▌Singapore

Overweight *(no change)*

Highlighted Companies

Netlink NBN Trust
ADD, TP S$1.10, S$0.96 close

We project NLT's FY22F/23F/24F core EPS to grow a steady 5.9%/1.5%/0.2% yoy. We like NLT for its strong earnings visibility/stability and attractive FY3/23F dividend yield of 5.4%.

SingTel
ADD, TP S$3.30, S$2.52 close

Following the 29.7% plunge in FY3/21 core EPS, mainly due to the impact of Covid-19, we see earnings rebounding to grow 12.8%/30.0%/17.3% in FY22F/23F/24F, led by a recovery in profits for associates, Singapore and Optus.

Starhub
HOLD, TP S$1.40, S$1.25 close

We see FY22F core EPS falling 46.0% on upfront costs for its Dare+ programme (e.g. IT transformation opex), before rising 23%/10% in FY23F/24F on full roaming revenue recovery, Enterprise growth and upfront Dare+ cost abating.

Summary Valuation Metrics

P/E (x)	Dec-22F	Dec-23F	Dec-24F
Netlink NBN Trust	37.18	35.96	
SingTel	17.23	14.41	12.23
Starhub	27.20	22.04	20.04
P/BV (x)	**Dec-22F**	**Dec-23F**	**Dec-24F**
Netlink NBN Trust	1.42	1.48	
SingTel	1.47	1.42	1.37
Starhub	3.73	3.65	3.52
Dividend Yield	**Dec-22F**	**Dec-23F**	**Dec-24F**
Netlink NBN Trust	5.46%	5.53%	
SingTel	4.35%	5.20%	6.13%
Starhub	4.00%	4.00%	3.99%

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Telco - Overall

Ringing louder and clearer

- Singtel's regional digital banking forays may add 29 Scts/share to its SOP valuation over 3-4 years' time. Asset recycling may raise another S$2bn-3bn.
- Singapore's mobile service revenue should finally turn the corner and grow 8%/14% in CY22F/23F, driven by rising 5G adoption and roaming recovery.
- Stay sector Overweight, with Singtel (Add, TP: S$3.30) as our top pick.

A regional digital banking business in the making for Singtel

With more newsflow, we believe the market may get more excited this year and start to price in Singtel's foray into building a regional digital banking business, which we estimate may add 29 Scts/share to its SOP valuation over 3-4 years' time. We expect Grab-Singtel to launch its Singapore digital bank (15 Scts/share) in 2HCY22F. In Malaysia, a Grab-Singtel consortium (including local partners) is a frontrunner to win a digital banking licence (6 Scts/share) to be issued in Mar 2022, in our view. In Jan 2022, Grab-Singtel paid S$96m for a 32.5% stake in Indonesia's Bank Fama International, marking its move into the digital banking business in Indonesia (8 Scts/share), ASEAN's biggest unbanked and underbanked market. We see further equity injection into Fama and thereafter digital banking products may be launched by year-end.

Singapore mobile business to finally turn the corner in CY22F

After seven consecutive years of declines, industry mobile service revenue should finally rebound 8.3%/14.3% in CY22F/23F (CY20/21: -19.7%/-1.3% yoy), we estimate. Our in-depth look at market offers found telcos driving subs to sign up for 5G plans for an extra S$10-15/month (e.g. previous 4G plans now ineligible for re-contracting/device subsidy). 10-20% of postpaid subs are already on 5G plans, 16 months after service launch (South Korea: 28% in 2.5 years). We also think competition will have less dilutive effect on future average revenue per user (ARPU) as the Big 3 have lost minimal subs to TPG and network tests show their lead vs. TPG is widening. Lastly, we see roaming revenue (19%/12% of Singtel/StarHub's CY19 mobile service revenue) recovering from 2HCY22F. Even if it does not, industry mobile service revenue may still grow 5.7%/8.1% in CY22F/23F.

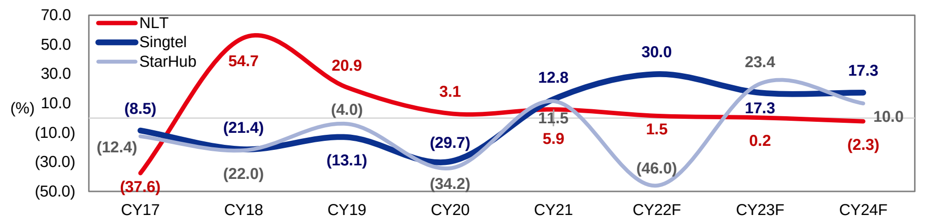
Asset recycling at Singtel to drive future growth & sustain dividends

After raising S$2.4bn cash so far, Singtel may do more asset recycling in the next 1-2 years that could raise another S$2bn-3bn (more tower sales by Telkomsel, divestment of Comcentre, possible sale of Amobee/Trustwave/Airtel Africa etc.), in our view. Besides illuminating the market value of its assets, we think this will allow Singtel to invest into higher growth businesses (e.g. regional data centres and digital banking) to drive future earnings, while preserving cash generated from its core business to sustain its 60-80% payout policy, which implies attractive FY3/22-24F yields of 3.6-5.4% p.a.

Stay sector Overweight; top sector pick: Singtel (Add, TP: S$3.30)

Singtel's key re-rating catalyst: FY3/23F core EPS growth of 30% yoy, forays into digital banking and more asset recycling. Its current share price implies an FY3/23F EV/EBITDA of just 2.6x for Singtel Singapore and Optus. We also like NLT for its strong earnings visibility and attractive FY3/23F dividend yield of 5.4%. Sector downside risks: mobile price wars, slower roaming recovery and NBN wholesale price cut.

Figure 1: Singapore telcos' core EPS growth trend



Note: Singtel's & NLT's FYE is 31 Mar, hence CY21 refers to FY3/22F
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

KEY CHARTS

GSS value-accretive to Singtel

While we do not see Grab-Singtel Singapore (GSS) bank having a major impact on Singtel's net profit in the next five years, we think that with more newsflow investors may focus on the growth of GSS's loan book size in evaluating its future prospects and potential valuation. Assuming GSS has a 1% share of total Singapore resident loans in five years, its total loans could be S$10.4bn by end-CY26F and it may have a S$1.6bn book value, based on 15% shareholder funds-to-loan ratio. GSS may have a S$7.8bn equity valuation (P/BV of 5.0x) by end-CY25F. Thus, Singtel's 40% stake could be worth S$3.1bn and the net equity value accretion is S$2.5bn or 15Scts/share.

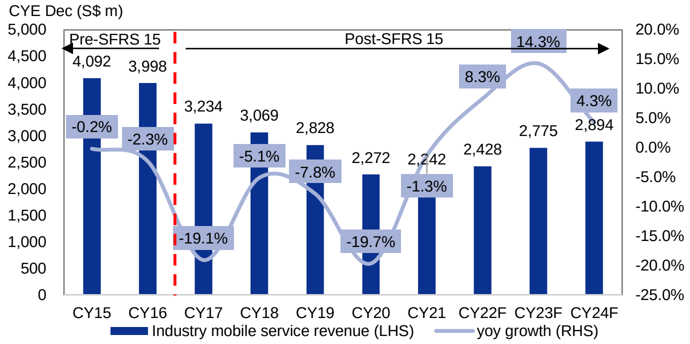
Singtel's 40% stake in GSS may add 15 Scts/share to its SOP

CYE 31 Dec	(S$ m)
Total resident loans (end-Dec 21)	816,809
Total resident loans (end-CY26F)	1,042,479
DFBs' share of total resident loans (end-CY26F)	2.0%
DFBs' total loans (end-CY26F)	20,850
GSS's total loans (end-CY26F)	**10,425**
GSS's shareholders funds-to-loan ratio	15%
GSS's book value (end-CY26F)	**1,564**
P/BV (x)	5.0
GSS's equity valuation	**7,819**
Equity value of Singtel's 40% stake in GSS	**3,127**
Singtel's share of GSS's paid-up capital	-600
Net equity value accretion to Singtel	**2,527**
No. of Singtel shares (m)	16,382
Net equity value accretion per Singtel share (S$)	**0.15**

Rebound in CY22F mobile service revenue

We forecast industry mobile service revenue to rebound 8.3% yoy in CY22F (back to CY20 level) and rise a further 14.3% in CY23F, following a 19.7%/1.3% decline in CY20/21 due to the negative impact from Covid-19. This will be driven by some ARPU uplift from subs upgrading to 5G and partial recovery in roaming/prepaid SIM sales from 2H22F, while intense competition and reduction in excess data usage revenue will be less of a drag on the topline. If roaming does not recover at all in CY22F/23F, industry mobile service revenue may still grow 5.7%/8.1% yoy, in our estimate.

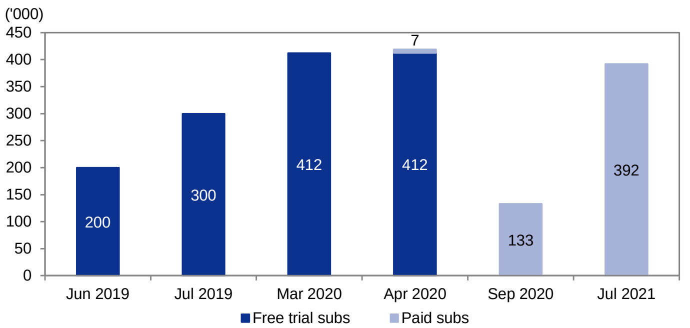
Singapore industry mobile service revenue trend



SIM-only offers to stabilise in 2022F

While we do not expect competition to ease in 2022F, we think SIM-only offers (c.20-25% of postpaid subs) may stabilise as: i) data quotas are currently already very generous for entry-level plans relative to subs' data usage, ii) incumbents may feel less pressured to react to TPG given the latter's modest subs traction thus far, iii) TPG's network quality/coverage have remained inferior to the Big 3, with the gap widening since end-2020, and iv) the gap in network quality between TPG and the incumbents may widen further in the next 12 months as TPG will not be able to offer full-speed 5G services until/unless it enters into a wholesale agreement with the incumbents, in our view.

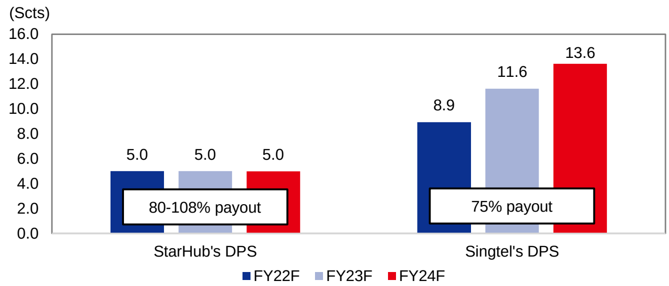
TPG reported 392k paid subs at end-Jul 2021



Higher CY22F DPS projected for Singtel

We think Singtel will be able to pay our projection of FY3/23F DPS of 11.6Scts (75% payout), despite FCF/share of only 6.3Scts. This is due to the higher cash balance after generating substantial FCF in FY22F (boosted by Telkomsel's tower sales proceeds and ATN stake sale). Net debt/group EBITDA may also ease to 1.5x by end-FY23F (earnings recovery) from 1.6x at end-FY22F. For StarHub, its FCF/share may dip to -18.5Scts in FY22F (FY21: +18.1Scts), due to front-loaded Dare+ investments and potential 700MHz payment (16.3 Scts/share). Nevertheless, we think it should be able to meet its FY22 guidance of at least 5Scts DPS as we project its net debt/EBITDA to stay at a reasonable 2.2x by end-FY22F.

Singapore telcos' DPS & payout ratio



SOURCES: CGS-CIMB RESEARCH ESTIMATES, MONETARY AUTHORITY OF SINGAPORE, STRAITS TIMES, COMPANY REPORTS

Figure 2: ASEAN Telco sector comparison

Company	Bloomberg Ticker	Recom.	Closing Price (local curr)	Target Price (local curr)	Mkt Cap (US$ m)	Core P/E (x)		EV/EBITDA (x)		EV/OpFCF (x)		3-year CAGR (%)		Dvd Yield (%)	
						2021F	2022F	2021F	2022F	2021F	2022F	EPS	EBITDA	2021F	2022F
Maxis	MAXIS MK	REDUCE	4.02	3.80	7,487	24.0	27.1	10.3	10.1	16.2	14.9	1.5	2.8	4.2	4.2
Telekom Malaysia	T MK	ADD	5.06	7.50	4,544	15.5	16.0	5.4	5.0	8.8	8.2	19.3	6.8	2.6	3.7
MY telcos average (ex-outliers)						**25.9**	**24.3**	**8.4**	**8.0**	**13.8**	**12.7**	**10.3**	**3.9**	**3.2**	**3.8**
SingTel	ST SP	ADD	2.52	3.30	30,753	21.1	16.3	8.1	7.2	14.2	17.2	19.8	1.6	3.6	4.6
Starhub	STH SP	HOLD	1.25	1.40	1,598	14.7	27.2	5.9	7.8	11.7	20.7	(9.5)	0.2	5.1	4.0
SG telcos average (ex-outliers)						**17.9**	**21.7**	**7.0**	**7.5**	**12.9**	**18.9**	**5.2**	**0.9**	**4.3**	**4.3**
Telkom Indonesia	TLKM IJ	ADD	4,340	4,250	29,931	18.6	16.9	8.3	7.8	15.6	13.6	8.2	4.7	4.0	4.4
XL Axiata	EXCL IJ	ADD	2,860	3,550	2,135	27.6	20.6	4.8	4.5	12.5	11.2	44.3	6.0	1.8	2.9
Indosat	ISAT IJ	HOLD	5,475	6,200	3,073	42.1	nm	5.4	4.5	571.9	nm	(2.1)	23.8	31.9	0.0
Link Net	LINK IJ	ADD	4,370	5,200	871	13.2	13.1	5.5	4.9	16.7	13.5	2.3	7.5	2.3	2.3
Indo telcos average (ex-outliers)						**25.4**	**16.9**	**6.0**	**5.5**	**14.9**	**12.7**	**18.3**	**10.5**	**10.0**	**2.4**
Advanced Info Services	ADVANC TB	HOLD	229.00	247.00	20,982	25.2	24.8	8.2	7.9	11.8	11.3	0.8	3.1	3.4	3.6
Total Access Communication	DTAC TB	ADD	47.00	58.30	3,429	33.5	32.5	5.7	5.6	11.7	11.0	(18.9)	2.1	4.5	4.5
True	TRUE TB	HOLD	5.00	5.70	5,137	nm	nm	7.0	6.9	18.6	13.4	(14.3)	5.8	1.4	1.4
Jasmine Broadband Internet Infrastructure Fund	JASIF TB	REDUCE	11.20	10.00	2,761	10.3	10.1	10.5	10.2	10.5	10.2	1.7	0.9	8.5	8.3
Digital Telecommunications Infrastructure Fund	DIF TB	ADD	14.20	17.20	4,651	11.9	12.1	12.0	12.2	12.0	12.2	0.4	(0.2)	7.4	7.4
Intouch	INTUCH TB	HOLD	75.75	73.00	7,484	23.2	22.4	23.4	22.6	23.4	22.7	0.5	0.0	3.7	4.0
Thai telcos average (ex-outliers)						**20.8**	**20.4**	**11.1**	**10.9**	**14.7**	**13.5**	**(3.1)**	**1.9**	**4.8**	**4.9**
ASEAN Telcos average (ex-outliers)						**21.6**	**20.9**	**8.6**	**8.4**	**14.3**	**13.8**	**6.5**	**4.5**	**5.6**	**3.9**

Note: Share prices as of 28 Feb 2022; operating FCF (OpFCF) is calculated as EBITDA minus average 3-year forward capex; core P/E is share price divided by core EPS (i.e. reported EPS excluding one-off extraordinary items); included only P/E ratios ranging between c.10-40x, EV/OpFCF of c.5-25x & EPS/EBITDA 3-year CAGR of -100% to +100% in our calculation of sector averages
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, BLOOMBERG

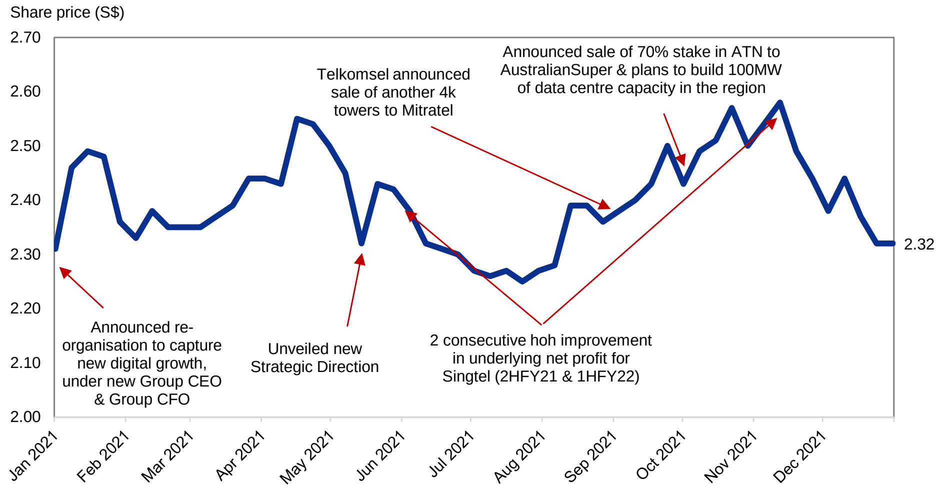
Ringing louder and clearer

Stay Overweight; Singtel remains top pick for better earnings outlook this year

2021 review: Telcos' flattish share price performance tells us...

The market stayed lukewarm on Singtel in 2021, with its share price ending the year largely flat despite various promising developments, including a) a change in Group CEO and Group CFO at the start of the year, which unveiled a new Strategic Direction in May 2021, b) two consecutive hoh improvement in underlying net profit (2HFY21, 1HFY22), c) tower asset sales in Australia and Indonesia (via 35% associate Telkomsel), and d) strong share price performance of its listed associates (Bharti: +35%, AIS: +31%, Globe: +65%), which form a combined 62% of its SOP valuation. While the market did get somewhat excited about the developments above, the increase in Singtel's share price was often temporary and the price came back down as soon as the initial euphoria dissipated (given no immediate positive earnings impact or extra cash returns to shareholders).

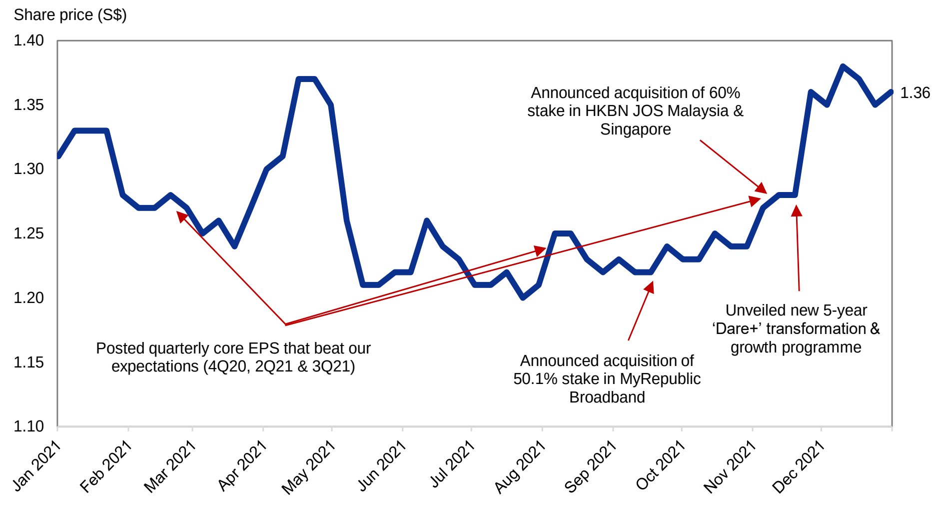
Figure 3: Singtel's share price & key developments in 2021



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, BLOOMBERG

For StarHub, its share price was also largely flat even though 2021 was not a bad year in terms of corporate developments. It posted a series of decent quarterly results across FY21 that beat our pessimistic expectations (in line with Bloomberg consensus). For the full year, StarHub posted improved core EPS yoy, despite intense mobile competition, and paid a higher DPS for the first time in five years. Cybersecurity has been the star, with revenue/EBIT (excluding one-off inventory write-off) for FY21 up 22%/103%. It also continued to pursue M&As, making several moderate size acquisitions, namely a 50.1% stake in MyRepublic Broadband (Unlisted) for S$70.8m, and 60% stake in HKBN JOS Singapore and Malaysia (Unlisted) for S$14.9m. These deals were executed at reasonable valuations, are mildly earnings-accretive immediately, and with potential future revenue synergies from the broadening customer base to which StarHub can sell its services to. On 22 Nov 2021, StarHub unveiled its new 5-year 'Dare+' transformation and growth programme at its annual Investor Day. Management guided for sizeable net benefit to be progressively realised from Dare+ (steady state +S$80m p.a. by FY26) and painted a rosy outlook for its cybersecurity arm Ensign in FY22 as its current orderbook already covers most of this year's budgeted revenue.

Figure 4: StarHub's share price & key developments in 2021



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, BLOOMBERG

…the market wants to "see the results today, not hear the promise of tomorrow"

We believe the uninspiring Singapore telco share price performance last year was a consequence of the market having grown weary on a) Singtel, after four consecutive years of declines in core EPS (FY03/17-21) and three consecutive years of DPS cuts (FY03/18-21); and b) Starhub, after seven consecutive years of core EPS declines (FY13-20) and 75% cut in DPS (FY16-20). Still, a silver lining is that Singapore telco share prices have been steadier since hitting their lows in Sep-Oct 2020, supported by signs of earnings stabilising to gradually improving in recent quarters, reasonably attractive valuations, and healthy dividend yields.

For there to be a sustainable re-rating, we believe the Singapore telcos will have to first and foremost convince the market with significant improvement in their actual results. Executing deals (asset sales, M&As) or expanding into new high growth areas may also help to drive a re-rating, if the deal/expansion could enhance cash returns to shareholders, is materially earnings-accretive not too far out into the future (i.e. within 2-3 years) or is seen to have the potential to create significant value.

Overweight the Singapore telco sector; outlook gradually improving

We stay Overweight on the Singapore telco sector. After a 6-year bear cycle over 2015-20 (StarHub: -71%, Singtel: -49%), Singapore telco share prices have started to stabilise in the past 12 months. We think earnings risk from more intense mobile competition and the sharp drop-off in roaming revenue due to Covid-19 international travel restrictions are now priced in. We expect mobile revenue to recover and continued healthy growth in the enterprise business in 2022F, while core net profit should improve (Singtel) or where it is down, to be only temporary (StarHub, upfront cost for transformation programme). The key sector downside risk is competition taking a turn for the worse in Singapore or in India, Indonesia and Australia where Singtel is present.

Singtel: Higher FY3/23F earnings, further forays into digital banking & asset monetisation

We keep our Add rating with an unchanged SOP-based TP of S$3.30 on Singtel, our Singapore telco top pick for 2022F, with an unchanged target price of S$3.30. We expect core EPS to rebound 13% yoy in FY3/22F, then grow a further 30%/17% in FY23F/24F; this should be its key re-rating catalyst, in our view. The EPS growth will likely be on the back of a) higher associate earnings (led by Bharti) due to a more favourable competitive landscape, b) Singapore's roaming revenue recovery post-Covid-19, and c) higher Optus earnings on the back of more rational competition and cost-saving initiatives. Singtel's potential entry into the digital banking businesses in Malaysia and Indonesia (in addition to its licence in Singapore) and further asset monetisation at lucrative valuations may also stir up more investor interest. Its current share price implies an FY3/23F EV/EBITDA of just 2.6x for Singtel Singapore and Optus (after deducting the associates' current market values), and FY22-24F yields of 3.6-5.4% p.a. Key downside risks are: i) more intense competition in Australia/India/Singapore, ii) weaker regional associate currencies against the S$, as well as iii) delays/failure in realisation of asset monetisation initiatives or expansion plans into higher growth business areas (e.g. regional data centres, digital banking).

Figure 5: Our SOP-based target price for Singtel remains at S$3.30

FYE 31 March (S$ m)	FY22F	FY23F	FY24F	FY25F	FY26F	FY27F	FY28F	FY29F	FY30F	FY31F
EBIT (1-T)	820	821	933	978	1,021	1,084	1,152	1,224	1,300	1,379
Depreciation	2,257	2,214	2,209	2,196	2,185	2,177	2,170	2,165	2,161	2,157
Capex	-477	-2,816	-3,769	-2,144	-2,144	-2,144	-2,144	-2,144	-2,144	-2,144
Annual FCFF	**2,600**	**219**	**-627**	**1,030**	**1,062**	**1,117**	**1,178**	**1,245**	**1,317**	**1,392**
Terminal value									0	23,220
Present value of cash flow	**2,429**	**191**	**-511**	**784**	**756**	**742**	**731**	**722**	**713**	**12,446**
Total NPV (Singapore & Optus)	**19,002**									
Net cash/(debt) at end-FY21	-12,365									
Regional investments	47,174									
Value of Equity	**53,811**									
No of shares (m)	16,382									
Value of Equity per share (S$)	**3.30**									

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 6: We value its associates at S$2.88 per Singtel share

Associates	% of RNAV	Stake (%)	Value (S$ m)	Value/share (S$)	Valuation Methodology
Advanced Info (ADVANC TB)	12.9%	23.3	6,986	0.43	Based on CGS-CIMB TP
Intouch (INTUCH TB)	3.7%	21.1	2,016	0.12	Based on consensus TP
Globe Telecom (GLO PM)	9.3%	47.0	5,020	0.31	Based on consensus TP
Bharti (BHARTI IN)	40.2%	31.7	21,715	1.33	20% discount to consensus TP
Telkomsel	18.4%	35.0	9,926	0.61	Based on DCF
Singapore Post (SPOST SP)	0.8%	21.7	439	0.03	Based on CGS-CIMB TP
Netlink Trust (NETLINK SP)	2.0%	25.0	1,072	0.07	Based on consensus TP
Total NAV			**47,174**	**2.88**	

Note: Consensus' target prices are from Bloomberg (as of 16 Feb 2022); Singtel's SOP-based TP excludes potential value accretion from regional digital banking forays as these may be realised over medium/longer-term

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, BLOOMBERG

Figure 7: Singtel's current share price implies an FY3/23F EV/EBITDA of just 2.6x for Singtel Singapore and Optus, based on our estimates

Associates	Singtel's stake (%)	Value (S$ m)	Value/Singtel share (S$)
Advanced Info (ADVANC TB)	23.3	6,594	0.40
Intouch (INTUCH TB)	21.1	2,130	0.13
Globe Telecom (GLO PM)	47.0	4,272	0.26
Bharti (BHARTI IN)	31.7	21,551	1.32
Telkomsel	35.0	9,990	0.61
Singapore Post (SPOST SP)	21.7	308	0.02
Netlink Trust (NETLINK SP)	25.0	930	0.06
Value of associates (based on market prices)*		**45,776**	**2.79**
Singtel's market cap*		41,282	2.52
Residual equity value (Singtel Singapore + Optus)		**-4,494**	**-0.27**
Net Cash/(Debt) at end-FY21		-14,570	-0.89
Implied EV (Singtel Singapore + Optus)		**10,076**	0.62
FY22F Operating EBITDA		3,864	
Implied FY22F EV/EBITDA (Singtel Singapore + Optus) (x)		**2.6**	

*All associates' values are based on current market values, except for Telkomsel's value, which is based on our estimated DCF-based equity value; share prices as of 28 Feb 2022

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, BLOOMBERG

StarHub: Big core EPS drop in FY22F; revisit in 1H23F ›

We reiterate our Hold rating on Starhub with unchanged target price of S$1.40, after applying a 20% discount to its DCF-based fair value given the weak FY22F earnings outlook. We expect its cybersecurity business to grow robustly (14% of total revenue, 15% growth in FY22F), while its mobile, broadband and pay TV revenues stabilise. However, we expect core EPS to fall 46% in FY22F due to the initial cost impact from the front-loaded investment for Dare+, before rising 23%/10% in FY23F/24F as these upfront costs abate. We have yet to bake in the net benefits from Dare+ which StarHub expects will start from 2H23 onwards and reach a steady state of +S$80m p.a. by FY26, or a potential 66% upside to our forecast for that year. StarHub is currently trading at FY22F EV/OpFCF of 20.7x, which falls to 11.8x in FY23F. The latter is in line with/at a 16% discount to the ASEAN Telco average/its own 14-year trading average. However, dividend yields are decent at 4.0% p.a. in FY22-24F. Upside/downside risks: lower-than-expected costs/stiffer competition.

Figure 8: StarHub's DCF-based target price remains at S$1.40 (WACC: 7.1%, terminal growth: 1.0%)

FYE 31 Dec (S$ m)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
EBIT (1-T)	110	135	143	144	149	154	158	163	167	171
Depreciation & amortisation	267	312	323	321	316	312	309	307	305	304
Capex	-667	-285	-228	-191	-192	-192	-193	-193	-194	-195
Annual FCFF	**-290**	**162**	**238**	**274**	**273**	**274**	**275**	**276**	**278**	**280**
Terminal value										4,598
Present value of cash flow	**-271**	**142**	**194**	**208**	**194**	**181**	**170**	**159**	**149**	**2,446**
Value of firm	**3,571**									
Net cash/(debt) at end-FY21F	-532									
Value of Equity	**3,040**									
Value of Equity per share (S$)	**1.75**									
20% discount (%)	-0.35									
Target price (S$)	**1.40**									

Key assumptions

Risk-free rate (RFR)	2.5%
Market risk premium (MRP)	7.0%
Beta	0.8
Cost of equity [Rf + MRP(beta)]	**8.1%**
Terminal growth rate	**1.0%**

Capital	% of total	Pre-tax cost	Tax rate	Post-tax cost
Equity	80.0%	8.1%	17.0%	6.7%
Debt	20.0%	3.3%		3.3%
WACC	**100.0%**			**7.1%**

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Netlink NBN Trust: Keep an eye on outcome of the upcoming interconnection pricing review

Reiterate Add on Netlink Trust (NLT) with an unchanged DDM-based TP of S$1.10 (annual DPU growth: 1.5%, cost of equity: 5.7%). Despite concerns over the outcome of the upcoming interconnection pricing review, we believe NLT can sustain a stable dividend yield of 5.4-5.5% p.a. in FY3/22-24F, given its strong cash flow generation and ability to tap its balance sheet strength to fund future capex. With its significant debt headroom, NLT continues to seek M&A opportunities within the telecom infrastructure space; this could help to re-rate the stock. Key downside risks include lower-than-expected interconnection offer (ICO) pricing in the upcoming review.

The key focus this year will be on the outcome of Netlink Trust's negotiations with Infocomm Media Development Authority (IMDA) on the ICO pricing for the next review period (2023-27). We expect the pricing review to be completed sometime in mid-2022F before being implemented in Jan 2023F. Overall, we do not expect a surprise from the pricing review exercise, though we have conservatively priced in a 5% reduction in ICO pricing for the next review period in our forecasts.

On the determination of pricing in the upcoming review, we believe the two key drivers are: regulated asset base (RAB) and return on capital (pre-tax WACC). Management shared that the RAB has increased vs. the previous review, given the continued capex spend by NLT (which has exceeded initial expectations). Meanwhile, the determination of pre-tax WACC, which will be subjected to more negotiation, is dependent on the 1) risk-free rate, and 2) level of returns for similarly RAB-governed peers. While current interest rates remain low, we believe the regulators could also factor in the forward rates, which the market expects to rise in the coming years.

Based on our sensitivity analysis, we believe NLT is in a good position to maintain stable or gradually increasing DPU in the coming years, assuming no surprises from the upcoming ICO pricing review. On our base case of 5% ICO price reduction while DPU continues to rise on a 1.5% p.a. trajectory, we assume NLT's net debt to EBITDA ratio to only increase slightly to 2.3x by FY30F, up from FY21's 2.0x.

Figure 9: Sensitivity analysis of impact to NLT's net debt to EBITDA ratio by FY30F assuming various ICO pricing review outcome and DPU growth

		Annual DPU growth					
		0.00%	0.50%	1.00%	1.50%	2.00%	2.50%
ICO price change	2.5%	1.18	1.31	1.45	1.59	1.73	1.87
	0.0%	1.39	1.53	1.67	1.81	1.96	2.11
	-2.5%	1.62	1.76	1.91	2.06	2.21	2.37
	-5.0%	1.86	2.01	2.16	2.32	2.48	2.65
	-7.5%	2.12	2.28	2.44	2.60	2.77	2.94
	-10.0%	2.40	2.56	2.73	2.90	3.08	3.26

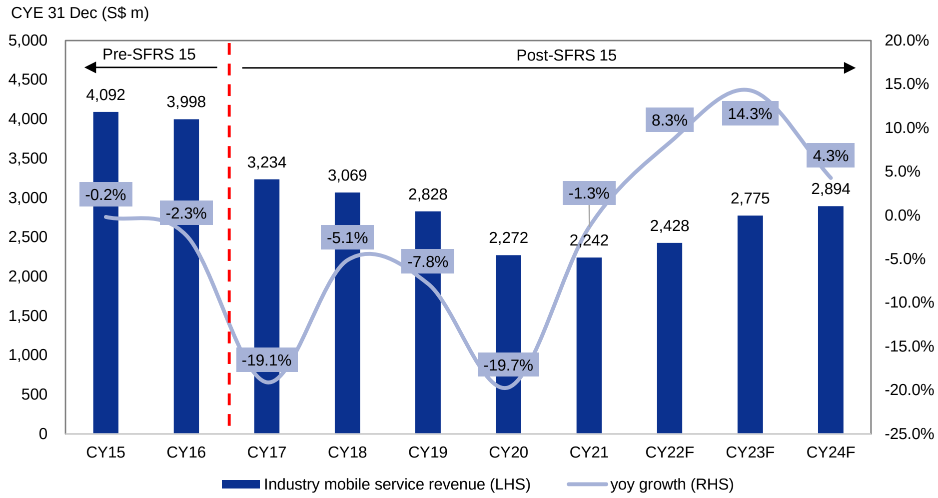
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Singapore mobile business outlook

Rebound in CY22F mobile service revenue as subs take up 5G, and negative effects from Covid-19 abate

We forecast the Singapore industry mobile service revenue (based on the Big 3 telcos) to rebound 8.3% in CY22F and rise a further 14.3%/4.3% in CY23F/24F, after having declined 19.7%/1.3% in CY20/21 due to the negative impact from Covid-19. This will be driven by some average revenue per user (ARPU) uplift from subs upgrading to 5G and partial recovery in roaming/prepaid SIM sales from 2H22F, while intense competition and reduction in excess data usage revenue will be less of a drag on the topline. We believe roaming accounted for c.19%/12% of Singtel Singapore's/StarHub's mobile service revenue in CY19, i.e. prior to Covid-19. If roaming does not recover at all in CY22F/23F, industry mobile service revenue may still grow 5.7%/8.1% yoy, in our estimate.

Figure 10: Singapore industry mobile service revenue trend



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Big 3 offering 5G services largely for extra S$10-25/month

StarHub and Singtel are seeing quite good traction in their subs upgrading to 5G plans, reporting >300k 5G subs each or 15%/7% of their total/Singapore mobile subs at end-CY21. This is an increase from 250k/200k at end-3Q21. We expect this trend to continue across CY22F, as subs re-contract or sign-up to 5G plans that were introduced in Feb-May 2021. For Singtel, subs who want device subsidies can only re-contract on its new 5G XO Plus plans (previous 4G XO plans are no longer available for re-contracting). Similarly, StarHub only offers two entry-level 4G plans (S$45 for 5GB/S$55 for 15GB) for re-contracting, with bigger quotas only available with its 5G plans.

Singtel's new XO Plus 5G device-bundled postpaid plans are priced S$10-17/month higher and come with 10-20GB extra data quota vs. its previous XO 4G plans, which are no longer offered to new subs. It also charges an extra S$15/month for its 5G SIM Only Plus plans (though this is waived for the first six months) with an extra 10GB vs. its existing comparable 4G SIM Only Plus plan. Meanwhile, StarHub's subs have to pay an extra S$15-25/month to upgrade from their 4G plan to either a Mobile+ 5G 2-year device-bundled or SIM-only plan, which comes with 10-20GB more quota. M1 is also offering a 5Go Plus Booster add-on for S$15/month with 25GB extra quota for its Bespoke SIM-only and 2-year contract plans. As part of its introductory promotion for new/recontracting subs, M1 is offering 5Go Plus for free for the first 3-6 months for all plans (ex-Unlimited), and for S$5/month from the 7th month onwards (until further notice) for Unlimited plan subs.

Figure 11: Comparison of 5G vs. 4G 2-year device-bundled plans (as of 31 Jan 2022)

Telco	Singtel					StarHub				M1						
4G																
Plan	[XO 48]	[XO 78]	[XO 108]			**S$45 bundle (2 yrs)**	**S$55 bundle (2 yrs)**	[S$80 bundle] (2 yrs)	[S$110 bundle] (2 yrs)	**Bespoke bundle (2-yr contract)**						
Monthly price (S$)	48.0	78.0	108.0			50.35	60.35	85.35	115.35	56.30	71.30	84.30	96.30	116.30	161.30	241.30
Base data (GB)	5	30	50			5	15	40	70	20	35	45	65	80	125	UL
Bonus data (GB)	5	10	20			0	0	0	0	0	0	0	0	0	0	0
Total data (GB)	10	40	70			5	15	40	70	20	35	45	65	80	125	UL
Calls (min)	100	300	500			100	100	300	500	200	300	300	500	800	1,200	UL
Other benefits	10GB/day weekend data					Free roaming & 3-mth Amazon Prime				UL weekend data (10GB/day FUP) for 3 mths for new/port-in subs						N/A
										Free caller ID worth S$5.35 (3 mths)						
5G																
Plan	**XO Plus 50 + 5G add-on**	**XO Plus 68**	**XO Plus 88**	**XO Plus 118**	**XO Plus 168**	**Mobile + S$65 (2 yrs)**	**Mobile + S$95 (2 yrs)**	**Mobile + S$125 (2 yrs)**	**Mobile + S$155 (2 yrs)**	**Bespoke bundle (2-yr contract) + 5Go Plus Booster**						
Monthly price (S$)	65.0	68.0	88.0	118.0	168.0	70.4	100.4	130.4	160.4	71.30	86.30	99.30	111.30	131.30	176.30	246.30
Base data (GB)	20	30	60	80	120	30	60	90	120	45	60	70	90	105	150	UL
Bonus data (GB)	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0
Total data (GB)	20	30	60	80	150	30	60	90	120	45	60	70	90	105	150	UL
Calls (min)	100	300	600	800	1,200	200	600	800	1,000	200	300	300	500	800	1,200	UL
Other benefits	Free 1-mth RiotGo	Free 3-mth Bookful, MelodyVR & RiotGO + S$200 Price plan voucher (for XO Plus 168 only, issued every 21 mths)				Free roaming, 12-mth Disney+ (for all except S$65 2-yr plan), 3-mth Hotstar, 1-mth Antstream & 3-mth Amazon Prime				UL weekend data (10GB/day FUP) for 3 mths for new/port-in subs						N/A
										5Go Plus Booster promo: free for 3 mths & S$5/mth for next 3 mths (<S$78.95 plans); free for 6 mths (>S$78.95 plans)						
										Free caller ID worth S$5.35 (3 mths)						

Note: UL: Unlimited; FUP: fair usage policy; [in brackets]: no longer available for new subs; prices for StarHub & M1 plans are adjusted to include caller ID fee (S$5.35/mth)

SOURCES: CGS-CIMB RESEARCH, SINGTEL, STARHUB, M1

Figure 12: Comparison of 5G vs. 4G SIM-only plans (as of 31 Jan 2022)

Telco	Singtel		StarHub		M1						
4G											
Plan	**SIM Only Plus 30**		**SIM-only (no contract)**	**SIM-only (1 yr)**	**Bespoke SIM-only (no contract)**						
Monthly price (S$)	30.0		25.35**	25.35**	21.30	26.30	25.30^	36.30^	61.30	76.30	111.30
Base data (GB)	40		30	35	5	12	30	40	60	90	UL
Bonus data (GB)	20^^		30**	45**	0	0	20^	20^	0	0	0
Total data (GB)	60		60	80	5	12	50	60	60	90	UL
Calls (min)	1,000^^		UL**	UL**	1100*						
Other benefits	Additional 18GB for 3 mths		Free roaming & 3-mth Amazon Prime		UL weekend data (10GB/day FUP) for 12 mths for new/existing subs						N/A
			Additional 20GB for 3 mths for new/recontract subs		Free caller ID worth S$5.35 (3 mths)						
5G											
Plan	**SIM Only Plus 45**	**SIM Only Plus 55**	**Mobile+ S$38 SIM-only (1 yr)**	**Mobile+ S$45 SIM-only (1 yr)**	**Bespoke SIM-only (no contract) + 5Go Plus Booster**						
Monthly price (S$)	45.0	45.0^*	43.35	50.35	36.30	41.30	40.30	51.30	76.30	91.30	116.30
Base data (GB)	50	70	60	80	30	37	75	85	85	115	UL
Bonus data (GB)	20^^	20^^	10	10	0	0	0	0	0	0	0
Total data (GB)	70	90	70	90	30	37	75	85	85	115	UL
Calls (min)	1,000^^	1,500^^	1,000	1,000	1100*						
Other benefits	S$100 voucher for new/recontracting subs for selected handsets		Free roaming, 12-mth Disney+ (for all except S$65 2-yr plan), 3-mth Hotstar, 1-mth Antstream & 3-mth Amazon Prime		UL weekend data (10GB/day FUP) for 12 mths for new/existing subs; first 3 mths free for new/recontract subs						First 3/6 mths free for new/recontract subs
	Additional S$15/mth discount (S$45 plan) & 18GB for 6 mths		Additional S$10/mth discount (6 mths) & 20GB (3 mths)	Additional 20GB for 3 mths	5Go Plus Booster promo: free for 3 mths & S$5/mth for next 3 mths						
					Free caller ID worth S$5.35 (3 mths)						

Note: UL: Unlimited; FUP: fair usage policy; ^^valid for 12 mths; ^*Includes S$10/mth discount for first 12 mths; **S$5 discount, bonus quota & UL calls valid for first 12 months for new/recontract subs; ^^^includes 10GB for 12 mths; ^Includes S$5/10 discount & bonus quota for 30/40GB plan valid for 12 mths for new subs; *Includes 1,000 min/SMS for 12 mths for new subs; prices for StarHub & M1 plans are adjusted to include caller ID fee (S$5.35/mth)

SOURCES: CGS-CIMB RESEARCH, SINGTEL, STARHUB, M1

SIM-only offers to stabilise in 2022F

The SIM-only market has stayed highly competitive in the past 12 months. A mobile virtual network operator (MVNO) has exited the market (Grid Mobile [Unlisted]) but two new ones, Changi Mobile (Unlisted) and ZYM Mobile (Unlisted), entered the market, increasing the number of brands in the market place to 15. TPG Singapore (Unlisted; subsidiary of Tuas [TUA AU, Not Rated, CP: A$1.92]) continued to market its aggressive S$10/S$18 per month offers (50/80GB base quota) and, since 10 Apr 2021, launched a 50GB bonus quota promotion (which has been extended numerous times; now valid till 31 Mar 2022). Various players have incrementally enhanced the attractiveness of their plans by introducing richer quotas and price discounts in 2021, albeit not as significantly as in 1H20 (when TPG first launched commercial services), based on our checks on telcos' offers on their respective websites. Without considering network quality, we believe the best SIM-only offers in the market currently are by TPG/Zero 1 (Unlisted) at S$10/S$20 per month for 100GB (the latter only offered to port-in subs from networks other than Singtel and its MVNOs, at selected retailers), followed by ViViFi's S$31.90/month for 120GB.

Figure 13: Comparison of SIM-only mobile postpaid plans by Singapore operators (as of 31 Jan 2022)

Telco	Singtel	StarHub	M1	TPG	Circles.Life	MyRepublic	giga	gomo	ViViFi	redONE	Zero 1	CMLink	Changi Mobile	ZYM Mobile	Geenet Mobile
Description	MNO	MNO	MNO	MNO	MVNO	MVNO	StarHub's sub-brand	Singtel's sub-brand	MVNO	MVNO	MVNO	MVNO	MVNO	MVNO	MVNO
Host network	N/A	N/A	N/A	N/A	M1	M1	StarHub	Singtel	Singtel	StarHub	Singtel	Singtel	M1	Singtel	M1
Launch date	N/A	N/A	N/A	Mar 2020	Jun 2016	Jun 2018	May 2019	Mar 2019	Jul 2019	Jul 2019	Mar 2018	Mar 2020	Jun 2021	Sep 2021	Mar 2020
Plan	**SIM Only Plus 30**	**S$25 SIM Only**	**30GB**	**50GB SIM Only**	**S$5**	**Pro**	**N/A**	**N/A**	**Share**	**Amazing 28**	**Jumbo 100GB**	**S$30**	**Pro**	**ZYM 28**	**N/A**
Monthly fee (S$)	30.00	25.35***	25.30^	10.00	30.00	24.00**	25.00	30.00	31.90~	28.00	20.00	30.00	20.00	28.00	30.00
Contract (mths)	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	2	N/A	N/A	N/A	2	N/A
Base data (GB)	40	30	30	50	20	70	60	60	40	50	100	60	60	50	100
Bonus data (GB)	20@	30***	20^	50@^	0	0	0	0	80~	0	0	0	0	0	0
Total data (GB)	**60**	**60**	**50**	**100**	**20**	**70**	**60**	**60**	**120**	**50**	**100**	**60**	**60**	**50**	**100**
Calls (mins)	1000@	UL***	1100*	UL	100	1000	2000	500	300	800	800	800	500	UL	500
SMS	500@	1000	1100*	30	25	1000	2000	500	100	800	100	400	500	500	500
Other benefits	Extra 18GB (3 mths)	Free roaming, Amazon Prime (3 mths)	UL weekend data (10GB/day FUP) for 12 mths for new/existing subs	1GB roaming data in 57 countries	Price for new subs; Includes S$2 for UL incoming calls	Data speeds throttled to 384kbps-1Mbps (average: 500kbps) after quota exceeded	Data roll-over of up to 60GB (2 mths max)	Rollover up to 100GB, 1000 mins & 1000 SMS to next mth	Base data shareable with up to 9 lines (S$6/mth/line)	Quota/calls usable in SG/MY, throttled to 128kbps after quota exceeded	Only for port-in subs not from Singtel & its MVNOs, at selected retailers	Data can be used in SG, CN, HK; Half of call mins are to 6 countries			Free one-time 10GB bonus quota for port-in subs (not from M1)
		Extra 20GB (3 mths) for new/recontract subs	Free caller ID worth S$5.35 (3 mths)	300 local fixed line mins + UL on-net SMS							500 mins IDD (5 countries)	Extra 20GB for first 6 mths			1000 mins IDD (5 countries)

Note: UL: unlimited; FUP: fair usage policy; @valid for 12 mths; ***Includes caller ID fees (S$5.35/mth), S$5 discount, bonus quota & UL calls valid for first 12 mths for new/recontract subs; *Includes 1,000 min/SMS valid for 12 mths for new subs; @^valid till 31 Mar 2022; **Includes S$3/5 monthly discount valid until further notice; ^Includes S$5/10 discount & bonus quota valid for 12 mths for new subs; ~Includes S$2/mth discount & bonus quota valid for first 12 months

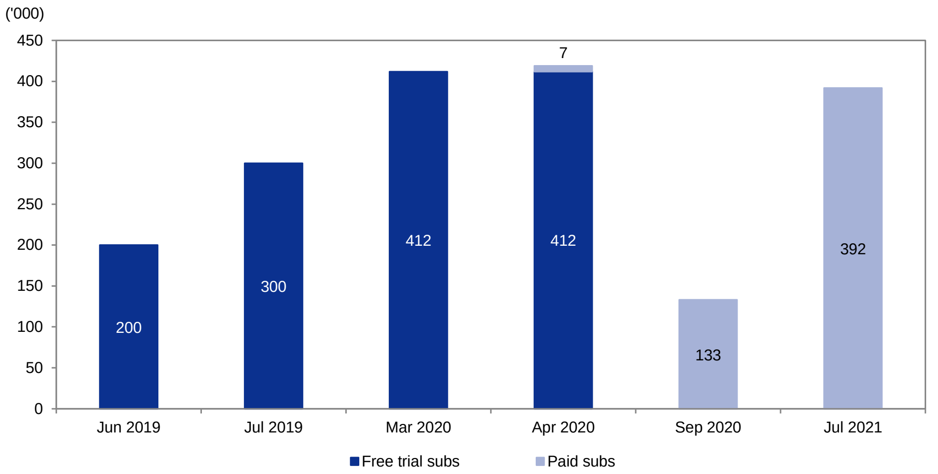
SOURCES: CGS-CIMB RESEARCH, SINGTEL, STARHUB, M1, TPG, CIRCLES.LIFE, MYREPUBLIC, GIGA, GOMO, VIVIFI, REDONE, ZERO 1, CMLINK, CHANGI MOBILE, ZYM MOBILE, GEENET

Although we do not see market repair yet in 2022F, we believe SIM-only offers (c.20-25% of postpaid subs, according to our channel checks) may stabilise as:

a) Data quotas are currently already very generous for entry-level plans, relative to subs' data usage levels (4QCY21 mobile data usage per sub per month: Singtel 8GB, StarHub 13GB). This, coupled with affordable subscription fees of S$20-30/month for incumbents' offers, may discourage subs from going through the hassle of switching networks to get better deals, and instead turn their consideration towards other factors such as network quality/coverage and customer service/support, in our view.

b) Incumbents may feel less pressured to react to TPG given the latter's modest subs traction thus far. Almost two years after the launch of its commercial services in Mar 2020, TPG reported it had 392k paid subs (or 4.5% market share) at end-Jul 2021, vs. 133k paid subs (1.6% market share) in early-Sep 2020. We believe a major part of the increase could have come from the conversion of its more than 400k free trial subs previously (based on company filings). Furthermore, findings from our channel checks suggest that the incumbents have not seen much churn out to TPG to-date.

Figure 14: TPG reported 392k paid subs (4.5% market share) at end-Jul 2021



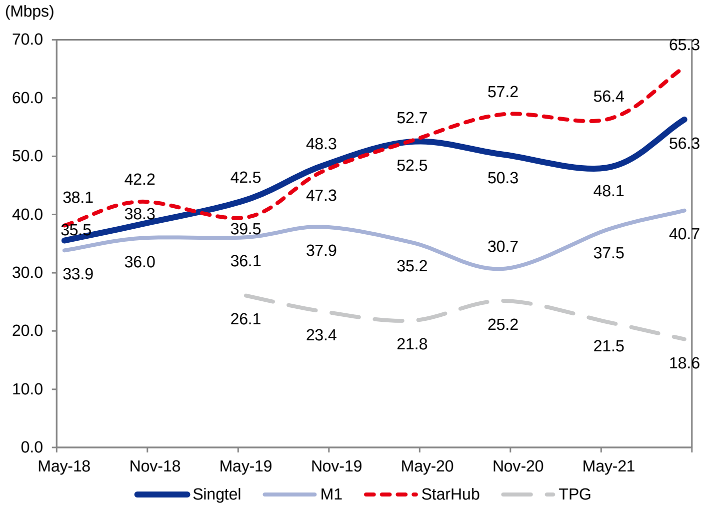
SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, STRAITS TIMES

c) TPG's network quality and coverage have remained inferior to the Big 3 telcos (Singtel, StarHub and M1), with the gap actually widening since end-2020, as per the Aug-Oct 2021 network test report from Opensignal (network test provider). This is despite its continued network rollout in 2021, which saw it achieving coverage of all Metro Rail Transit (MRT) lines at end-Oct 2021 and meeting its full rollout obligation ahead of Infocomm Media Development Authority's (IMDA) end-Dec 2021 deadline. This may see TPG's subs traction remaining modest and confine it to primarily competing in the secondary SIM market (for second devices, back-up, elderly/kids) in 2022F, in our view.

d) The gap in network quality between TPG and the incumbents may further widen in the next 12 months as the latter progressively roll out 5G standalone (SA) services (using their 2.1GHz and 3.5GHz spectrum). The Big 3 telcos launched their respective 5G SA service offerings in May-Aug 2021. StarHub in its 2021 Analyst Day briefing presentation deck reported that its 5G SA population coverage was an estimated 75% at end-2021, with expected nationwide coverage by end-2022. Meanwhile, M1 in a press release (25 Jan 2021) said its 5G SA network spanned c.65% of Singapore; it targets to achieve 99% nationwide coverage by end-2022, according to its website. While Singtel has not disclosed its 5G coverage, a cursory glance at nPerf's (network speed test platform) network test shows that its coverage is much wider than M1's and, to a lesser extent, StarHub's.

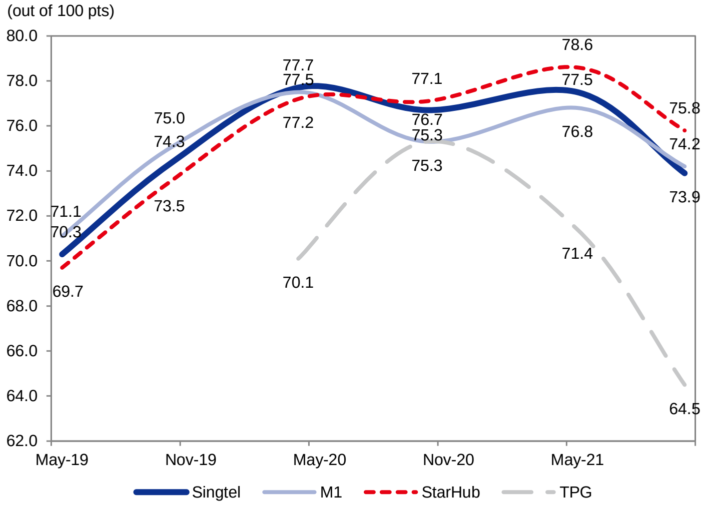
TPG will not be able to offer full-speed 5G services until/unless it enters into a wholesale agreement with the incumbents, in our view. While TPG can use the 2.3GHz (40MHz) and recently acquired 2.1GHz (2x10MHz) to offer 5G service, the bandwidth available to it is relatively small (5G ideally requires a bandwidth of 80-100MHz to be able to deliver speeds that are much faster vs. existing 4G networks). TPG can use its millimetre-wave (mmWave) spectrum to deliver super-fast 5G services but its coverage would be extremely limited.

Figure 15: OpenSignal's overall download speeds



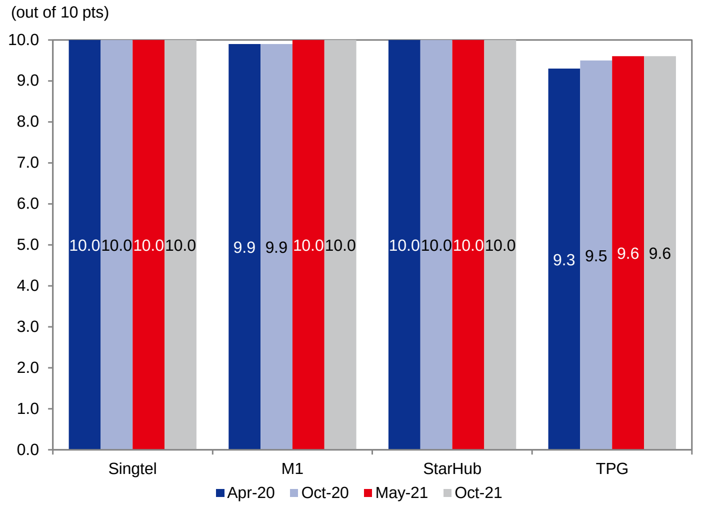
SOURCES: CGS-CIMB RESEARCH, OPENSIGNAL

Figure 16: OpenSignal's overall video experience



SOURCES: CGS-CIMB RESEARCH, OPENSIGNAL

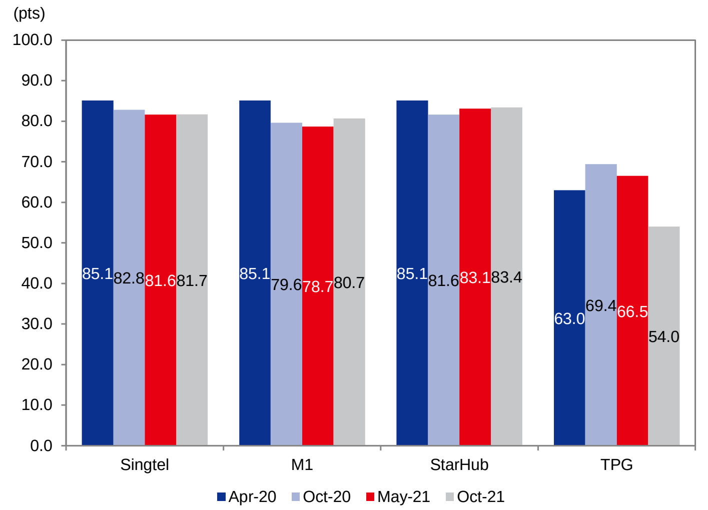
Figure 17: OpenSignal's 4G coverage experience



^Refers to the proportion of time Opensignal users are connected to 4G relative to the locations visited by users of all operators

SOURCES: CGS-CIMB RESEARCH, OPENSIGNAL

Figure 18: OpenSignal's overall games experience (a measure of latency)

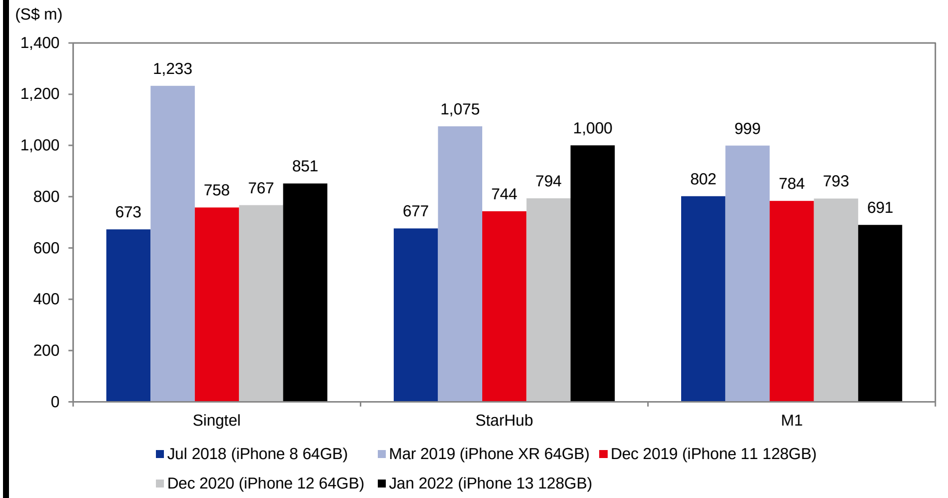


SOURCES: CGS-CIMB RESEARCH, OPENSIGNAL

Device-bundled contract plans did not see major changes; handset subsidies stayed rational

While Singtel introduced its XO Plus plans in Feb 2021, StarHub its Mobile+ plans in Jun 2021, and M1 rejigged its Bespoke device-bundled plans over the past year, we have not seen any major price cuts or increases in data quotas since at least mid-2019. We note that device subsidies have risen over the past 12 months for Singtel and StarHub (though not back to the high levels seen in 1Q19). However, we believe that these remain rational, as the increase corresponds to higher-priced 5G plans. For example, for Singtel subs that were previously on the XO 78 plan and re-contract on the new XO Plus 88 plan, it provides an additional subsidy of S$87 on the iPhone 13 but earns extra S$240 of subscription fees over the 2-year contract period.

Figure 19: Device subsidies have risen for Singtel & StarHub in the past 12 months but this corresponded with higher-priced 5G plans



Note: Singtel's data is based on XO Plus 88 (Jan 2022), XO 78 (Mar 2019-Dec 2020) & Combo 3 (Jul 2018) plans; StarHub's data is based on Mobile+ S$95 (Jan 2022), S$80 (Dec 2020), S$75 (Mar-Oct 19) & S (Jul 2018) plans; M1's data is based on base plan + S$15 bundle + 5Go Plus Booster (Jan 2022), +S$38 bundle (Dec 2020), +S$48 bundle (Oct 19), & mySIM(e) 70 (Jul 2018 & Mar 2019) plan

SOURCES: CGS-CIMB RESEARCH, SINGTEL, STARHUB, M1

Decline in excess data usage revenue to be less of a drag in 2022F

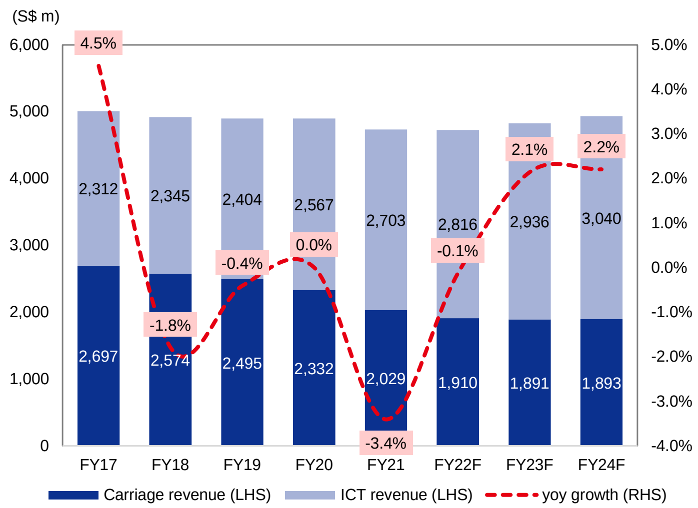
On the back of competitive pressure, StarHub launched its revised #hellochange postpaid plans in Dec 2018, followed by Singtel's launch of its XO plans in Mar 2019 and M1's launch of its One plan in May 2019. These plans were not only simpler in construct but also much more generous in terms of data quotas, resulting in a reduction of excess data usage revenue for telcos as subs progressively re-contracted into the plans upon the expiry of their previous 2-year device-bundled contracts. We believe most (if not all) subs would have made the transition by mid-2021, thus resulting in a less significant ARPU drag from the decline in excess data usage in 2022F.

Enterprise to remain a bright spot for growth into 2022F

Robust growth in StarHub's enterprise revenue due to M&As and cybersecurity

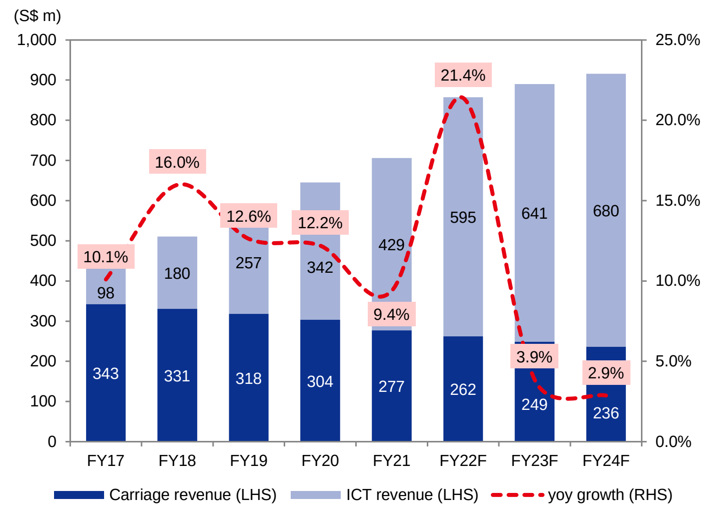
We expect StarHub's enterprise revenue (38% of FY22F total revenue) growth to accelerate to 21.4% in FY22F (FY21: +9.4%), boosted by the acquisition of JOS Singapore and Malaysia (completed at end-2021). Even if we exclude the contribution from JOS, we project StarHub's FY22F enterprise revenue to rise a healthy 4.7%, led by 15% growth in Cybersecurity revenue (36% of FY22F total enterprise revenue). We expect enterprise revenue (ex-mobile) for Singtel Singapore (58% of total FY23F Singtel Singapore revenue) to also grow, albeit at a slower rate of 1.7% in FY3/23F and 1.3% in FY24F (FY21/22F: -0.4%/-0.1%), driven by growth in ICT but partially offset by the declining legacy carriage business.

Figure 20: Singtel Singapore's enterprise revenue



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 21: StarHub's enterprise revenue



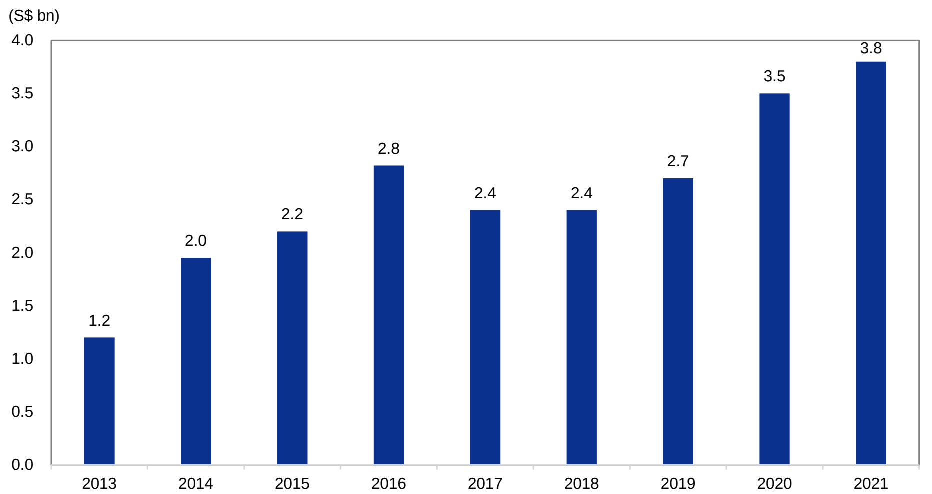
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Government further boosts ICT spend by 9% to new highs

Based on a 23 Jun 2021 press release by the Singapore Government Technology Agency (GovTech), the government will spend up to an estimated S$3.8bn on info-communications technology (ICT) procurement for FY3/22, a 9% increase from FY3/21's procurement value of S$3.5bn. This spending will go towards transforming government digital services used by both citizens and businesses, and re-engineering government digital infrastructure to support modern application development. This is the highest annual ICT spend by the Singapore government (on our records) and should provide a boost to both Singtel and StarHub; as we gathered from our channel checks, 20-30% of their CY21 enterprise revenue came from the public sector.

An estimated S$2.7bn will be spent on 250 projects to transform, integrate and streamline digital services across different sectors (including a new national business registry and regulatory system). Of the S$2.7bn the government expects to spend on digital application services, 44% of the latter will be developed on the cloud. To date, the government has close to 600 systems on the cloud and is on track to have 70% of eligible systems on the cloud by FY3/24. Over S$500m will be spent to accelerate the adoption and deployment of Artificial Intelligence (AI) for the public sector, according to GovTech.

Figure 22: Singapore's government further boosts ICT spend by 9% for FY3/22



SOURCES: CGS-CIMB RESEARCH, SINGAPORE GOVERNMENT TECHNOLOGY AGENCY

Private sector to continue digitalisation journey

We expect continued strong demand for enterprise services from the private sector, supported by Singapore's GDP growth of 4.2% in 2022F (2021: +7.2%), based on CGS-CIMB Research's estimates. Similar to the public sector, private enterprises are on a digitalisation drive to improve cost efficiencies, scalability, agility, resiliency and decision-making capabilities (via data analytics), as well as strengthening cybersecurity systems. StarHub's acquisition of JOS SG and MY last year and Strateq the year before will help to extend its range of ICT service capabilities and give it a wider enterprise client base to sell these services to, in our view. Meanwhile, Singtel is working to accelerate NCS's expansion into the Singapore private sector (traditionally, it focused on the public sector), as well as geographically into Australia and Greater China. It also plans to build up to 100MW of data centre (DC) capacity in Singapore, Thailand and Indonesia in the next 3-5 years, which may involve investments of c.S$1bn, 50% of which may be equity funded by Singtel and its partners (Gulf Energy [GULF TB, Not Rated, CP: THB50.50] and Telkom Indonesia [TLKM IJ, Add, TP: Rp4,250, CP: Rp4,340]). In Singapore, Singtel is building a new DC with 30-40 MW capacity that will be integrated with its existing cable landing station in Tuas; this will be ready in 3-4 years.

Singtel's regional forays to build a regional digital banking business may stir up some investor interest

GSS bank to commence operations in 2H22F…

We believe the market may start to get more excited as it sees Singtel making headway in building a regional digital banking business with Grab this year. After securing one of two digital full bank (DFB) licences from the Monetary Authority of Singapore (MAS) on 4 Dec 2020, we expect the Grab-Singtel Singapore (GSS) bank to commence operations in 2H22F. We do not see GSS bank having a major impact on Singtel's net profit in the next five years, as a) it will operate in a restricted phase for 1-2 years (with an aggregate deposit cap of S$50m, it cannot widely solicit deposits from the public); and b) there could be significant costs incurred to drive customer acquisitions, even after it transitions to a fully-functioning DFB within 3-5 years (i.e. CY24-26F). Nonetheless, we view this positively for Singtel over the medium to long term, as it represents an expansion into a potentially profitable business and a diversification away from its mature telco businesses. The partnership with Grab also allows both parties to leverage each other's sizeable customer bases and insights (i.e. faster go-to-market, lower customer acquisition costs), as well as their digital capabilities, which raises the chance of success, in our view.

…, which may add 15 Scts/share to Singtel's fair value in the medium term

We believe investors may look past GSS's profitability and focus on the growth of its business, or specifically its loan book size, in evaluating its future prospects and potential valuation. We believe the two DFBs in Singapore may secure a combined 2% market share of total Singapore resident loans in five years, if we refer to the South Korean experience (see below). Assuming GSS has an equal share of this, its total loans could be S$10.4bn by end-CY26F and it may have a book value of S$1.6bn, based on a 15% shareholder funds-to-loan ratio (in-line with Singapore banks). Based on P/BV of 5.0x [roughly in line with KakaoBank's (323410 KS, Add, TP: W53,000, CP: W48,000) Bloomberg consensus FY22F P/BV prior to its share price decline (as of end-Dec 2021) due to controversy surrounding the management of parent company Kakao Corp (035720 KS, Add, TP: W130,000, CP: W94,100), as per Bloomberg's 25 Jan 2022 article], GSS may have an equity valuation of S$7.8bn by end-CY25F. Thus, Singtel's 40% stake could be worth S$3.1bn and the net equity value accretion is S$2.5bn (after deducting its S$600m share for paid-up capital), or 15 Scts/share. The valuation could be higher if GSS is able to make bigger inroads into the Singapore consumer loan market or gain significant traction in the Business Loan segment.

Figure 23: Singtel's 40% stake in GSS may add 15 Scts/share to its SOP valuation

CYE 31 Dec	(S$ m)	Remarks
Total resident loans (end-Dec 21)	816,809	Based on Monetary Authority of Singapore's estimates
Total resident loans (end-CY26F)	1,042,479	Assuming 5% CAGR in CY22-26F
DFBs' share of total resident loans (end-CY26F)	2.0%	
DFBs' total loans (end-CY26F)	20,850	
GSS's total loans (end-CY26F)	**10,425**	**Assuming 50:50 share with Sea Group**
GSS's shareholders funds-to-loan ratio	15%	
GSS's book value (end-CY26F)	**1,564**	
P/BV (x)	5.0	
GSS's equity valuation	**7,819**	
Equity value of Singtel's 40% stake in GSS	**3,127**	
Singtel's share of GSS's paid-up capital	-600	
Net equity value accretion to Singtel	**2,527**	
No. of Singtel shares (m)	16,382	
Net equity value accretion per Singtel share (S$)	**0.15**	

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, MONETARY AUTHORITY OF SINGAPORE

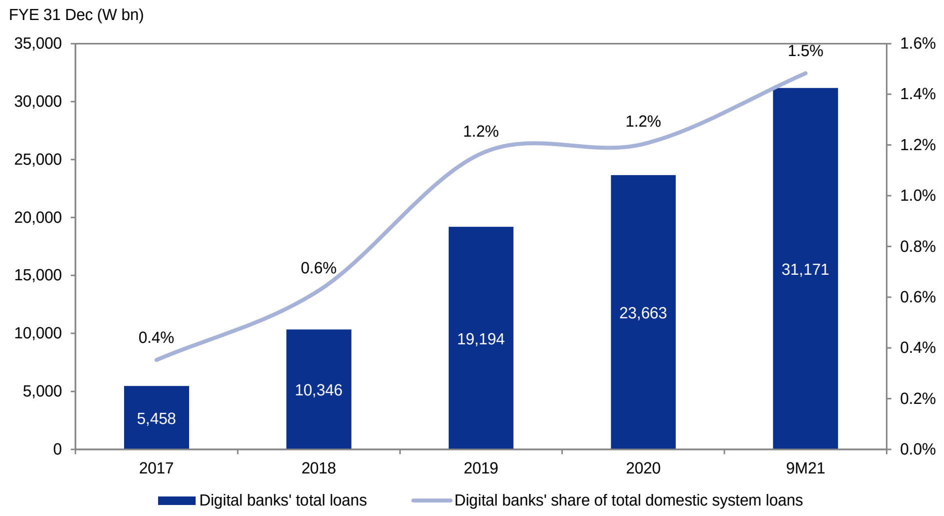
Figure 24: Scenario analysis of various resident loan market shares for DFBs on Singtel's net equity value accretion

CYE 31 Dec (S$ m)	Scenario analysis				
DFBs' share of total resident loans (end-CY26F)	**0.5%**	**1.0%**	**2.0% (Base case)**	**3.0%**	**5.0%**
GSS's total loans (end-CY26F)	2,606	5,212	10,425	15,637	26,062
GSS's book value (end-CY26F)	391	782	1,564	2,346	3,909
GSS's equity valuation	1,955	3,909	7,819	11,728	19,546
Equity value of Singtel's 40% stake in GSS	**782**	**1,564**	**3,127**	**4,691**	**7,819**
Singtel's share of GSS's paid-up capital	-600	-600	-600	-600	-600
Net equity value accretion to Singtel	182	964	2,527	4,091	7,219
Net equity value accretion per Singtel share (S$)	**0.01**	**0.06**	**0.15**	**0.25**	**0.44**

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, MONETARY AUTHORITY OF SINGAPORE

South Korean digital banks, K Bank and Kakao Bank, started operations in Apr and Jul 2017, respectively. As at end-3Q21, their combined loan book was W31.1tr (i.e. four years after start of operations), equivalent to a 1.5% share of South Korea's total outstanding system loans. With their loans growing much faster (3Q21: +8.6% qoq) than the industry average (3Q21: +2.4% qoq), albeit from a low base, South Korean digital banks could have a c.2% share of the total loan market by mid-2022F (i.e. Year 5), based on our estimates.

Figure 25: South Korean digital banks' loan book trend and market share



SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS, CEIC, BANK OF KOREA

Malaysia digital banking licence may be next; worth possibly 6 Scts/share to Singtel

As GrabPay (estimated 15m users, based on Grab's 30 Jul 2020 press release) is one of the three largest e-wallets in Malaysia (according to data from Statista, Oct 21), we think a Grab-led consortium (of which Singtel is a member) is among the frontrunners to win one of up to five Malaysian digital banking licences expected to be issued by Bank Negara in 1Q22. Currently, Singtel has not disclosed its stake in this consortium, but we believe the figure will be smaller than its stake in Singapore, given the presence of other local partners.

Taking the same approach as the Singapore case, the five digital bank licensees may have a 2% share in total of the Malaysian loan market by end-CY27F (assuming commercial operations start in 2023F, a year after the issuance of the licences), or RM51bn. However, if we further assume they augment the total loan market by 2% by lending to previously unbanked/underserved segments, the total loans by digital banks could be RM103bn. If the Grab-Singtel Malaysia (GSM) digital bank has a 25% share of this, its total loans could be RM26bn and its book value may be RM3.8bn by end-CY27F. Applying a P/BV of 5.0x, the market value of the Grab-led digital bank may be RM19bn by end-CY26F. Hypothetically assuming Singtel has a 20% stake in the consortium, this would be worth RM3.8bn, with net equity value accretion of RM3.1bn (after deducting its share of paid-up capital, assumed at 20% of book value) or S$993m (6 Scts/share).

Figure 26: Malaysia digital banking licence may add 6 Scts to Singtel's SOP valuation

CYE 31 Dec	(RM m)	Remarks
Total system loans (end-Dec 21)	1,913,724	
Total system loans (end-CY27F)	2,564,573	Assuming 5% CAGR in CY22-27F
DFBs' share of total system loans (end-CY27F)	2.0%	
DFBs' loans, ex-unbanked/underserved segments (end-CY27F)	51,291	
DFBs' loans to previously unbanked/underserved segments (end-CY27F)	51,291	Assumed digital banking services augment total loan market by 2%
DFBs' total loans (end-CY27F)	102,583	
GSM's loans (end-CY27F)	**25,646**	**Assuming MDB has 25% share of DFBs' total consumer loans**
GSM's shareholders funds-to-loan ratio	15%	
GSM's book value (end-CY27F)	**3,847**	
P/BV (x)	5.0	
GSM's equity valuation	19,234	
Equity value of Singtel's assumed 20% stake in GSM	**3,847**	
Singtel's share of GSM's paid-up capital	-769	Assumed at 20% of book value
Net equity value accretion to Singtel	**3,077**	
Net equity value accretion to Singtel (S$ m)	**993**	
No. of Singtel shares (m)	16,382	
Net equity value accretion per Singtel share (S$)	**0.06**	

SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS, BANK NEGARA MALAYSIA

Grab-Singtel making the move to enter Indonesia digital banking business via Fama acquisition in Jan 2022

In Jan 2022, Singtel acquired a 16.3% stake in Indonesia's Bank Fama International (Fama; Unlisted) for a small sum of S$48m (Rp500bn), with Grab taking a similar stake as well. This marked Grab-Singtel's move to pursue digital banking opportunities in Indonesia, which is amongst the three biggest unbanked and underbanked markets in ASEAN (as of 2021, according to British research platform Merchant Machine). We believe Fama would need an additional Rp1tr to comply with the minimum capital requirement of Rp3tr by end-2022F as outlined by Indonesia's Financial Services Authority (OJK) and thereafter new digital banking products may be launched. If we peg Fama's valuation to a P/BV of 20x, which our Indonesian banking analyst thinks is fair for digital bank, then Fama may have a value of Rp60tr by end-2022F. Assuming Singtel ends up with a 25% stake (Grab: 25%, other shareholders: 50%) in Fama at end-2022, that could add S$1.3bn (net of equity injection) or 8 Scts/share to its SOP-based valuation.

We have not factored the above potential equity value accretion from Singtel's regional digital banking ventures into its current SOP-based valuation due to limited visibility currently as these may only potentially generate meaningful earnings contribution in the medium- to longer-term.

Asset monetisation could illuminate value but won't boost Singtel shareholders' returns immediately

Asset sales raised S$2.4bn for Singtel thus far

In Oct 2021, Singtel signed an agreement to sell a 70% stake in Australia Tower Network (ATN) to AustralianSuper (Australia's largest superannuation fund) for net cash proceeds of A$1.9bn (S$1.9bn or 12 Scts per share). ATN was valued at a lofty FY3/21 proforma EV/EBITDA of 38x, a premium to the 28x fetched by Telstra for its tower business sale (49% stake) at end-Jun 2021. Prior to that, its 35%-associate Telkomsel sold 10,050 towers to Mitratel (MTEL IJ, Add, TP: Rp1,000, CP: Rp775) for Rp16.5tr (S$1.53bn; of which c.S$417m was Singtel's portion, net of withholding taxes). In Oct 2021, Singtel's cybersecurity arm Trustwave divested SecureTrust, its payment card industry compliance business, to Sysnet Global Solutions for US$80m cash.

Another S$2bn-3bn cash may be raised from asset recycling in the next 1-2 years

We believe there may be further asset recycling in the next 1-2 years that may potentially raise another S$2bn-3bn across Singtel's asset base of towers, satellites, fibre networks and DCs, as well as Amobee and Trustwave. After the non-cash impairment in May 2021, Amobee/Global Cyber Security Business had remaining carrying values of S$511m/S$695m. We believe Singtel may also consider selling its 5.5% stake in Airtel Africa, which is worth S$560m based on the latter's current market capitalisation. Meanwhile, Bloomberg reported on 9 Dec 2021 that Mitratel plans to use most of the Rp18.6tr (S$1.7bn) proceeds it raised in its recent IPO to acquire more than 4k towers from Telkomsel and other operators starting this year. On 23 Feb, Singtel announced it is divesting Comcentre, its headquarters along the Orchard Road belt, to a joint venture (JV) company (in which it will hold a majority stake) for redevelopment into Grade A office buildings to maximise and unlock the value of the property. We estimate this may raise net cash proceeds of S$1.0bn-1.2bn for Singtel upon handover of the property to the JV in CY24F.

Cash will mostly be reinvested to drive future growth

In line with previous comments from Singtel's management, we expect the cash proceeds raised from asset monetisation to be reinvested into 5G rollouts and IT system upgrades to reinvigorate its core business, as well as to expand its ICT (into Greater China and Australia) and DC businesses regionally.

In Sep 2021, Singtel announced it intends to fully subscribe to its entitlement (14% direct stake) for associate Bharti's (BHARTI IN, Not Rated, CP: Rs686) 1-for-14 rights issue at Rs535/share for a total consideration of up to Rs29.4bn (S$539m), over three years. Singtel also indirectly holds 17.7% of Bharti via Bharti Telecom Ltd (BTL, Unlisted), which is a JV between Singtel and the Mittal-owned Bharti Group (Unlisted). BTL would have to fork out S$1.39bn to subscribe to its share of the rights (36% share of Bharti's total rights proceeds of S$3.85bn, based on BTL's 36% stake in the latter) within the next three years, according to Bharti's bourse filing. If BTL does an equity call at some point, Singtel may have to invest up to S$681m if it does not want to dilute its stake in BTL (and hence, Bharti), based on Singtel's 49.4% stake in BTL.

Meanwhile, in Dec 2021, Optus was awarded 2x25 MHz of 900 MHz spectrum nationwide for a duration of 20 years, which will help boost its network coverage into regional areas. Nonetheless, the additional spectrum will cost it A$1.5bn, though payments for this will only be made in 2024 when the licence becomes available (though there are options to bring the licence date forward for parts of the spectrum).

Financial outlook

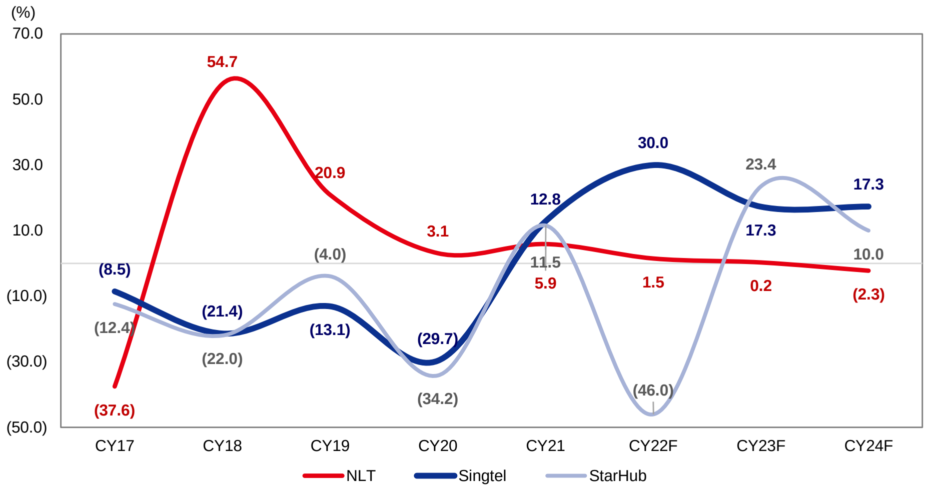
Singtel to see core EPS recovery in FY3/23F; StarHub's FY22F core EPS may be hit by upfront cost for Dare+

We expect Singtel's core EPS to recover 13% yoy in FY3/22F (Bharti turnaround, Optus recovery, higher Globe earnings), then further grow 30%/17% in FY23F/24F. The latter would be driven by further improvement in Bharti's earnings (+170%/+45% yoy) and resumption of earnings growth at Telkomsel (+6%/+3% yoy), both due to a more favourable competitive landscape and continued growth in data usage. In addition, Singapore earnings should rebound 3%/11% yoy in FY23F/24F as roaming revenue (~S$280m in FY3/20, pre-Covid-19) gradually recovers post-Covid-19. Meanwhile, Optus's core net profit may dip 19.0% in FY23F (no more NBN migration fees, tower leases to ATN), before rising 19.6% in FY24F, on more rational competition and cost-saving initiatives.

For StarHub, we see service revenue growing 13.9% in FY22F, led by a rebound in mobile revenue (partial recovery in roaming revenue, ARPU uplift from 5G). However, we project core EPS to fall 46.0% on the back of upfront costs for its Dare+ programme, including IT transformation initiatives (where PCCW Solutions has been selected to operate StarHub's IT applications and infrastructure). Thereafter, we estimate core EPS to grow 23.4% in FY23F, driven by full roaming revenue recovery, further Enterprise growth and upfront Dare+ cost abating, partially offset by the start of 700MHz spectrum amortisation. We have yet to bake in Dare+ net benefits, which StarHub expects will start from

2H23 onwards and reach a steady state of +S$80m p.a. by FY26, or a potential 66% upside to our forecast for that year.

Figure 27: Singapore telcos' core EPS growth trend



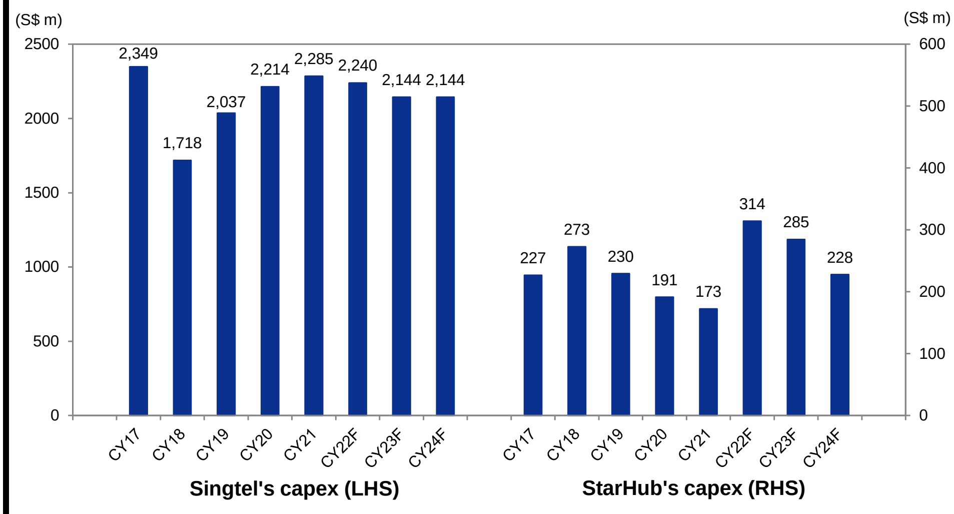
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Singtel's capex should be steady to slightly lower in CY22F; StarHub's to be elevated due to Dare+ costs

For FY3/22F, Singtel guided for capex (including 5G network rollouts) to be around S$2.3bn-2.4bn, comprising A$1.5bn for Optus and S$800m for the rest of the group (mainly for Singapore). This is not much changed from FY20-21 as Singtel had begun rolling out 5G networks in Australia [non-standalone (NSA) since Nov 2019, standalone (SA) from 2022] and Singapore (NSA since Sep 2020, SA since May 2021) over the past two years. Going into FY23F, we expect capex to remain at about the same levels, before it eases gradually in FY24F after reaching island-wide coverage in Singapore and four years of elevated capex in Australia.

For StarHub, we expect its capex to jump 82% yoy to S$314m (capex/sales: 14.0%) in FY22F due to the front-loaded investment for Dare+ and continued 5G rollout. Thereafter, we project capex to fall 9% in FY23F to S$285m (capex/sales: 12.2%) and a further 10% to S$228m in FY24F (capex/sales: 9.6%), as its IT transformation is completed and network investment starts to approach business as usual levels. This is in line with StarHub's guidance of 12-15% capex/sales in FY22-23F.

Figure 28: Singtel vs. StarHub capex trend (ex-spectrum payments)



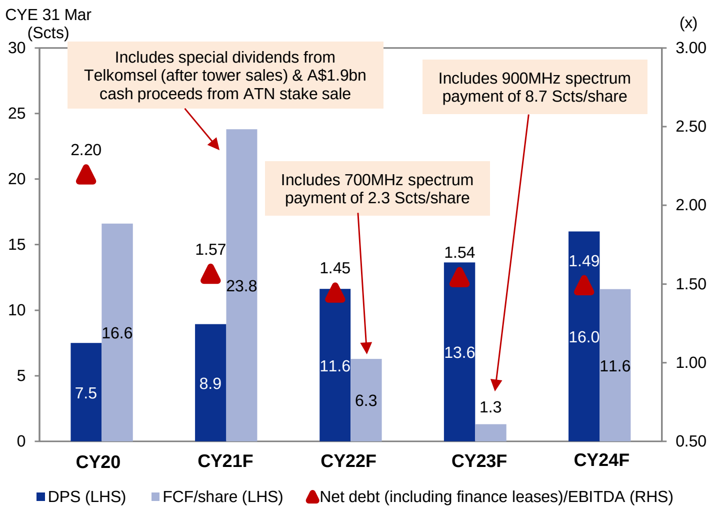
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Higher DPS projected for Singtel as earnings rise

Based our capex projection of S$2.3bn for the group, we forecast Singtel's FCF/share (including asset sale proceeds) to be at 6.3 Scts in FY3/23F, lower than FY22F's 23.8 Scts which was boosted by special dividends from Telkomsel (after tower sales) and the A$1.9bn cash proceeds (11.6 Scts per Singtel share) from the sale of its 70% stake in ATN. Given the strong FCF generated in FY22F, we think Singtel will be able to pay FY23F DPS of 11.6 Scts (75% payout, yield: 4.6%). Also, with improving group EBITDA, we see Singtel's net debt (including finance leases)/group EBITDA easing further to 1.45x by end-FY23F as its earnings recover, from a peak of 2.2x at end-FY3/21 and 1.57x at end-FY22F.

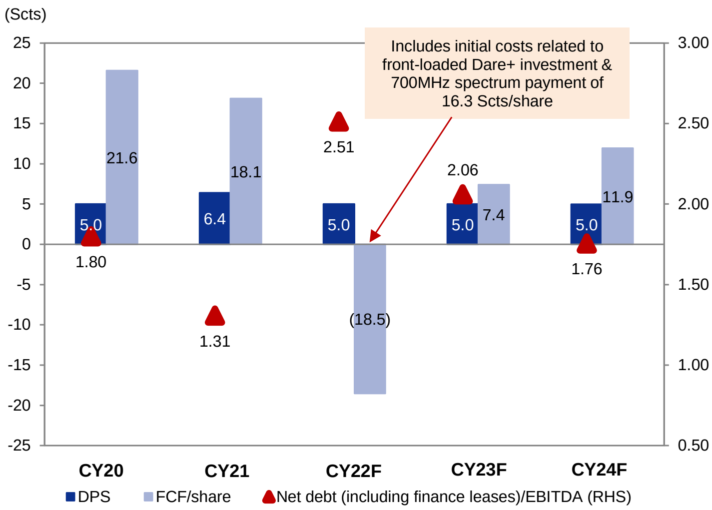
For StarHub, we estimate its FCF/share will dip into a negative 18.5 Scts in FY22F (FY21: +18.1 Scts), due to the front-loaded investment for Dare+ and assuming 700MHz payment (S$282m, or 16.3 Scts/share). Nonetheless, FCF/share should recover to 7.4/11.9 Scts in FY23F/24F, as Dare+ costs taper and earnings improve, based on our estimates. We also project that its net debt (including finance leases)/EBITDA will still be within reasonable levels at 2.5x by end-FY22F (end-FY21: 1.3x). These should help to support our FY22F DPS forecast of 5.0 Scts.

Figure 29: Singtel's DPS, FCF/share & net debt/EBITDA



Note: Singtel's FYE is Mar, e.g. CY21F refers to FY3/22F
SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

Figure 30: StarHub's DPS, FCF/share & net debt/EBITDA



SOURCES: CGS-CIMB RESEARCH ESTIMATES, COMPANY REPORTS

ESG in a nutshell

Singtel is our top-ranked Singapore telco for sustainability, followed closely by StarHub. Nonetheless, both telcos are strong ESG performers, with scores that not only exceed the mid-point but also those of their telco peers in Malaysia and Thailand. While we have not scored Netlink NBN Trust (NLT) given its different nature of business, it too has no major ESG-related risks. In our view, Singapore telcos' ESG key strengths are in i) data privacy and security, ii) network quality of service (QoS)/reliability/affordability, and iii) corporate governance/ethics. Board gender diversity, carbon emissions and more disclosures (for NLT) are potential areas for improvement.

Keep your eye on	Implications
Singtel suffered two major data breaches (Accellion FTA, My Singtel app) in the past four years, while StarHub reported an incident in Aug 2021 (personal data of customers that subscribed prior to 2007 leaked on third-party dump site). While data protection is a major risk factor, it is also a major business opportunity. Both telcos have made big investments to beef up their cybersecurity capabilities in the past six years and are well-placed to capture the strong demand. Separately, we believe Grab-Singtel will likely start its Singapore digital bank operations in early-2022F while a Grab-led consortium (which Singtel is a part of) is a frontrunner for a digital banking licence in Malaysia (to be awarded by 1Q22).	We have not factored in the risk of further data breaches into our forecasts for Singtel and StarHub at this juncture, as it is difficult to predict, with any degree of certainty, the timeline or potential magnitude of the impact. Both telcos have also implemented more stringent measures to manage data protection risks and have been reasonably successful in responding to breaches. In terms of business opportunities, we project Singtel/StarHub to record robust Singapore managed services/cybersecurity revenue CAGR of 3%/12% in CY21-24F. Meanwhile, we have not included the value accretion from the digital bank business into our SOP valuation for Singtel as investors may only start to recognise this value in CY24-25F, when operating indicators are possibly disclosed.
ESG highlights	**Implications**
Overall, the Singapore telco sector performed well from an ESG standpoint as the companies have superior network QoS/reliability/affordability, contribute significantly to community development (e.g. enable greater digitisation and digital/financial inclusion for Singtel), and are generally well-governed, in our view.	We believe the telco sector's ESG performance is relatively better than other sectors, especially those in the natural resource, manufacturing, power generation (coal, natural gas) and sin sectors. We have not ascribed a premium to our valuations for Singtel and StarHub despite them topping our ESG rankings. However, their already-good and potential further improvements in ESG disclosures/ performance in the medium-to-longer term could be upside risks and help them garner more interest from ESG-focused investors.
Trends	**Implications**
Singtel Group's total emissions rose 3% yoy in CY20, possibly driven by data centres and substantial surges in data consumption, while StarHub's fell 9% yoy on its commendable efforts to improve energy efficiency. While Singapore telcos are not big carbon emitters and energy cost is <5% of total opex, the environmental pillar may gain importance in the future amid their growing data centre business and the government possibly raising the carbon tax (S$5/t$CO_2$e for 2019-23) higher than earlier indicated.	A bigger and faster increase in the carbon tax (indirectly raising energy cost) or harsher penalties (fines)/regulations (e.g. ban on new data centres) could impact Singapore telcos. However, we have not incorporated this risk into our forecasts/valuation as the telcos' carbon emissions are relatively low vs. other high-emitting companies and measures are being undertaken to reduce emissions. For instance, Singtel and StarHub have embarked on initiatives (e.g. solar power systems for data centres) to limit increases in/reduce emissions and taken green loans to align their operations towards achieving their sustainable growth goals.

SOURCES: CGS-CIMB RESEARCH, COMPANY REPORTS

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Hold	21.8%	0.0%
Reduce	7.1%	0.0%

Corporate Governance Report of Thai Listed Companies (CGR). CG Rating by the Thai Institute of Directors Association (Thai IOD) in 2021, Anti-Corruption 2021

ADVANC – Excellent, Certified, **AMATA** – Excellent, Certified, **ANAN** – Excellent, n/a, **AOT** – Excellent, n/a, **AP** – Excellent, Certified, **ASP** – Excellent, n/a, **AWC** – Excellent, Declared, **AU** – Good, n/a, **BAM** – Very Good, Certified, **BAY** – Excellent, Certified, **BBL** – Excellent, Certified, **BCH** – Very Good, Certified, **BCP** - Excellent, Certified, **BCPG** – Excellent, Certified, **BDMS** – Excellent, n/a, **BEAUTY** – Good, n/a, **BEM** – Excellent, n/a **BH** - Good, n/a, **BJC** – Very Good, n/a, **BLA** – Very Good, Certified, **BTS** - Excellent, Certified, **CBG** – Very Good, n/a, **CCET** – n/a, n/a, **CENTEL** – Excellent, Certified, **CHAYO** – Very Good, n/a, **CHG** – Very Good, n/a, **CK** – Excellent, n/a, **COM7** – Excellent, Certified, **CPALL** – Excellent, Certified, **CPF** – Excellent, Certified, **CPN** - Excellent, Certified, **CPNREIT** – n/a, n/a, **CRC** – Excellent, Declared, **DELTA** - Excellent, Certified, **DDD** – Excellent, n/a, **DIF** – n/a, n/a, **DOHOME** – Very Good, Declared, **DREIT** – n/a, n/a, **DTAC** – Excellent, Certified, **ECL** – Excellent, Certified, **EGCO** - Excellent, Certified, **EPG** – Excellent, Certified, **ERW** – Very Good, Certified, **GFPT** - Excellent, Certified, **GGC** – Excellent, Certified, **GLOBAL** – Excellent, n/a, **HANA** - Excellent, Certified, **HMPRO** - Excellent, Certified, **HUMAN** – Good, n/a, **ICHI** – Excellent, Certified, **III** – Excellent, Declared, **INTUCH** - Excellent, Certified, **IRPC** – Excellent, Certified, **ITD** – Very Good, n/a, **IVL** - Excellent, Certified, **JASIF** – n/a, n/a, **JKN** – n/a, Certified, **JMT** – Very Good, n/a, **KBANK** - Excellent, Certified, **KCE** - Excellent, Certified, **KEX** – Very Good, Declared, **KKP** – Excellent, Certified, **KSL** – Excellent, Certified, **KTB** - Excellent, Certified, **KTC** – Excellent, Certified, **LH** - Excellent, n/a, **LPN** – Excellent, Certified, **M** – Very Good, Certified, **MAKRO** – Excellent, Certified, **MC** – Excellent, Certified, **MEGA** – Very Good, n/a, **MINT** - Excellent, Certified, **MTC** – Excellent, Certified, **NETBAY** – Very Good, n/a, **NRF** – Very Good, Declared, **OR** – Excellent, n/a, **ORI** – Excellent, Certified, **OSP** – Excellent, n/a, **PLANB** – Excellent, Certified, **PRINC** – Very Good, Certified, **PR9** – Excellent, Declared, **PSH** – Excellent, Certified, **PTT** - Excellent, Certified, **PTTEP** - Excellent, n/a, **PTTGC** - Excellent, Certified, **QH** – Excellent, Certified, **RAM** – n/a, n/a, **RBF** – Very Good, n/a, **RS** – Excellent, Declared, **RSP** – Good, n/a, **S** – Excellent, n/a, **SAK** – Very Good, Declared, **SAPPE** – Very Good, Certified, **SAWAD** – Very Good, n/a, **SCB** - Excellent, Certified, **SCC** – Excellent, Certified, **SCGP** – Excellent, Declared, **SECURE** – n/a, n/a, **SHR** – Excellent, n/a, **SIRI** – Excellent, Certified, **SPA** – Very Good, n/a, **SPALI** - Excellent, Certified, **SPRC** – Excellent, Certified, **SSP** - Good, Certified, **STEC** – Excellent, n/a, **SVI** – Excellent, Certified, **SYNEX** – Very Good, Certified, **TCAP** – Excellent, Certified, **THANI** – Excellent, Certified, **TIDLOR** – n/a, Certified **TISCO** - Excellent, Certified, **TKN** – Very Good, n/a, **TOP** - Excellent, Certified, **TRUE** – Excellent, Certified, **TTB** - Excellent, Certified, **TU** – Excellent, Certified, **TVO** – Excellent, Certified, **VGI** – Excellent, Certified, **WHA** – Excellent, Certified, **WHART** – n/a, n/a, **WICE** – Excellent, Certified, **WORK** – Good, n/a.

- CG Score 2021 from Thai Institute of Directors Association (IOD)

- Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of August 5, 2021) are categorised into: companies that have declared their intention to join CAC, and companies certified by CAC.

Recommendation Framework

Stock Ratings	Definition:
Add	The stock's total return is expected to exceed 10% over the next 12 months.
Hold	The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
Reduce	The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings	Definition:
Overweight	An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
Neutral	A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
Underweight	An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings	Definition:
Overweight	An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
Neutral	A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
Underweight	An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.

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