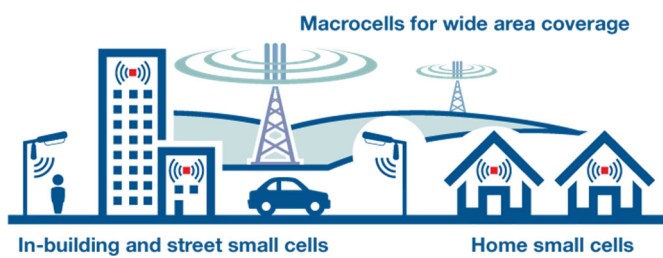
Source: CITA

5G high-band spectrum delivers super-fast speeds over short distances

The high-band spectrum is limited because signals can't travel very far – in some cases the signal will travel only one kilometre – and they are also susceptible to interference from things like trees and buildings and even glass. But the benefit of the high-band spectrum is that if the signal is unencumbered, users can get connection speeds between 1 Gbps to 3 Gbps or even higher.

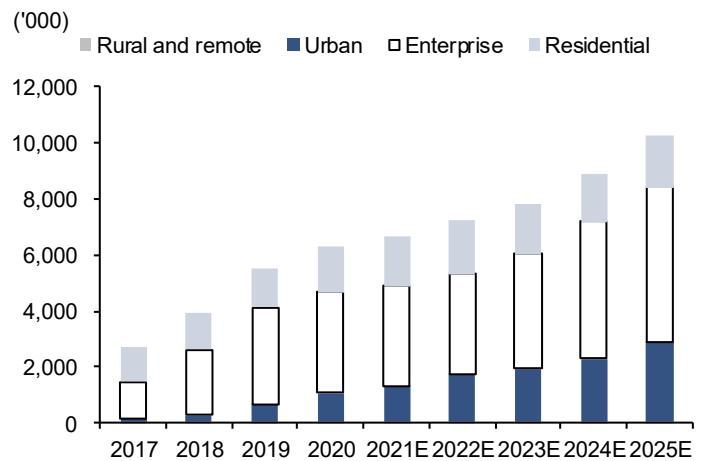
Besides its low-band 5G offering, AT&T, an MNO in the US, also has a high-band 5G service, which it's calling 5G+. This is deployed in the company's 36 GHz band millimetre wave spectrum. It offers extra speed and capacity and is intended for high-traffic areas like campuses and arenas. AT&T's 5G+ is available in parts of 23 cities, and the company is only making it available to enterprises.

Exhibit 19: Mobile network landscape



Source: EMF Explained

Exhibit 20: Small cell deployment and upgrades by environment in 2017-25



Sources: Small Cells Forum

This is the reason why small cells are essential for the high-band spectrum

As a result, with the best network quality in the high-band spectrum but a poor coverage range, the low cost of a cell site network rollout should act a key growth driver in terms of network expansion. According to the data from Small Cell Forum, small cell deployments tend to be located in the enterprise sector over urban and rural areas where macro cells like ground-based or rooftop towers are more suitable.

Moreover, since it seems likely that 5G growth will come via the enterprise sector for things like self-driving cars, remote surgery, and industrial automation, we know that all of these will require super-fast speeds and the best network quality. The high-band spectrum and small cells would be a great answer for those segments, in our view.

In conclusion, we believe that the key growth area for the 5G network expansion will likely be small cells not macro cells. Macro cells remain essential, but with the number of ground-based towers in Thailand already over 50k and with good network coverage, we believe the growth of ground-based towers should have a slower pace compared to 4G. In addition, with the currently low occupancy in each ground-based tower, there is still an antenna slot available on each tower for a 5G antenna. We believe MNOs can just install additional 5G antennas on their existing towers to provide 5G services. If there is a greater requirement for additional towers, we think it would occur in 2023 onward when 5G adoptions are likely to increase significantly.

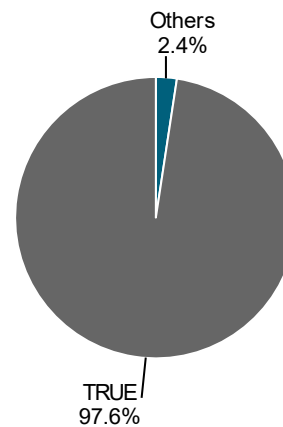
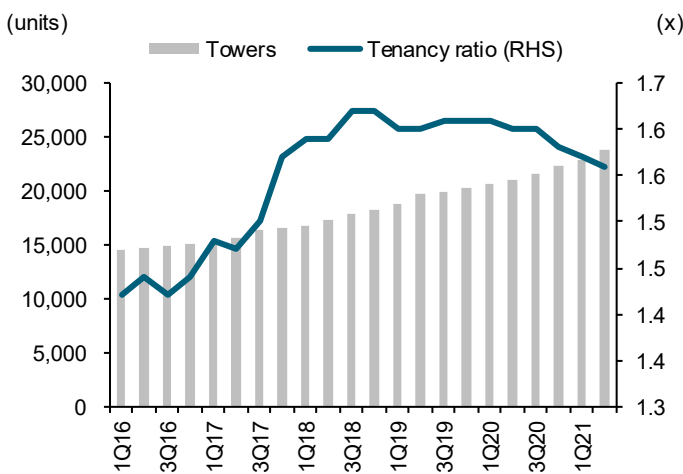
4. Who would the towerco's customers be?

We believe that an independent towerco which would be operated by a third party would need to carefully consider who their additional tenants would be besides the key operators who would sell and lease back their towers. The successful model of an independent towerco is to have more tenants to have economies of scale and utilise assets more efficiently. Edotco, an integrated telecommunications infrastructure services company which owns over 24k telecom towers, mainly in Bangladesh, Malaysia, and Cambodia, has an average tenancy ratio of 1.55x. This company had a net profit of MYR166m on average during 2018-20.

Compare Edotco with DIF, the first telecom infrastructure fund in Thailand which was founded in 2013 and owns over 16k of TRUE's towers. The company has been able to find customers and generate revenue from other tenants at only 2.4% of its total revenue, meaning that DIF still relies on the revenue from TRUE, the key tenant, which accounted for over 97.6% of its total revenue in 2020. This can demonstrate that the telecom market in Thailand may have a low demand for telecom towers.

Exhibit 21: Edotco's towers and tenancy ratio

Exhibit 22: DIF's revenue by customers



Source: Axiata

Source: DIF

As a result, in order to establish an independent towerco in Thailand, the towerco operator would have to focus on how they would gain more customers besides the key companies that would like to sell their towers to the towerco, which might be hard in the Thai market. If established via an infrastructure fund model, the price of the towers sold may not be high like what TRUE had gotten from DIF, as DIF's performance may represent how difficult it is to find additional customers in the Thai telecom market.

A DTAC and TRUE partnership would mean a smaller chance of a towerco

If the rumour regarding DTAC and TRUE partnering or merging is true, then we believe that there would be a lower probability of a towerco in Thailand, given that both companies operate over 30k towers. The cooperation would result in spectrum and tower sharing. Because Thailand would only have two MNOs left, the chance of tower sharing would be slim. The chance of a towerco to emerge in Thailand would therefore be diminished because there would only be two MNOs left in Thailand. In this case, DTAC and TRUE might not be willing to lease additional towers, as their network coverage would be strong. In addition, if they really wanted to spin off their towers, we believe they would go to DIF, the fund that was established by TRUE and to which TRUE spun off its towers and fibre optic cables. This would be more beneficial for the company, as TRUE is a major shareholder of the fund at 23.4%.

Financial Statements

Advanced Info Service

Profit and Loss (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Revenue	180,894	172,890	174,298	179,257	184,409
Cost of goods sold	(74,444)	(59,112)	(57,760)	(59,451)	(60,580)
Gross profit	106,449	113,778	116,538	119,806	123,829
Other operating income	-	-	-	-	-
Operating costs	(27,740)	(24,380)	(26,261)	(27,533)	(28,693)
Operating EBITDA	78,709	89,398	90,277	92,273	95,136
Depreciation	(37,456)	(51,923)	(53,171)	(53,298)	(53,768)
Goodwill amortisation	-	-	-	-	-
Operating EBIT	41,254	37,475	37,106	38,975	41,367
Net financing costs	(4,777)	(5,917)	(6,377)	(5,815)	(5,233)
Associates	(86)	(70)	1	20	40
Recurring non-operating income	1,672	638	1,308	1,373	1,442
Non-recurring items	(747)	247	0	0	0
Profit before tax	37,402	32,444	32,037	34,533	37,576
Tax	(6,209)	(5,089)	(5,696)	(6,263)	(6,951)
Profit after tax	31,193	27,355	26,341	28,271	30,625
Minority interests	(3)	(3)	(28)	(30)	(33)
Preferred dividends	-	-	-	-	-
Other items	-	-	-	-	-
Reported net profit	31,190	27,352	26,312	28,240	30,592
Non-recurring items & goodwill (net)	747	(247)	0	0	0
Recurring net profit	31,937	27,105	26,312	28,240	30,592
Per share (THB)					
Recurring EPS *	10.74	9.12	8.85	9.50	10.29
Reported EPS	10.49	9.20	8.85	9.50	10.29
DPS	7.08	6.80	7.00	6.88	8.19
Diluted shares (used to calculate per share data)	2,973	2,973	2,973	2,973	2,973
Growth					
Revenue (%)	6.5	(4.4)	0.8	2.8	2.9
Operating EBITDA (%)	6.7	13.6	1.0	2.2	3.1
Operating EBIT (%)	3.4	(9.2)	(1.0)	5.0	6.1
Recurring EPS (%)	7.7	(15.1)	(2.9)	7.3	8.3
Reported EPS (%)	5.1	(12.3)	(3.8)	7.3	8.3
Operating performance					
Gross margin inc. depreciation (%)	38.1	35.8	36.4	37.1	38.0
Gross margin of key business (%)	-	-	-	-	-
Operating EBITDA margin (%)	43.5	51.7	51.8	51.5	51.6
Operating EBIT margin (%)	22.8	21.7	21.3	21.7	22.4
Net margin (%)	17.7	15.7	15.1	15.8	16.6
Effective tax rate (%)	-	-	-	-	-
Dividend payout on recurring profit (%)	65.9	74.6	79.1	72.4	79.6
Interest cover (X)	9.0	6.4	6.0	6.9	8.2
Inventory days	21.2	22.2	15.1	14.9	15.0
Debtor days	37.9	38.1	37.4	37.0	37.0
Creditor days	193.8	253.0	257.2	255.1	258.0
Operating ROIC (%)	48.9	37.7	30.2	34.6	40.3
ROIC (%)	20.9	17.2	14.7	15.8	18.4
ROE (%)	50.4	37.4	33.6	33.2	33.3
ROA (%)	12.7	10.3	9.0	9.2	10.1

* Pre-exceptional, pre-goodwill and fully diluted

Revenue by Division (THB m)	2019	2020	2021E	2022E	2023E
Mobile	139,898	131,804	133,282	135,515	138,883
Fixed broadband	5,722	6,959	8,786	10,368	11,771
Sale of goods	30,765	29,574	26,538	27,296	27,415
Others	4,509	4,553	5,692	6,079	6,341

Sources: Advanced Info Service; FSSIA estimates

Financial Statements

Advanced Info Service

Cash Flow (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Recurring net profit	31,937	27,105	26,312	28,240	30,592
Depreciation	37,456	51,923	53,171	53,298	53,768
Associates & minorities	-	-	-	-	-
Other non-cash items	7,973	8,643	7,405	5,388	4,786
Change in working capital	(738)	(2,041)	(277)	697	212
Cash flow from operations	76,627	85,630	86,611	87,624	89,359
Capex - maintenance	(13,817)	(16,834)	(18,300)	(18,600)	(18,600)
Capex - new investment	(13,232)	(38,058)	(22,738)	(23,439)	(23,439)
Net acquisitions & disposals	188	326	435	457	480
Other investments (net)	76	(129)	(383)	(121)	(134)
Cash flow from investing	(26,784)	(54,694)	(40,986)	(41,703)	(41,692)
Dividends paid	(21,050)	(20,219)	(20,808)	(20,457)	(24,357)
Equity finance	0	0	0	0	0
Debt finance	(15,110)	4,071	55	(10,000)	(10,000)
Other financing cash flows	(3,128)	(15,977)	(9,740)	(7,815)	(7,233)
Cash flow from financing	(39,288)	(32,124)	(30,494)	(38,272)	(41,590)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	(216)	(95)	0	0	0
Movement in cash	10,338	(1,284)	15,132	7,648	6,077
Free cash flow to firm (FCFF)	54,619.51	36,852.20	52,001.96	51,735.38	52,899.55
Free cash flow to equity (FCFE)	31,388.54	18,934.97	35,940.05	28,105.58	30,433.54

Per share (THB)	2019	2020	2021E	2022E	2023E
FCFF per share	18.37	12.39	17.49	17.40	17.79
FCFE per share	10.56	6.37	12.09	9.45	10.23
Recurring cash flow per share	26.02	29.49	29.22	29.24	29.98

Balance Sheet (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Tangible fixed assets (gross)	241,913	337,010	364,890	394,390	423,890
Less: Accumulated depreciation	(116,403)	(155,769)	(194,433)	(233,206)	(272,452)
Tangible fixed assets (net)	125,510	181,241	170,457	161,184	151,438
Intangible fixed assets (net)	111,424	120,224	141,639	128,613	115,591
Long-term financial assets	67	110	110	110	110
Invest. in associates & subsidiaries	660	831	1,214	1,335	1,469
Cash & equivalents	21,626	20,342	35,474	43,122	49,199
A/C receivable	18,298	17,781	17,926	18,436	18,966
Inventories	4,828	2,372	2,391	2,459	2,530
Other current assets	2,390	1,660	1,674	1,722	1,771
Current assets	47,142	42,155	57,465	65,739	72,466
Other assets	4,865	5,610	6,035	6,531	7,074
Total assets	289,669	350,171	376,919	363,512	348,148
Common equity	69,266	75,564	81,068	88,851	95,087
Minorities etc.	128	125	154	184	217
Total shareholders' equity	69,394	75,689	81,222	89,035	95,304
Long term debt	69,172	79,301	79,345	71,345	63,345
Other long-term liabilities	45,848	101,367	122,981	110,308	97,551
Long-term liabilities	115,020	180,668	202,326	181,653	160,897
A/C payable	41,377	40,571	40,828	42,268	43,380
Short term debt	24,872	18,748	18,759	16,759	14,759
Other current liabilities	39,007	34,494	33,785	33,798	33,808
Current liabilities	105,255	93,813	93,372	92,825	91,947
Total liabilities and shareholders' equity	289,669	350,171	376,919	363,512	348,148
Net working capital	(54,867)	(53,251)	(52,621)	(53,448)	(53,921)
Invested capital	187,660	254,765	266,833	244,325	221,760

* Includes convertibles and preferred stock which is being treated as debt

Per share (THB)	2019	2020	2021E	2022E	2023E
Book value per share	23.30	25.42	27.27	29.88	31.98
Tangible book value per share	(14.18)	(15.02)	(20.37)	(13.37)	(6.90)

Financial strength	2019	2020	2021E	2022E	2023E
Net debt/equity (%)	104.4	102.7	77.1	50.5	30.3
Net debt/total assets (%)	25.0	22.2	16.6	12.4	8.3
Current ratio (x)	0.4	0.4	0.6	0.7	0.8
CF interest cover (x)	10.3	10.6	10.2	9.9	11.3

Valuation	2019	2020	2021E	2022E	2023E
Recurring P/E (x) *	17.7	20.8	21.5	20.0	18.5
Recurring P/E @ target price (x) *	20.5	24.1	24.9	23.2	21.4
Reported P/E (x)	18.1	20.7	21.5	20.0	18.5
Dividend yield (%)	3.7	3.6	3.7	3.6	4.3
Price/book (x)	8.2	7.5	7.0	6.4	5.9
Price/tangible book (x)	(13.4)	(12.6)	(9.3)	(14.2)	(27.6)
EV/EBITDA (x) **	8.1	7.2	7.0	6.6	6.2
EV/EBITDA @ target price (x) **	9.2	8.2	7.9	7.6	7.2
EV/invested capital (x)	3.4	2.5	2.4	2.5	2.7

* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income

Sources: Advanced Info Service; FSSIA estimates

Corporate Governance report of Thai listed companies 2020

EXCELLENT LEVEL										
AAV	ADVANC	AF	AIRA	AKP	AKR	ALT	AMA	AMATA	AMATAV	ANAN
AOT	AP	ARIP	ARROW	ASP	BAFS	BANPU	BAY	BCP	BCPG	BDMS
BEC	BEM	BGRIM	BIZ	BKI	BLA	BOL	BPP	BRR	BTS	BWG
CENTEL	CFRESH	CHEWA	CHO	CIMBT	CK	CKP	CM	CNT	COL	COMAN
COTTO	CPALL	CPF	CPI	CPN	CSS	DELTA	DEMCO	DRT	DTAC	DTC
DV8	EA	EASTW	ECF	ECL	EGCO	EPG	ETE	FNS	FPI	FPT
FSMART	GBX	GC	GCAP	GEL	GFPT	GGC	GPSC	GRAMMY	GUNKUL	HANA
HARN	HMPRO	ICC	ICI	III	ILINK	INTUCH	IRPC	IVL	JKN	JSP
JWD	K	KBANK	KCE	KKP	KSL	KTB	KTC	LANNA	LH	LHFG
LIT	LPN	MAKRO	MALEE	MBK	MBKET	MC	MCOT	METCO	MFEC	MINT
MONO	MOONG	MSC	MTC	NCH	NCL	NEP	NKI	NOBLE	NSI	NVD
NYT	OISHI	ORI	OTO	PAP	PCSGH	PDJ	PG	PHOL	PLANB	PLANET
PLAT	PORT	PPS	PR9	PREB	PRG	PRM	PSH	PSL	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QTC	RATCH	RS	S	S & J	SAAM
SABINA	SAMART	SAMTEL	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SDC
SEAFCO	SEOIL	SE-ED	SELIC	SENA	SIRI	SIS	SITHAI	SMK	SMPC	SNC
SONIC	SORKON	SPALI	SPI	SPRC	SPVI	SSSC	SST	STA	SUSCO	SUTHA
SVI	SYMC	SYNTEC	TACC	TASCO	TCAP	TFMAMA	THANA	THANI	THCOM	THG
THIP	THRE	THREL	TIP	TIPCO	TISCO	TK	TKT	TTB	TMILL	TNDT
TNL	TOA	TOP	TPBI	TQM	TRC	TRC	TSC	TSR	TSTE	TSTH
TTCL	TTW	TU	TVD	TVI	TVO	TWPC	U	UAC	UBIS	UV
VGI	VIH	WACOAL	WAVE	WHA	WHAUP	WICE	WINNER	TRUE		

VERY GOOD LEVEL										
2S	ABM	ACE	ACG	ADB	AEC	AEONTS	AGE	AH	AHC	AIT
ALLA	AMANAHA	AMARIN	APCO	APCS	APURE	AQUA	ASAP	ASEFA	ASIA	ASIAN
ASIMAR	ASK	ASN	ATP30	AUCT	AWC	AYUD	B	BA	BAM	BBL
BFIT	BGC	BJC	BJCHI	BROOK	BTW	CBG	CEN	CGH	CHARAN	CHAYO
CHG	CHOTI	CHOW	CI	CIG	CMC	COLOR	COM7	CPL	CRC	CRD
CSC	CSP	CWT	DCC	DCON	DDD	DOD	DOHOME	EASON	EE	ERW
ESTAR	FE	FLOYD	FN	FORTH	FSS	FTE	FVC	GENCO	GJS	GL
GLAND	GLOBAL	GLOCON	GPI	GULF	GYT	HPT	HTC	ICN	IFS	ILM
IMH	INET	INSURE	IRC	IRCP	IT	ITD	ITEL	J	JAS	JCK
JCKH	JMART	JMT	KBS	KCAR	KGI	KIAT	KOOL	KTIS	KWC	KWM
L&E	LALIN	LDC	LHK	LOXLEY	LPH	LRH	LST	M	MACO	MAJOR
MBAX	MEGA	META	MFC	MGT	MILL	MITSIB	MK	MODERN	MTI	MVP
NETBAY	NEX	NINE	NTV	NWR	OCC	OGC	OSP	PATO	PB	PDG
PDI	PICO	PIMO	PJW	PL	PM	PPP	PRIN	PRINC	PSTC	PT
QLT	RCL	RICHY	RML	RPC	RWI	S11	SALEE	SAMCO	SANKO	SAPPE
SAWAD	SCI	SCP	SE	SEG	SFP	SGF	SHR	SIAM	SINGER	SKE
SKR	SKY	SMIT	SMT	SNP	SPA	SPC	SPCG	SR	SRICHA	SSC
SSF	STANLY	STI	STPI	SUC	SUN	SYNEX	T	TAE	TAKUNI	TBSP
TCC	TCMC	TEAM	TEAMG	TFG	TIGER	TITLE	TKN	TKS	TM	TMC
TMD	TMI	TMT	TNITY	TNP	TNR	TOG	TPA	TPAC	TPCORP	TPOLY
TPS	TRITN	TRT	TRU	TSE	TVT	TWP	UEC	UMI	UOBKH	UP
UPF	UPOIC	UT	UTP	UWC	VL	VNT	VPO	WIJK	WP	XO
YUASA	ZEN	ZIGA	ZMICO							

GOOD LEVEL										
7UP	A	ABICO	AJ	ALL	ALUCON	AMC	APP	ARIN	AS	AU
B52	BC	BCH	BEAUTY	BGT	BH	BIG	BKD	BLAND	BM	BR
BROCK	BSBM	BSM	BTNC	CAZ	CCP	CGD	CITY	CMAN	CMO	CMR
CPT	CPW	CRANE	CSR	D	EKH	EP	ESSO	FMT	GIFT	GREEN
GSC	GTB	HTECH	HUMAN	IHL	INOX	INSET	IP	JTS	JUBILE	KASET
KCM	KKC	KUMWEL	KUN	KWG	KYE	LEE	MATCH	MATI	M-CHAI	MCS
MDX	MJD	MM	MORE	NC	NDR	NER	NFC	NNCL	NPK	NUSA
OCEAN	PAF	PF	PK	PLE	PMTA	POST	PPM	PRAKIT	PRECHA	PRIME
PROUD	PTL	RBF	RCI	RJH	ROJNA	RP	RPH	RSP	SF	SFLEX
SGP	SISB	SKN	SLP	SMART	SOLAR	SPG	SQ	SSP	STARK	STC
SUPER	SVOA	TC	TCCC	THMUI	TIW	TNH	TOPP	TPCH	TIPIP	TPLAS
TTI	TYCN	UKEM	UMS	VCOM	VRANDA	WIN	WORK	WPH		

Description

Score Range

Excellent

90-100

Very Good

80-89

Good

70-79

Disclaimer:

The disclosure of the survey results of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey results may be changed after that date. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such survey results.

* CGR scoring should be considered with news regarding wrong doing of the company or director or executive of the company such unfair practice on securities trading, fraud, and corruption SEC imposed a civil sanction against insider trading of director and executive; ** delisted

Source: Thai Institute of Directors Association (IOD); FSSIA's compilation

Anti-corruption Progress Indicator 2020

CERTIFIED										
2S	ADVANC	AI	AIE	AIRA	AKP	AMA	AMANAHA	AP	AQUA	ARROW
ASK	ASP	AYUD	B	BAFS	BANPU	BAY	BBL	BCH	BCP	BCPG
BGC	BGRIM	BJCHI	BKI	BLA	BPP	BROOK	BRR	BSBM	BTS	BWG
CEN	CENTEL	CFRESH	CGH	CHEWA	CHOTI	CHOW	CIG	CIMBT	CM	CMC
COL	COM7	CPALL	CPF	CPI	CPN	CSC	DCC	DELTA	DEMCO	DIMET
DRT	DTAC	DTC	EASTW	ECL	EGCO	FE	FNS	FPI	FPT	FSS
FTE	GBX	GC	GCAP	GEL	GFPT	GGC	GJS	GPSC	GSTEEL	GUNKUL
HANA	HARN	HMPRO	HTC	ICC	ICHI	IFS	INET	INSURE	INTUCH	IRPC
ITEL	IVL	K	KASET	KBANK	KBS	KCAR	KCE	KGI	KKP	KSL
KTB	KTC	KWC	L&E	LANNA	LHFG	LHK	LPN	LRH	M	MAKRO
MALEE	MBAX	MBK	MBKET	MC	MCOT	MFC	MFEC	MINT	MONO	MOONG
MPG	MSC	MTC	MTI	NBC	NEP	NINE	NKI	NMG	NNCL	NSI
NWR	OCC	OCEAN	OGC	ORI	PAP	PATO	PB	PCSGH	PDG	PDI
PDJ	PE	PG	PHOL	PL	PLANB	PLANET	PLAT	PM	PPP	PPPM
PPS	PREB	PRG	PRINC	PRM	PSH	PSL	PSTC	PT	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QLT	QTC	RATCH	RML	RWI	S & J
SABINA	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SEAOIL	SE-ED	SELIC
SENA	SGP	SIRI	SITHAI	SMIT	SMK	SMPC	SNC	SNP	SORKON	SPACK
SPC	SPI	SPRC	SRICHA	SSF	SSSC	SST	STA	SUSCO	SVI	SYNTEC
TAE	TAKUNI	TASCO	TBSP	TCAP	TCMC	TFG	TFI	TFMAMA	THANI	THCOM
THIP	THRE	THREL	TIP	TIPCO	TISCO	TKT	TTB	TMD	TMILL	TMT
TNITY	TNL	TNP	TNR	TOG	TOP	TPA	TPCORP	TPP	TRU	TSC
TSTH	TTCL	TU	TVD	TVI	TVO	TWPC	U	UBIS	UEC	UKEM
UOBKH	UWC	VGI	VIH	VNT	WACOAL	WHA	WHAUP	WICE	WIJK	XO
ZEN	TRUE									

DECLARED										
7UP	ABICO	AF	ALT	AMARIN	AMATA	AMATAV	ANAN	APURE	B52	BKD
BM	BROCK	BUI	CHO	CI	COTTO	DDD	EA	EFORL	EP	ERW
ESTAR	ETE	EVER	FSMART	GPI	ILINK	IRC	J	JKN	JMART	JMT
JSP	JTS	KWG	LDC	MAJOR	META	NCL	NOBLE	NOK	PK	PLE
ROJNA	SAAM	SAPPE	SCI	SE	SHANG	SINGER	SKR	SPALI	SSP	STANLY
SUPER	SYNEX	THAI	TKS	TOPP	TRITN	TTA	UPF	UV	WIN	ZIGA

Level	
Certified	This level indicates practical participation with thoroughly examination in relation to the recommended procedures from the audit committee or the SEC's certified auditor, being a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) or already passed examination to ensure independence from external parties.
Declared	This level indicates determination to participate in the Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC)

Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of June 24, 2019) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Source: The Securities and Exchange Commission, Thailand; * FSSIA's compilation

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Naruedom Mujjalinkool FSS International Investment Advisory Securities Co., Ltd

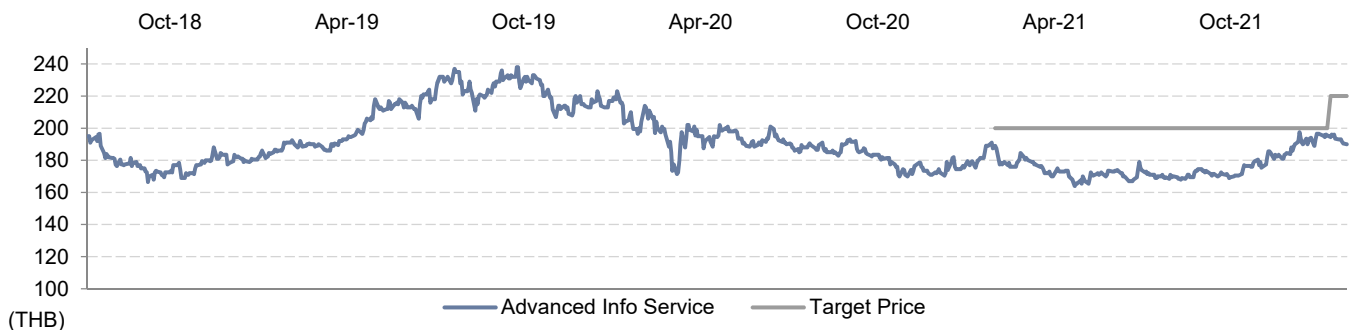
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

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History of change in investment rating and/or target price

Advanced Info Service (ADVANC TB)



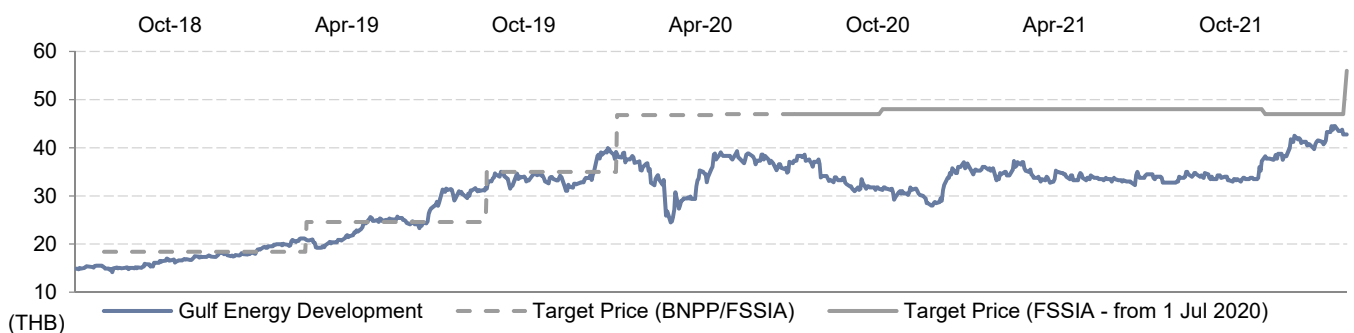
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
16-Dec-2020	HOLD	200.00	09-Feb-2021	BUY	200.00	30-Jun-2021	BUY	200.00
05-Jan-2021	HOLD	200.00	06-May-2021	BUY	200.00	01-Oct-2021	BUY	220.00

Naruedom Mujjalinkool started covering this stock from 16-Dec-2020

Price and TP are in local currency

Source: FSSIA estimates

Gulf Energy Development (GULF TB)



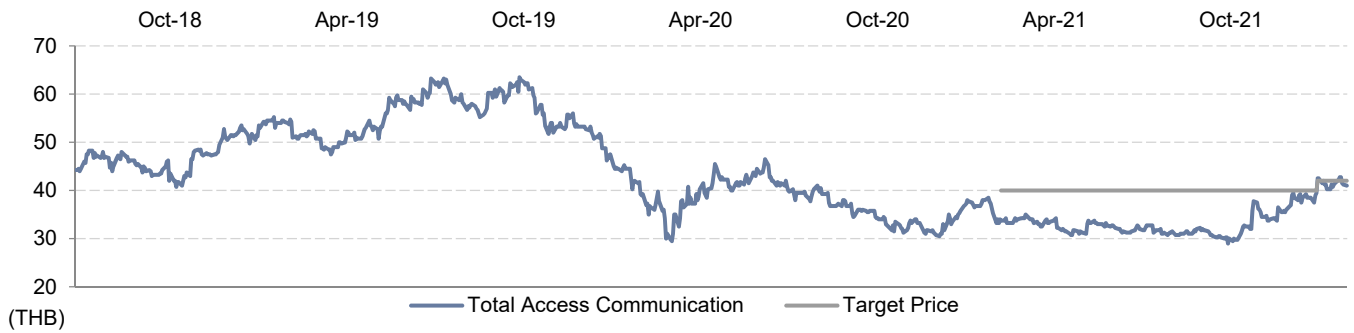
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
15-Nov-2018	BUY	18.40	30-Jun-2020	BUY	47.00	06-Aug-2021	BUY	47.00
08-May-2019	BUY	24.60	11-Sep-2020	BUY	48.00	27-Sep-2021	BUY	47.00
10-Oct-2019	BUY	35.00	20-Oct-2020	BUY	48.00	15-Oct-2021	BUY	56.00
30-Jan-2020	BUY	46.80	23-Feb-2021	BUY	48.00			
22-Apr-2020	BUY	47.00	19-Apr-2021	BUY	48.00			

Suwat Sinsadok started covering this stock from 15-Nov-2018

Price and TP are in local currency

Source: FSSIA estimates

Total Access Communication (DTAC TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
24-Dec-2020	BUY	40.00	05-May-2021	BUY	40.00	22-Sep-2021	HOLD	42.00
01-Feb-2021	BUY	40.00	22-Jun-2021	BUY	40.00			

Naruedom Mujjalinkool started covering this stock from 24-Dec-2020

Price and TP are in local currency

Source: FSSIA estimates

True Corporation (TRUE TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
29-Dec-2020	REDUCE	3.00	02-Mar-2021	HOLD	3.30	-	-	-

Naruedom Mujjalinkool started covering this stock from 29-Dec-2020

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Advanced Info Service	ADVANC TB	THB 190.00	BUY	The key downside risks to our DCF-based TP are stronger-than-expected competition in the mobile market and the slower-than-expected adoption of 5G use cases.
Gulf Energy Development	GULF TB	THB 42.75	BUY	The downside risks to our SoTP-based TP on GULF include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) delays in project commercial operation dates.
Total Access Communication	DTAC TB	THB 41.00	HOLD	The key downside and upside risks to our DCF-based TP are if the 5G subscription losses are worse than our expectation, the cost of the 3500MHz band is higher than our expectation, if there is stronger or weaker-than-expected competition in the mobile market, and if there is a faster or slower-than-expected adoption of 5G use cases.
True Corporation	TRUE TB	THB 4.18	HOLD	The key upside and downside risks to our DCF-based TP are if the 5G subscription gains and ARPU are better or worse than our expectation, if the company can reduce its costs better or worse than we expect, and if there is a faster or slower-than-expected adoption of 5G use cases.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finasia Syrus Securities Public Company Limited

FSSIA may incorporate the recommendations and target prices of companies currently covered by FSS Research into equity research reports, denoted by an 'FSS' before the recommendation. FSS Research is part of Finasia Syrus Securities Public Company Limited, which is the parent company of FSSIA.

All share prices are as at market close on 18-Oct-2021 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as $(\text{target price}^* - \text{current price}) / \text{current price}$.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral (N). Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight (U). Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.