



# Telecom

SET ICT index Close: 30/1/2020 153.26 -4.42 / -2.80% Bt7,186mn  
 Bloomberg ticker: SETCOMUN

## How to enjoy this roller coaster

**We suggest investors stay away from this sector before the auction (Feb 16), but expect share prices to rebound after the auction brings more clarity to the whole issue. This is based on the assumption that our base case is correct. Then, when 5G begins to be rolled out (expected in 4Q20F-1Q21F), share prices are likely to go down again in anticipation of the costs that will erode profitability. ADVANC is our top pick. We are NEUTRAL for TRUE and DTAC.**

**Bidding to be either in line or worse.** We believe investors expect little competition in the 5G bidding, despite possible participation by CAT and TOT. This could be related to indications that DTAC may not bid aggressively due to the resignation of Mrs. Alexandra as CEO. We expect bidding will end up as expected – or possibly be worse. We see no reason to be positive toward the sector before the auction. Our base case assumes ADVANC will secure 60MHz of 2600MHz, TRUE 60MHz and DTAC 40MHz at Bt2.0bn per 10MHz, close to the reserve price.

**CAT and TOT just noise.** We expect CAT and TOT to focus on 700MHz and 26GHz, with the spectrum acquired used to support government projects. We do not expect CAT and TOT to be serious bidders for 2600MHz and compete with private operators; we also do not believe they have any intension of inflating the bidding price. If CAT or TOT need 2600MHz, there should be 30MHz available as we assume the three mobile players will secure 160MHz of 2600MHz (out of 190MHz). We also do not believe CAT and TOT would become a fourth player in the field (if they do secure 2600MHz) due to lack of expertise in the consumer space.

**Development in South Korea signals weaker profitability.** Telecom operators (SKT, KT and LG U+) in South Korea began launching 5G commercial service in April, 2019. Two quarters after the launch, all operators have seen operating profit fall despite better operating revenue growth, with operating expenses rising faster on spectrum cost, higher marketing expenses and higher handset subsidies. Share prices for all Korean operators have been weak after the commercial 5G launch (see more details on figure 1-4).

**Revised assumptions down.** We trim our earnings forecast for all operators after incorporating 5G. We cut earnings for ADVANC by 1.4% in 2020F and 6.6% in 2021F, by 6.5% in 2020F and 93.6% in 2021F for TRUE and by 0.2% in 2020F and 12.2% in 2021F for DTAC. We do not assume potential revenue upside from industrial users due to unclear commercial use case.

**ADVANC remains our top pick.** We keep ADVANC as our top pick as earnings impact on ADVANC from 5G should be the least in the sector. However, we cut TPs for all operators after incorporating 5G into our assumptions. Our new TP for ADVANC is Bt250 (from Bt260), TRUE Bt4.2 (from Bt5.0) and DTAC Bt52 (from Bt63).

### Sensitivity analysis on final price of 2600MHz to our TP

Company	% higher from our base case	New TP (Bt/sh.)
ADVANC	10% increases	249.6
	20% increases	249.2
	30% increases	248.8
	40% increases	248.4
	50% increases	248.0
TRUE	10% increases	4.16
	20% increases	4.12
	30% increases	4.08
	40% increases	4.04
	50% increases	4.00
DTAC	10% increases	51.7
	20% increases	51.4
	30% increases	51.1
	40% increases	50.8
	50% increases	50.5

Source: The companies and SCBS Investment Research

### Valuation summary

	Rating	Price (Bt)	TP (Bt)	ETR (%)	P/E (x) 19F	P/E (x) 20F	P/BV (x) 19F	P/BV (x) 20F
ADVANC	Buy	203.0	250.0	27.3	18.3	16.7	8.8	7.5
DTAC	Neutral	44.5	52.0	20.2	19.1	16.0	4.2	4.0
TRUE	Neutral	3.8	4.2	10.3	155.4	141.7	0.9	0.9
<b>Average</b>					<b>64.3</b>	<b>58.1</b>	<b>4.6</b>	<b>4.2</b>

Source: SCBS Investment Research

### Price performance

(%)	Absolute			Relative to SET		
	1M	3M	12M	1M	3M	12M
ADVANC	(4.7)	(11.4)	13.7	(1.2)	(6.8)	22.5
DTAC	(16.4)	(28.2)	(7.3)	(13.4)	(24.6)	(0.1)
TRUE	(17.0)	(23.6)	(25.1)	(13.9)	(19.7)	(19.3)

Source: SET, SCBS Investment Research

### Analyst

**Kittisorn Pruittipat, CFA, FRM**  
 Fundamental Investment  
 Analyst on Securities  
 (66-2) 949-1007  
 kittisorn.pruittipat@scb.co.th

## 5G bidding competition from CAT/TOT not a concern

Initially, the market was concerned that the bidding competition for 5G would be high, particularly after 2600MHz (the hot spectrum) after it looks like CAT and TOT may join the bid. A recent development at DTAC leads us to expect it to bid but not aggressively. We therefore continue to believe that the final price will be close to the reserve price. We expect CAT and TOT to focus on 700MHz and 26GHz and use the spectrum acquired to support government projects in a compromise with the Minister of the Digital Economy and Society, who wants CAT and TOT to join. We do not believe CAT and TOT will be serious bidders on 2600MHz to compete with private operators or even to inflate the bidding price. There are multiple reasons why we believe this will be the case.

**1) Need huge capital for infrastructure investment** – Both CAT and TOT are profitable and cash-rich, but revenue comes largely from rental of their telecom towers and spectrum holdings (850MHz, 2100MHz and 2300MHz). To bid for 2600MHz and use the spectrum mainly to support government projects would not be an effective use of this hot spectrum. Hence, we believe CAT and TOT would need to justify such a bid with their boards by showing a profitable business case, which is unlikely in current market conditions (over 100% penetration rate). This also requires huge investment in network, and we believe it would be difficult for CAT and TOT to find financial supporters.

**2) Risky move for CAT and TOT** – We believe if the intention to join the bid is to inflate the bidding price of 2600MHz, this would be a very risky move for CAT and TOT, particularly since DTAC is unlikely to bid aggressively. If they attempt to push up the bids they may unintentionally end up with the 2600MHz spectrum.

**3) President of CAT interested in 700MHz** – In an interview in late November 2019, the president of CAT, Colonel Sanpachai Huvanandana, said that CAT is interested in bidding for 700MHz where there is less competition than 2600MHz.

## Expect lower profitability after launching 5G

So far, the potential commercial use case for 5G in Thailand looks to be only on the consumer side as we do not see any possible use case for industrial customers - which could be a new growth area for telecom operators. As revenue upside would mainly come from higher ARPU on the consumer side (early adopter group), we see limited upside for revenue and given the costs of rolling out a new spectrum, near-term profitability will suffer.

Our thesis is based on developments in South Korea, which began 5G service with 5G smartphones in April 2019. All operators reported an increase in ARPU at 1.7% for KT, 1.3% for SK Telecom and 0.5% for LG U+ between 1Q19 and 3Q19. The ARPU upside for 5G subscribers ran from 10-30% compared to 4G. Currently, the number of 5G subscribers is 5% of total subscribers. However, overall profitability for all operators has deteriorated since launching 5G and in line with this, share prices for all have fallen since the commercial launch of 5G in April 2019.

**1) SK Telecom** – Its trend is similar to KT where operating revenue rose by 6.8% YoY in 2Q19 and 9.0% YoY in 3Q19, but operating profit declined 0.7% YoY in 2Q19 and 6.9% YoY in 3Q19 due to costs related to 5G.

**Figure 1: SK Telecom - Profitability dropped YoY after launching 5G in April 2019**

Unit: KRW bn	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19
Operating revenue	4,182	4,154	4,186	4,352	4,335	4,437	4,561
Operating expense	3,856	3,807	3,882	4,126	4,012	4,114	4,259
<b>Operating profit</b>	<b>325</b>	<b>347</b>	<b>304</b>	<b>225</b>	<b>323</b>	<b>323</b>	<b>302</b>
<b>Net profit</b>	<b>689</b>	<b>922</b>	<b>980</b>	<b>706</b>	<b>380</b>	<b>269</b>	<b>266</b>
CAPEX	87	411	402	1,228	331	586	661

Operating revenue grew by 7% and 9% YoY after launching 5G in April 2019, but operating profit dropped by 1% and 7% from higher 5G expenses.

Source: SCBS Investment Research, SK Telecom

2) **KT** – Operating revenue rose 4.5% YoY in 2Q19 and 5.0% YoY in 3Q19 but operating profit fell 15% in 2Q19 and 28% in 3Q19 due to higher 5G marketing expenses. Its operating profit margin dropped from 6.9% to 5.0% after launching 5G.

**Figure 2: KT Corp - Profitability dropped YoY after launching 5G in April 2019**

Unit: KRW bn	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19
Operating revenue	5,710	5,807	5,949	5,995	5,834	6,099	6,214
Operating expense	5,313	5,408	5,579	5,899	5,432	5,810	5,901
<b>Operating profit</b>	<b>397</b>	<b>399</b>	<b>370</b>	<b>96</b>	<b>402</b>	<b>288</b>	<b>313</b>
<b>Net profit</b>	<b>175</b>	<b>233</b>	<b>211</b>	<b>51</b>	<b>223</b>	<b>148</b>	<b>189</b>
CAPEX	237	408	463	869	552	802	741

Operating revenue grew by 4% and 5% YoY after launching 5G in April 2019, but operating profit dropped by 15% and 28% from higher 5G expenses.

Source: SCBS Investment Research, KT Corp

3) **LG U+** - This company reported operating revenue growth YoY of 7.3% in 2Q19 and 8.4% in 3Q19. However, the higher operating costs outweighed the rise in revenue. As a result, operating profit dropped 29.6% in 2Q19 and 31.7% in 3Q19 YoY.

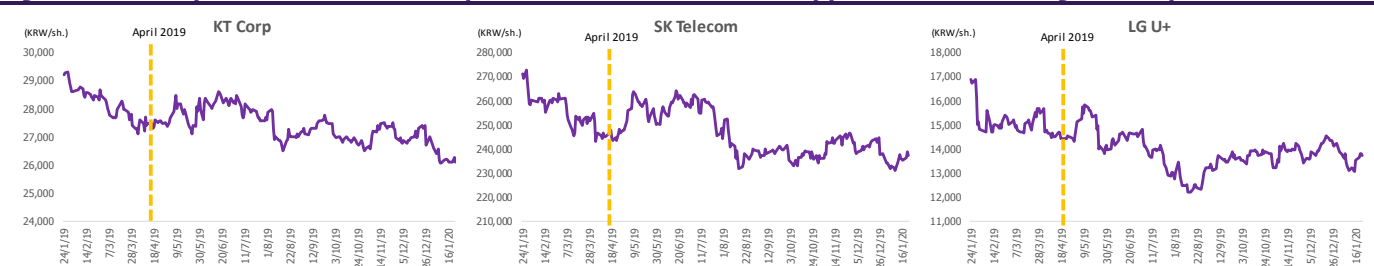
**Figure 3: LG U+ - Profitability dropped YoY after launching 5G in April 2019**

Unit: KRW bn	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19
Operating revenue	2,980	2,981	2,992	3,173	3,020	3,200	3,244
Operating expense	2,792	2,770	2,764	3,068	2,826	3,051	3,088
<b>Operating profit</b>	<b>188</b>	<b>211</b>	<b>228</b>	<b>104</b>	<b>195</b>	<b>149</b>	<b>156</b>
<b>Net profit</b>	<b>120</b>	<b>141</b>	<b>160</b>	<b>81</b>	<b>133</b>	<b>98</b>	<b>104</b>
CAPEX	205	260	291	641	277	730	784

Operating revenue grew by 7% and 8% YoY after launching 5G in April 2019, but operating profit dropped by 30% and 32% from higher 5G expenses.

Source: SCBS Investment Research, LG U+

**Figure 4: Share prices of all telecom operators in South Korea dropped after launching 5G in April 2019**



Source: SCBS Investment Research, Bloomberg

## Our assumptions after bidding

We assume ADVANC and TRUE will secure 60MHz of 2600MHz for Bt12bn (close to reserve price). For DTAC, we believe it will submit a bid, but may acquire less than ADVANC and TRUE. We expect DTAC to secure 40MHz of 2600MHz at Bt8.0bn, also close to the reserve price. After the bidding, we expect ADVANC to have 130MHz spectrum capacity, 125MHz for TRUE, and 139MHz for DTAC. The industry structure should be maintained as is, as we do not expect CAT and TOT to become new players in the market as they have no expertise or brand perception as evidenced by limited awareness among Thai consumers on their brand (my 4G by CAT and TOT Mobile).

Figure 5: Spectrum holding post auction (ADVANC)

Pre auction		Post auction	
Spectrum	Bandwidth	Spectrum	Bandwidth
700MHz	10	700MHz	10
900MHz	10	900MHz	10
1800MHz	20	1800MHz	20
2100MHz	30	2100MHz	30
		<b>2600MHz</b>	<b>60</b>

Source: SCBS Investment Research, ADVANC

Figure 6: Spectrum holding post auction (TRUE)

Pre auction		Post auction	
Spectrum	Bandwidth	Spectrum	Bandwidth
700MHz	10	700MHz	10
850MHz	15	850MHz	15
900MHz	10	900MHz	10
1800MHz	15	1800MHz	15
2100MHz	15	2100MHz	15
		<b>2600MHz</b>	<b>60</b>

Source: SCBS Investment Research, TRUE

Figure 7: Spectrum holding post auction (DTAC)

Pre auction		Post auction	
Spectrum	Bandwidth	Spectrum	Bandwidth
700MHz	10	700MHz	10
900MHz	5	900MHz	5
1800MHz	5	1800MHz	5
2100MHz	15	2100MHz	15
2300MHz	64	2300MHz	64
		<b>2600MHz</b>	<b>40</b>

Source: SCBS Investment Research, DTAC

## Revising forecasts down

We cut our forecasts for all operators after incorporating additional revenue and costs related to 5G into our forecasts. Our assumptions assume revenue upside solely from the consumer side. We do not assume any upside from industrial users as there is no commercial use case. We also believe Thailand to show a pattern similar to South Korea, where the added cost for 5G will exceed incremental revenue. We therefore expect see a flow of earnings downgrades by consensus after the auction. There is further downside to our assumptions if DTAC cannot secure 2600MHz. This may force DTAC to use pricing to protect its market share, which would be bad for the sector - but this would not take place until 4Q20F-1Q21F when we expect operators to start launching 5G. Admittedly, it is difficult to gauge earnings impact under this scenario as it largely depends on the stance of DTAC's new CEO. We would expect DTAC share price to drop further if it abstains from the bid, as this would very likely lead to de-rating of its valuation.

We also ran a sensitivity analysis on final price of 2600MHz if it differs from our assumption. This suggests that each incremental rise of 10% in the price for 2600MHz cut TP for ADVANC by Bt0.4/sh, TRUE Bt0.04/sh and DTAC Bt0.3/sh.

Figure 8: Revised assumptions (ADVANC)

Old		
Unit: Btmn	2020F	2021F
Mobile revenue	129,170	132,658
Cost of service	107,724	110,618
SG&A	27,461	28,834
CAPEX ex. spectrum	20,000	19,000
<b>Net profit</b>	<b>36,136</b>	<b>37,013</b>
<b>TP (Bt/sh.)</b>	<b>260</b>	
New	2020F	2021F
Mobile revenue	129,170	134,337
Cost of service	108,346	113,877
SG&A	27,461	29,716
CAPEX ex. spectrum	25,000	29,000
<b>Net profit</b>	<b>35,619</b>	<b>34,570</b>
% change	-1.4%	-6.6%
<b>TP (Bt/sh.)</b>	<b>250</b>	

Source: SCBS Investment Research, ADVANC

Figure 9: Revised assumptions (TRUE)

Old		
Unit: Btmn	2020F	2021F
Mobile revenue	106,970	112,083
Cost of service	108,090	113,055
SG&A	27,784	28,585
CAPEX ex. spectrum	35,000	30,000
<b>Net profit</b>	<b>900</b>	<b>2,772</b>
<b>TP (Bt/sh.)</b>	<b>5.0</b>	
New	2020F	2021F
Mobile revenue	106,970	114,284
Cost of service	108,163	114,917
SG&A	27,784	30,835
CAPEX ex. spectrum	40,000	40,000
<b>Net profit</b>	<b>842</b>	<b>444</b>
% change	-6.5%	-84.0%
<b>TP (Bt/sh.)</b>	<b>4.2</b>	

Source: SCBS Investment Research, TRUE

Figure 10: Revised assumptions (DTAC)

<b>Old</b>		
Unit: Btmn	2020F	2021F
Mobile revenue	60,869	61,781
Cost of service	56,232	56,492
SG&A	14,897	14,996
CAPEX ex. spectrum	14,000	14,000
<b>Net profit</b>	<b>6,579</b>	<b>7,124</b>
<b>TP (Bt/sh.)</b>	<b>63</b>	
<b>New</b>		
	2020F	2021F
Mobile revenue	62,111	63,630
Cost of service	57,271	59,649
SG&A	15,424	15,652
CAPEX ex. spectrum	16,500	19,000
<b>Net profit</b>	<b>4,955</b>	<b>4,442</b>
<i>% change</i>	<i>-24.7%</i>	<i>-37.6%</i>
<b>TP (Bt/sh.)</b>	<b>52</b>	

Source: SCBS Investment Research, DTAC

Note that huge downward revision in 2020F unlike other operators due to huge disappointment in 4Q19 results

Figure 11: Sensitivity analysis

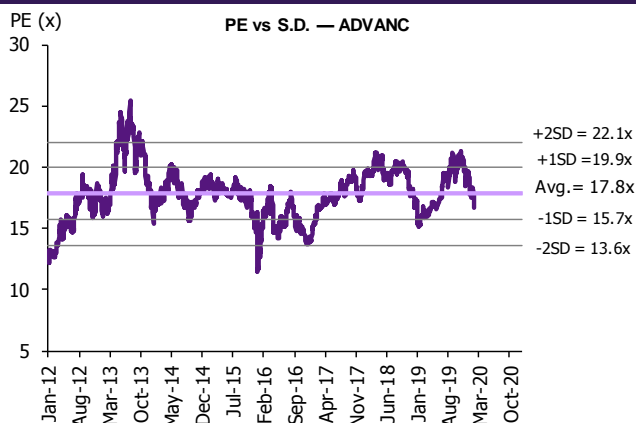
Company	% higher from our base case	New TP (Bt/sh.)
<b>ADVANC</b>	10% increases	249.6
	20% increases	249.2
	30% increases	248.8
	40% increases	248.4
	50% increases	248.0
<b>TRUE</b>	10% increases	4.16
	20% increases	4.12
	30% increases	4.08
	40% increases	4.04
	50% increases	4.00
<b>DTAC</b>	10% increases	51.7
	20% increases	51.4
	30% increases	51.1
	40% increases	50.8
	50% increases	50.5

Source: SCBS Investment Research

## ADVANC remains our top pick

We keep ADVANC as our top pick as the hit to earnings from 5G will affect it the least in the sector. We keep our NEUTRAL rating for TRUE as we expect its core earnings will suffer the most due to its low earnings base. For DTAC, we expect to see a near-term share price rebound if it submits a bid on Feb 4. However, we keep NEUTRAL rating for DTAC. We cut TPs for all operators after incorporating 5G into our assumptions. Our new TP for ADVANC is Bt250 (from Bt260), TRUE Bt4.2 (from Bt5.0) and DTAC Bt52 (from Bt63).

Figure 12: ADVANC: PE Band



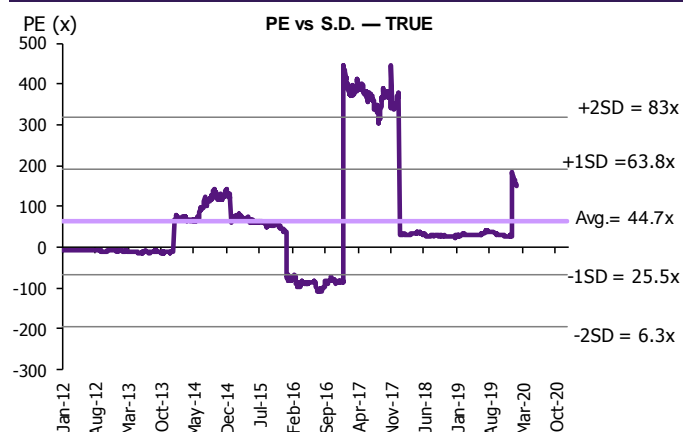
Source: SCBS Investment Research, Bloomberg

Figure 13: ADVANC: EV/EBITDA Band



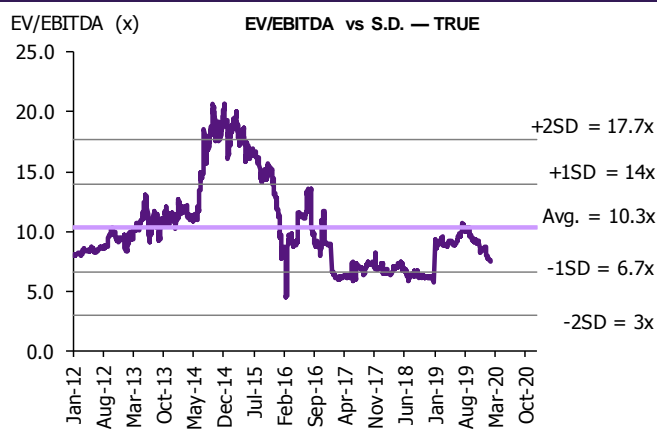
Source: SCBS Investment Research, Bloomberg

**Figure 14: TRUE: PE Band**



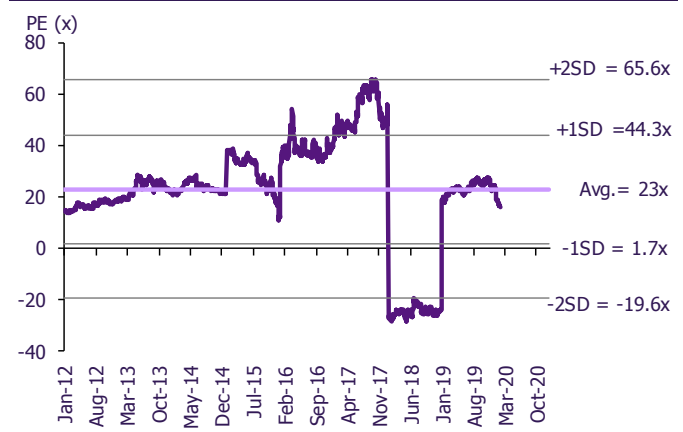
Source: SCBS Investment Research, Bloomberg

**Figure 15: TRUE: EV/EBITDA Band**



Source: SCBS Investment Research, Bloomberg

**Figure 16: DTAC: PE Band**



Source: SCBS Investment Research, Bloomberg

**Figure 17: DTAC: EV/EBITDA Band**



Source: SCBS Investment Research, Bloomberg

**Figure 18: Valuation summary (price as of Jan 30, 2020)**

	Rating	Price (Bt/Sh)	Target (Bt/Sh)	ETR (%)	P/E (x)			EPS growth (%)			P/BV (x)			ROE (%)			Div. Yield (%)			EV/EBITDA (x)		
					18A	19F	20F	18A	19F	20F	18A	19F	20F	18A	19F	20F	18A	19F	20F	18A	19F	20F
ADVANC	Buy	203.00	250.0	27.3	20.4	18.3	16.7	(1)	12	10	10.5	8.8	7.5	55	52	48	3.5	3.9	4.2	9.4	8.6	8.4
DTAC	Neutral	44.50	52.0	20.2	n.m.	19.1	16.0	n.m.	n.m.	19	4.8	4.2	4.0	(17)	23	26	2.3	6.4	3.3	7.1	5.2	5.2
TRUE	Neutral	3.82	4.2	10.3	18.1	155.4	141.7	n.m.	(88)	10	1.0	0.9	0.9	5	1	1	2.4	1.9	0.3	4.9	7.9	7.6
<b>Average</b>					<b>19.3</b>	<b>64.3</b>	<b>58.1</b>	<b>(1)</b>	<b>(38)</b>	<b>13</b>	<b>5.4</b>	<b>4.6</b>	<b>4.2</b>	<b>14</b>	<b>25</b>	<b>25</b>	<b>2.7</b>	<b>4.1</b>	<b>2.6</b>	<b>7.1</b>	<b>7.2</b>	<b>7.1</b>

Source: SCBS Investment Research

**Disclaimer**

The information in this report has been obtained from sources believed to be reliable. However, its accuracy or completeness is not guaranteed. Any opinions expressed herein reflect our judgment at this date and are subject to change without notice. This report is for information only. It is not to be construed as an offer, or solicitation of an offer to sell or buy any securities. We accept no liability for any loss arising from the use of this document. We or our associates may have an interest in the companies mentioned therein.

SCB Securities Company Limited ("SCBS") is a wholly-owned subsidiary of The Siam Commercial Bank Public Company Limited ("SCB"). Any information related to SCB is for sector comparison purposes.

SCB Securities Company Limited ("SCBS") acts as market maker and issuer of Derivative Warrants on the ordinary shares ADVANC, BEM, BJC, MINT, INTUCH, TOP.

Before making an investment decision over a derivative warrant, an investor should carefully read the prospectus for the details of the said derivative warrants. Any opinion, news, research, analyse, price, statement, forecast, projection and/or other information contained in this document (the "Information") is provided as general purpose information only, and shall not be construed as a recommendation to any person of an offer to buy or sell, or the solicitation of an offer to buy or sell, any securities. SCBS and/or its directors, officers, employees, and agents shall not be liable for any direct, indirect, incidental, special or consequential loss or damage, resulting from the use of, or reliance on, the Information, including without limitation, damages for loss of profits. The investor should use the Information in association with other information and opinion, including his/her own judgment in making investment decision. The Information is obtained from sources believed to be reliable, and SCBS cannot guarantee the accuracy, completeness and/or correctness of the Information.

SCBS reserves the right to modify the Information from time to time at its sole discretion without giving any notice. This document is delivered to intended recipient(s) only and is not permitted to reproduce, retransmit, disseminate, sell, distribute, republish, circulate or commercially exploit the Information in any manner without the prior written consent of SCBS.

This document is prepared by SCB Securities Company Limited ("SCBS") which is wholly-owned by The Siam Commercial Bank Public Company Limited ("SCB"). SCB has acted as Financial Advisor of SCG Packaging Public Company Limited. SCBS has acted as Joint Lead Underwriter of SCG Packaging Public Company Limited. Any opinions, news, research, analyses, prices, statements, forecasts, projections and/or other information contained in this document (the "Information") is provided as general information purposes only, and shall not be construed as individualized recommendation of an offer to buy or sell or the solicitation of an offer to buy or sell any securities. SCBS and/or its directors, officers and employees shall not be liable for any direct, indirect, incidental, special or consequential loss or damage, resulting from the use of or reliance on the Information, including without limitation to, damages for loss of profits. The investors shall use the Information in association with other information and opinion, including their own judgment in making investment decision. The Information is obtained from sources believed to be reliable, and SCBS cannot guarantee the accuracy, completeness and/or correctness of the Information.

SCBS reserves the right to modify the Information from time to time without notice and in its sole discretion. This document is delivered to intended recipient(s) only and is not permitted to reproduce, retransmit, disseminate, sell, distribute, republish, circulate or commercially exploit the Information in any manner without the prior written consent of SCBS.

This document is prepared by SCB Securities Company Limited ("SCBS") which is wholly-owned by The Siam Commercial Bank Public Company Limited ("SCB"). SCB has acted as Financial Advisor, Lead Arranger of Global Power Synergy Public Company Limited. Any opinions, news, research, analyses, prices, statements, forecasts, projections and/or other information contained in this document (the "Information") is provided as general information purposes only, and shall not be construed as individualized recommendation of an offer to buy or sell or the solicitation of an offer to buy or sell any securities. SCBS and/or its directors, officers and employees shall not be liable for any direct, indirect, incidental, special or consequential loss or damage, resulting from the use of or reliance on the Information, including without limitation to, damages for loss of profits. The investors shall use the Information in association with other information and opinion, including their own judgment in making investment decision. The Information is obtained from sources believed to be reliable, and SCBS cannot guarantee the accuracy, completeness and/or correctness of the Information.

This document is prepared by SCB Securities Company Limited ("SCBS") which is wholly-owned by The Siam Commercial Bank Public Company Limited ("SCB"). SCB Asset Management Company Limited ("SCBAM") which is wholly-owned by The Siam Commercial Bank Public Company Limited ("SCB"). SCB has acted as Financial Advisor of Digital Telecommunications Infrastructure Fund. SCBAM has acted as Fund Manager of Digital Telecommunications Infrastructure Fund. Any opinions, news, research, analyses, prices, statements, forecasts, projections and/or other information contained in this document (the "Information") is provided as general information purposes only, and shall not be construed as individualized recommendation of an offer to buy or sell or the solicitation of an offer to buy or sell any securities. SCBS and/or its directors, officers and employees shall not be liable for any direct, indirect, incidental, special or consequential loss or damage, resulting from the use of or reliance on the Information, including without limitation to, damages for loss of profits. The investors shall use the Information in association with other information and opinion, including their own judgment in making investment decision. The Information is obtained from sources believed to be reliable, and SCBS cannot guarantee the accuracy, completeness and/or correctness of the Information.

Futures and Options trading carry a high level of risk with the potential for substantial losses, and are not suitable for all persons. Before deciding to trade Futures and Options, you should carefully consider your financial position, investment objectives, level of experience, and risk appetite if Futures and Options trading are appropriate. The possibility exists that you could sustain a loss of some or all of your initial investment. You should be aware of all the risks associated with Futures and Options trading, and you are advised to rely on your own judgment while making investment decision and/or should seek advice from professional investment advisor if you have any doubts.

This document is delivered to intended recipient(s) only and is not permitted to reproduce, retransmit, disseminate, sell, distribute, republish, circulate or commercially exploit the Information in any manner without the prior written consent of SCBS.

Copyright©2012 SCB Securities Company Limited. All rights reserved.



**CG Rating 2019 Companies with CG Rating**

▲▲▲▲▲

AAV, ADVANC, AIRA, AKP, AKR, AMA, AMATA, AMATAV, ANAN, AOT, AP, ARROW, BAFS, BANPU, BAY, BCP, BCPG, BOL, BRR, BTS, BTW, BWG, CFRESH, CHEWA, CHO, CK, CKP, CM, CNT, COL, COMAN, CPALL, CPF, CPI, CPN, CSS, DELTA, DEMCO, DRT, DTAC, DTC, EA, EASTW, ECF, EGCO, GBX, GC, GCAP, GEL, GFPT, GGC, GOLD, GPSC, GRAMMY, GUNKUL, HANA, HARN, HMPRO, ICC, ICHI, III, ILINK, INTUCH, IRPC, IVL, JKN, JSP, K, KBANK, KCE, KKP, KSL, KTB, KTC, KTIS, LH, LHFG, LIT, LPN, MAKRO, MALEE, MBK, MBKET, MC, MCOT, MFEC, MINT, MONO\*, MTC, NCH, NCL, NKI, NSI, NVD, NYT, OISHI, OTO, PAP, PCSGH, PDJ, PG, PHOL, PJW, PLANB, PLANET, PORT, PPS, PR9, PREB, PRG, PRM, PSH, PSL, PTG, PTT, PTTEP, PTTGC, PYLON, Q-CON, QH, QTC, RATCH, ROBINS, RS, S, S & J, SABINA, SAMART, SAMTEL, SAT, SC, SCB, SCC, SCCC, SCN, SDC, SEAFCO, SEAOL, SE-ED, SELIC, SENA, SIS, SITHAI, SNC, SORKON, SPALI, SPI, SPRC, SSSC, STA, STEC, SVI, SYNTEC, TASCO, TCAP, THAI, THANA, THANI, THCOM, THIP, THREL, TIP, TISCO, TK, TKT, TMB, TMILL, TNDT, TOA, TOP, TRC, TRU, TRUE, TSC, TSR, TSTH, TTA, TTCL, TTW, TU, TVD, TVO, U, UAC, UV, VGI, VIH, WACOAL, WAVE, WHA, WHAUP, WICE, WINNER

▲▲▲▲

2S, ABM, ADB, AF, AGE, AH, AHC, AIT, ALLA, ALT, AMANAH, AMARIN, APCO, APCS, AQUA, ARIP, ASAP, ASIA, ASIAN, ASIMAR, ASK, ASN, ASP, ATP30, AUCT, AYUD, B, BA, BBL, BDMS, BEC, BEM, BFIT, BGC, BGRIM, BIZ, BJC, BJCHI, BLA, BPP, BROOK, CBG, CEN, CENTEL, CGH, CHG, CHOTI, CHOW, CI, CIMBT, CNS, COLOR, COM7, COTTO, CRD, CSC, CSP, DCC, DCON, DDD, DOD, EASON, ECL, EE, EPG, ERW, ESTAR, ETE, FLOYD, FN, FNS, FORTH, FPI, FPT, FSMART, FSS, FVC, GENCO, GJS, GL, GLOBAL, GLOW, GULF, HPT, HTC, HYDRO, ICN, IFS, INET, INSURE, IRC, IRCP, IT, ITD\*, ITEL, J, JAS\*, JCK, JCKH, JMART, JMT, JWD, KBS, KCAR, KGI, KIAT, KOOL, KWC, KWM, L&E, LALIN, LANNA, LDC, LHK, LOXLEY, LRH, LST, M, MACO, MAJOR, MBAX, MEGA, METCO, MFC, MK, MODERN, MOONG, MPG, MSC, MTI, NEP, NETBAY, NEX, NINE, NOBLE, NOK, NTV, NWR, OCC, OGC, ORI, OSP, PATO, PB, PDG, PDI, PL, PLAT, PM, PPP, PRECHA, PRIN, PRINC, PSTC, PT, QLT, RCL, RICHY, RML, RWI, S11, SAAM, SALEE, SAMCO, SANKO, SAPPE, SAWAD, SCG, SCI, SCP, SE, SFP, SIAM, SINGER, SIRI, SKE, SKR, SKY, SMT, SMK, SMPC, SMT, SNP, SONIC, SPA, SPC, SPCG, SPVI, SR, SRICHA, SSC, SSF, SST, STANLY, SUC, SUN, SUSCO, SUTHA, SWC, SYMC, SYNEX, T, TACC, TAE, TAKUNI, TBSP, TCC, TCMC, TEAM, TEAMG, TFG, TFMAMA, THG, THRE, TIPCO, TITLE, TIW, TKN, TKS, TM, TMC, TMD, TMI, TMT, TNITY, TNL, TNP, TNR, TOG, TPA, TPAC, TPBI, TPCORP, TPOLY, TRITN, TRT, TSE, TSTE, TVI, TVT, TWP, TWPC, UBIS, UEC, UMI, UOBKH, UP, UPF, UPOIC, UT, UWC, VNT, WIJK, XO, YUASA, ZEN, ZMICO

▲▲▲

A, ABICO, ACAP\*, AEC, AEONTS, AJ, ALUCON, AMC, APURE, AS, ASEFA, AU, B52, BCH, BEAUTY, BGT, BH, BIG, BLAND, BM, BR, BROCK, BSBM, BSM, BTNC, CCET, CCP, CGD, CHARAN, CHAYO, CITY, CMAN, CMC, CMO, CMR, CPL, CPT, CSR, CTW, CWT, D, DIMET, EKH, EMC, EPCO, ESSO, FE, FTE, GIFT, GLAND, GLOCON, GPI, GREEN, GTB, GYT, HTECH, HUMAN, IHL, INGRS, INOX, JTS, JUBILE, KASET, KCM, KKC, KWG, KYE, LEE, LPH, MATCH, MATI, M-CHAI, MCS, MDX, META, MGT, MJD, MM, MVP, NC, NDR, NER, NNCL, NPK, NUSA, OCEAN, PAF, PF, PICO, PIMO, PK, PLE, PMTA, POST, PPM, PROUD, PTL, RCI, RJH, ROJNA, RPC, RPH, SF, SGF, SGP, SKN, SLP, SMART, SOLAR, SPG, SQ, SSP, STI, SUPER, SVOA, TCCC, THE, THMUI, TIC, TIGER, TNH, TOPP, TPCH, TPIPP, TPLAS, TQM, TTI, TYCN, UTP, VCOM, VIBHA, VPO, WIN, WORK, WP, WPH, ZIGA

**Corporate Governance Report**

The material contained in this publication is for general information only and is not intended as advice on any of the matters discussed herein. Readers and others should perform their own independent analysis as to the accuracy or completeness or legality of such information. The Thai Institute of Directors, its officers, the authors and editor make no representation or warranty as to the accuracy, completeness or legality of any of the information contained herein. By accepting this document, each recipient agrees that the Thai Institute of Directors Association, its officers, the authors and editor shall not have any liability for any information contained in, or for any omission from, this publication.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey result may be changed after that date. SCB Securities Company Limited does not conform nor certify the accuracy of such survey result.

To recognize well performers, the list of companies attaining "Good", "Very Good" and "Excellent" levels of recognition

(Not including listed companies qualified in the "no announcement of the results" clause from 1 January 2018 to 25 October 2019) is publicized.

\* บริษัทหรือกรรมการหรือผู้บริหารของบริษัทที่มีข่าวด้านการกำกับดูแลกิจการ เช่น การกระทำผิดเกี่ยวกับหลักทรัพย์ การทุจริต คลอรัปชั่น เป็นต้น ซึ่งการใช้ข้อมูล CGR ควรตระหนักถึงข้อจำกัดกล่าวประกอบด้วย

**Anti-corruption Progress Indicator****Certified (ได้รับการรับรอง)**

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

**Declared (ประกาศเจตนารมณ์)**

2S, ABICO, AF, AI, AIRA, ALT, AMA, AMARIN, AMATA, ANAN, B, BM, BPP, BUI, CHG, CHO, CHOTI, CHOW, CI, CMC, COL, DDD, DELTA, EFORL, EPCO, ESTAR, ETE, FPI, FTE, ICHI, INOX, IRC, ITEL, JAS, JSP, JTS, KWG, LDC, LIT, META, MFEC, MPG, NEP, NOK, NWR, ORI, PRM, PSL, ROJNA, RWI, SAAM, SAPPE, SCI, SEAOL, SHANG, SKR, SPALI, STANLY, SYNEX, TAE, TAKUNI, TMC, TOPP, TPP, TRITN, TVO, UV, UWC, WHAUP, XO

**N/A**

7UP, A, A5, AAV, ABM, ACAP, ACC, ACE, ACG, ADB, AEC, AEONTS, AFC, AGE, AH, AHC, AIT, AJ, AJA, AKR, ALL, ALLA, ALUCON, AMATAV, AMC, AOT, APCO, APEX, APP, APURE, AQ, ARIN, ARIP, AS, ASAP, ASEFA, ASIA, ASIAN, ASIMAR, ASN, ATP30, AU, AUCT, AWC, B52, BA, BAM, BAT-3K, BC, BCT, BDMS, BEAUTY, BEC, BEM, BFIT, BGC, BGT, BH, BIG, BIZ, BJC, BKD, BLAND, BLISS, BOL, BR, BROCK, BSM, BTNC, BTW, CAZ, CBG, CCET, CCP, CGD, CHARAN, CHAYO, CHUO, CITY, CK, CKP, CMAN, CMO, CMR, CNT, COLOR, COMAN, COTTO, CPH, CPL, CPR, CPT, CPW, CRANE, CRD, CSP, CSR, CSS, CTW, CWT, D, DCON, DCORP, DOD, DOHOME, DTCL, EA, EASON, ECF, EE, EIC, EKH, EMC, EPG, ERW, ESSO, EVER, F&D, FANCY, FLOYD, FMT, FN, FORTH, FPT, FSMART, FVC, GENCO, GIFT, GL, GLAND, GLOBAL, GLOCON, GPI, GRAMMY, GRAND, GREEN, GSC, GTB, GULF, GYT, HFT, HPT, HTECH, HUMAN, HYDRO, ICN, IFEC, IHL, III, ILINK, ILM, IMH, INGRS, INSET, IP, IRCP, IT, ITD, J, JCK, JCKH, JCT, JKN, JMART, JMT, JUBILE, JUTHA, JWD, KAMART, KC, KCM, KDH, KIAT, KKC, KOOL, KTECH, KTIS, KUMWEL, KUN, KWM, KYE, LALIN, LEE, LH, LHFG, LOXLEY, LPH, LST, MACO, MAJOR, MANRIN, MATCH, MATI, MAX, M-CHAI, MCS, MDX, MEGA, METCO, MGT, MIDA, MILL, MITSIB, MJD, MK, ML, MM, MODERN, MORE, MPIC, MTC, MVP, NC, NCH, NCL, NDR, NER, NETBAY, NEW, NEWS, NEX, NFC, NOBLE, NPK, NTV, NUSA, NVD, NYT, OHTL, OISHI, OSP, OTO, PACE, PAE, PAF, PERM, PF, PICO, PIMO, PJW, PK, PLE, PMTA, POLAR, POMPUI, PORT, POST, PPM, PPPM, PR9, PRAKIT, PRECHA, PRIME, PRIN, PRO, PROUD, PTL, RAM, RBF, RCI, RCL, RICH, RICHY, RJH, ROCK, ROH, RP, RPC, RPH, RS, RSP, S, S11, SAFARI, SALEE, SAM, SAMART, SAMCO, SAMTEL, SANKO, SAUCE, SAWAD, SAWANG, SCP, SDC, SE, SEAFCO, SEG, SF, SFLEX, SFP, SGF, SHR, SIAM, SIMAT, SINGER, SISB, SKE, SKN, SKY, SLP, SMART, SMT, SOLAR, SONIC, SPA, SPCG, SPG, SPORT, SPVI, SQ, SR, SSC, SSP, STAR, STARK, STC, STEC, STHAI, STI, STPI, SUC, SUN, SUPER, SUTHA, SVH, SVOA, SWC, SYMC, T, TACC, TPAC, TBSP, TC, TCC, TCCC, TCJ, TCMC, TCOAT, TEAM, TEAMG, TGPRO, TH, THAI, THANA, THE, THG, THL, THMUI, TIGER, TITL, TIW, TK, TKN, TKS, TM, TMI, TMW, TNDT, TNH, TNPC, TOA, TPAC, TPBI, TPCH, TPIPL, TPIPP, TPLAS, TPOLY, TPS, TQM, TR, TRC, TRT, TRUBB, TSE, TSF, TSI, TSR, TSTE, TTA, TTI, TTT, TTW, TVT, TWP, TWZ, TYCN, UAC, UMI, UMS, UNIQ, UP, UPA, UPF, UPOIC, UREKA, UT, UTP, UVAN, VARO, VCOM, VI, VIBHA, VL, VNG, VPO, VRANDA, WAVE, WG, WIN, WINNER, WORK, WORLD, WP, WPH, WR, YCI, YGG, ZIGA, ZMICO

**Explanations**

Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of November 30, 2018) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.