

Singapore Telecommunications Ltd

Directionally healthy

SINGAPORE | TELECOMMUNICATIONS | UPDATE

- 2023 Investor Day: Mobile price recovery is underway in India, delayed in the Philippines and Thailand and likely in Indonesia. Australia and Singapore face challenges due to lowend competition by MVNOs.
- Growth drivers for Singtel include fixed broadband (Indonesia, India and Thailand), data centres and NCS. There is an upside to ordinary dividends with S\$2bn of excess cash yet to be returned. Generative AI will soak up data centre supply even faster due to the spike in power and cooling requirements.
- Our BUY recommendation and SOTP TP of S\$2.80 are maintained. We believe earnings have troughed as mobile prices start to edge up higher and new growth engines gather scale. The downside will depend on Optus's ability to rationalise cost to cope with the unrelenting price competition. Other catalysts for Singtel include the disposal of loss-making Trustwave, paring down of associate stakes (to narrow holding co-discount) and monetisation of fixed assets (towers, real estate) and other businesses (IPO).

Key Highlights from Singtel Investor Day 2023

A) Corporate

CEO: Unwavering focus on strategic reset

- 1. Consolidation amongst mobile operators is underway and healthy for the industry. For Singtel, 4 of the 6 countries they operate have consolidated. In Singapore, Singtel is not allowed to become the consolidator.
- 2. With mobile market repair, ARPU and EBITDA margins are improving such as India, Thailand and Indonesia.
- 3. 5G is not up to scale but you do see early adopters at the Hyundai factory deploying robotics at a commercial level to assemble cars and not just trials. Other adopters are aviation and ports. Singtel's Paragon 5G software has been developed with interest from North American and European telcos.
- 4. GXS digital bank was launched in August 2022 and deposits were even rolling in too fast. Malaysia and Indonesia are the opportunities with a target launch date end 2023.
- 5. Fibre broadband penetration is low at 10-17% and will be a high growth area for the next five years. There will be synergies and momentum with bundling with mobile phone plans.

CFO: ROIC, growth and monetisation (to rerate share price)

- 1. Will "double down" (capital) in the growth engines of digital infraco and NCS. Telco industry EBITDA has been lost and will never be replenished. Singtel will focus on new growth areas.
- 2. Current ROIC is 8% (excluding Optus goodwill or ignoring the purchase price of Optus) with the target of low double-digits by FY26. Drivers to ROIC improvement are increasing efficiencies for Optus and Singtel SG; sale of loss-making businesses (e.g. Trustwave with EBIT loss of S\$100mn p.a.); reduced capital intensity and improvement at Airtel.
- 3. On NCS and regional data centre (RDC), the combined EBITDA contribution to rise from 12% to more than 20% by 2028 of Group EBITDA. This implies outpacing the growth of matured telco businesses by only 1.6% points per year (including acquisitions). The current market is not conducive to IPO, but NCS or RDC can bring in 20-25% stake partners.



27 August 2023

BUY (Maintained)	
CLOSING PRICE	SGD 2.340
FORECAST DIV	SGD 0.103
TARGET PRICE	SGD 2.800
TOTAL RETURN	24.1%

COMPANY DATA

BLOOMBERG CODE:	ST SP
O/S SHARES (MN) :	16,511
MARKET CAP (USD mn / SGD mn) :	28490/38635
52 - WK HI/LO (SGD) :	2.77/2.29
3M Average Daily T/O (mn) :	20.31

MAJOR SHAREHOLDERS

Temasek Holdings Pte Ltd	52.0%

PRICE PERFORMANCE (%)			
	1MTH	3MTH	YTD
COMPANY	(8.6)	(4.6)	(6.1)
STTF	(1.1)	1.1	2.0





KEY FINANCIALS

Y/E Mar, SGDbn	FY22	FY23	FY24e	FY25e		
Revenue	15.34	14.62	14.83	15.19		
EBITDA	3.77	3.69	3.71	3.86		
Net Profit	1.92	2.05	2.09	2.28		
DPS (cents)	9.3	14.9	10.3	11.0		
EPS-adj. (cents)	11.6	12.4	12.7	13.8		
P/E(X)-adj.	19.9	17.4	19.3	17.0		
Dividend Yield	4.0%	6.4%	4.4%	4.7%		
ROE	7.0%	7.6%	8.1%	8.7%		
ROA	4.0%	4.3%	4.6%	5.0%		
Source: Company, PSR						

VALUATION METHOD

Sum Of Parts - 6x EV/EBITDA; 20% disc. on assoc.

Paul Chew (+65 6212 1851) Head Of Research paulchewkl@phillip.com.sg



- 4. On the associate stakes, Singtel will look to pare down the stakes but not completely dispose them. There is S\$50bn in value in the associate stake which can be reallocated to growth areas.
- 5. There is more latitude to raise ordinary dividends with the S\$2bn excess cash (or 11 cents) in operating cash flow not paid out. Will not borrow to pay dividends.

B) Subsidiaries

Optus: MVNOs the formidable 4th operator

- 1. Tier 2 brands or MVNOs have been capturing market share by 5.7% points from 19.7% in 2019 to 25.4% in 2022. This was despite Optus purchasing the largest MVNO amaysim in 2021 for A\$250mn.
- 2. MVNOs value proposition is lower prices with a Telstra network for coverage. Telstra has a sticky postpaid market share of 50% share and uses wholesale to take the lower-tier plans. The trend of the 40 MVNOs capturing more share or customers trading down is unlikely to stop unless downtrading hurts Telstra or prices come down to wholesale cost. Telstra's wholesale price arrangement with MVNOs can be revenue share, fixed fees, etc.
- 3. The deteriorating consumer confidence is also causing a trade-down effect. Any price repair in the industry will be anchored down by the MVNO prices.
- 4. Optus is competing in mobile service innovation. These include donating data plans to the underprivileged, the ability to pause network connection (for the whole household), mobile turbocharge during congested periods, unlimited data days, call translation between speakers, call notes, subhub to consolidate all content providers and smartspace experts to install a well-connected home for customers.

Singtel Singapore: Merging consumer and enterprise for cost and revenue synergies

- 1. The ROIC is healthy at low20% but still working on cost synergies at the operating and capital expenditure level post the integration of both businesses.
- 2. Mobile ARPU is down despite an uplift in roaming due to SIM-only plans. EBITDA is a better gauge.
- 3. On consolidation of mobile operators, regulators could be more understanding and voicing an opinion. If it does happen, Singtel will be the major player.
- 4. Hyundai is using 5G for their lonic 5 assembly in Singapore and requires only 10 workers in the factory. Robotics can help resolve labour and union issues. 5G is better than WiFi due to low latency. WiFi performance also degrades when more devices are connected. If successful, other models could be assembled in the Singapore plant. Micron is also using 5G for detecting faults. 5G can also provide slicing for security purposes or reserved bandwidth for emergency cases.
- 5. Other countries are still pacing out their 5G rollout because the application is not here yet. But 5G can raise prices when transitioning from 4G. 5G penetration is now 40%. Any mass adoption of 5G still relies on the consumer market.

NCS: Targeting key sectors

- 1. Started in 1981, it is the largest systems integrator in SE Asia with more than 12,000strong workforce and more than 4,000 ongoing projects. The top 30 clients provide 70% of revenue and more than 10 years of relationship. The target is S\$5bn revenue in three years from current S\$2.7bn. This likely includes acquisitions after completing the recent acquisition of Australian businesses.
- 2. EBITDA declined in 2022 due to the acquisition cost of four companies in Australia to penetrate the market, and a one-off wage increase in the middle of last year but the situation has settled down and there are investments to change the model to three strategic focuses. The book to bill is 1.02.
- 3. The government sector customers are stat boards, ministries, defence and homeland security. NCS is essentially the tech partner of the government. Some projects include



tax collection solutions, IOT sensors in the housing estate, smart lighting/lifts/sensors, robotics for surveillance, and data analytics for the tourism sector.

Digital Infrastructure Co: Demand more than supply in Singapore

- 1. A newly separated entity to house Singtel's data centre, satellite, submarine and Paragon 5G platform.
- Current data centre capacity in Singapore is 62MW (41MW Datacentre West; 21MW KC2). Under construction is Data Centre Tuas with 58MW. Another 5 older data centres will be closed with demand shifting to Tuas. DC Tuas is filled with reservation fees required. Another unique feature of DC Tuas is the submarine cable landing on-premise.
- 3. The plan is to build a regional green data centre. In Thailand, the plan is 40MW in two phases of 20MW each. Meanwhile, there is a planned 51MW capacity in Indonesia, split into three phases of 17MW each.
- Generative AI requires more GPUs. The demand for power and cooling in a data centre will surge. For instance, the average kilowatt per rack is 12, but this can spike to 50-80kwh with generative AI racks including liquid coolers. GPU supply is booked out till 2025.
- 5. The Paragon platform built over four years by Singtel will allow telcos to offer 5G to their customers, including aggregating the hyperscalers. It will be a licensing revenue model. Telco can accelerate its 5G adoption fast without the need to build its own infrastructure. The target customers include US and European telcos.

C) Regional Associates

Bharti Airtel: Clear mobile price repair

- Mobile prices amongst competitors are unlikely to rise until after the elections. Airtel tends to lead the tariff price increases and will do it again. If competitor does not respond with a similar price increase, Airtel does not want to lose market share because it is hard to recover. Smaller competitors lack scale and face balance sheet challenges. Any further change unlikely until after the election.
- 2. There are five drivers to rising mobile price increases; (a) Customers upgrade from feature to smartphone, ARPU tends to rise by 50%, there are still 100mn feature phones on the network; (b) Prepaid customers moving to postpaid, there is a 60% rise in ARPU. Airtel does not provide subsidies for postpaid; (c) family plan is a pivot to win share where customers switch to postpaid and bring all family members into shared data; (d) data monetisation where once data allowance runs out, customers buy data on impulse and only for that day; (e) entry-level price plan has been raised.
- 3. 5G SA networks require a low bandwidth spectrum. Bharti chooses non-SA because it spent 3-4 years accumulating mid-band 1800MHz which competitors do not have. Competitors purchase expensive 700MHz as their 4G networks were congested. Customers currently do not even know the difference (4G or 5G) because most applications are only 4 to 8MBps. Bharti does not want to invest in spectrum if the customer is indifferent and there is no monetisation opportunity. 700MHz only gives coverage, not speed.
- 4. The enterprise segment is a massive opportunity and currently serves top 3,000 companies. Need to retool the entire go-to market to address top 500 accounts, where there is customer trust and go deeper and engage multiple products.
- 5. On the potential of 6G, there is no rationale for even faster speed. Better for equipment makers to focus on spectrum efficiency, lower weight and less power to improve operating costs for the operators.

Advanced Info Services (AIS): Waiting for even faster price repair

 Despite an effective duopoly, mobile prices have not recovered due to a weak economy and consumers' purchasing power impacted by inflation. Another consideration is the pending approval by the authorities of the acquisition of 3BB. The target ARPU is Bt250 against Bt220 currently. AIS has no desire to be the outright number one mobile operator because it can be costly and hard to win market share.

- Thailand JV Co (Gulf Energy 40%, AIS 25%, Sinatel 35%)
- Indonesia JV Co (PT Telkom 60%, Singtel 35%, Medco 5%)
- GPU = Nvidia graphic processing unit

- SA-Stand Alone
- NSA Non Standalone

- 2. The path to higher mobile prices is gradual with immediate action of removing unlimited pre-paid plans. In the past, it was difficult to remove unlimited plans because competitors offered similar packages. When the entry price level is too low, customers will trade down. Lower-end prices need to be removed with middle and upper-end upsold with more value-added services.
- 3. The next largest competitor has invested huge sums and post-consolidation needs to recover these investments. "Arbitraging between consumer and telco valuations" is also more difficult for the competitor.
- 4. The plan to acquire broadband operator 3BB is a defensive strategy against fixed mobile convergence or broadband bundles. DTAC-True merger will result in a competitor large in both broadband and mobile. Once it enters customer homes, a telco can deliver many other services. Another opportunity is to grow broadband penetration from 50% to 70%.
- 5. There will be digital bank licenses' bid out but the initial capital required mentioned is large at Bt5bn initial and Bt10bn after five years. Need huge scale for a healthy return on capital.

Globe Telecom: The aspiring tech incubator

- 1. Mobile competition is stable and benign between the number 1 and 2 operators. Competitors follow their lead in higher prices. Already completed two rounds of price increases. But inflation is hurting consumer wallets when it comes to spending on mobile.
- 2. The 3rd mobile operator Dito is already in its 5th year of operation. The partner China Telecom wanted a majority stake but regulation has changed. If a foreign entity were to invest invest in the Philippines' critical infra (such as mobile telecommunication), the home company needed to open up the market. So, it becomes harder for China Telecom to invest more capital.
- 3. GCash continues to grow but there was an interruption due to the need to remove improper accounts that were involved in illegal activities. GCash has tightened its KYC account opening procedures. Lending is the growth driver with a 7mn customer base. GCash is also refining credit scores based on telco data and GCash data. NPLs are in the mid-high single digits. Other products include GStocks, GFund, and GInsurance. There are plans to go public by year-end.
- 4. Launched prepaid fibre broadband on 30th July. The response was encouraging but too early to tell. It enjoys better than expected ARPU and needs a few reloads to understand the potential. Removed sales commission and went direct unlike competitors. The consumer still wants consumption in a sachet form and not a monthly obligation. They want to have the freedom to pay.
- 5. Under 917Venture, Globe is also building up a portfolio of other start-ups such as petpal, housify, capitan, rush, KodeGo, eadventure and gogoro smartscoorters.

Telkomsel: Fixed broadband the next growth driver

- 1. The starter pack was in a cutthroat environment and encouraged churn and valueseeking. Rather than reload, customers purchased new SIMs. It caused SIM shortages post-COVID and cost challenges. Telkomsel now encourages incentives on renewals by increasing the minimum price of the starter pack and reducing the price for top-ups.
- 2. In mobile, Telkomsel undertook some price adjustments which Indosat and Excel followed.
- 3. Post-IndiHome acquisition, on 21 July it launched Telkomsel One with up to 2GBps broadband plans. There are 6.5mn Telkomsel customers with fibre home passed and not yet part of IndiHome's current 9.5mn broadband subscribers. There is also the Orbit fixed wireless access offering as an interim solution for no home-passed customers. In the past, capital was an inhibitor to the growth of this business.
- Broadband penetration is only 17% in Indonesia and uplift to 30-35% is possible. The broadband bundle by Telkomsel cannot be easily replicated by competitors. Furthermore, with 400,000 traditional outlets, it can reach customers faster.

Page | 5 | PHILLIP SECURITIES RESEARCH (SINGAPORE) -

Singtel Limited Update

Financials

Income Statement

Y/E Mar, SGD 'Mn	FY21	FY22	FY23	FY24e	FY25e
Revenue	15,644	15,339	14,624	14,829	15,187
Operating Profit	3,690	3,614	3,491	3,557	3,680
EBITDA	3,832	3,767	3,686	3,707	3,860
Depreciation & Amortisation	(2,685)	(2,723)	(2,574)	(2,773)	(2 <i>,</i> 876)
EBIT	1,147	1,045	1,112	934	984
Net Finance Inc/(Exp)	(398)	(404)	(416)	(405)	(386)
Associates	607	1,653	1,827	1,974	2,156
Profit before tax	754	2,621	2,598	2,459	2,799
Taxation	(194)	(662)	(365)	(443)	(504)
Non-controlling interest	(6)	(11)	(8)	(10)	(11)
Net profit, reported	554	1,949	2,225	2,006	2,284
Exceptional	(1,179)	25	172	(88)	-
Net profit, adjusted	1,733	1,924	2,053	2,094	2,284

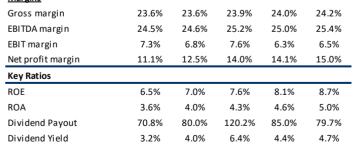
Per share data (SGD Cen	its)				
Y/E Mar	FY21	FY22	FY23	FY24e	FY25e
EPS, reported	3.4	11.8	13.4	12.1	13.8
EPS, adjusted	10.6	11.6	12.4	12.7	13.8
DPS	7.5	9.3	14.9	10.3	11.0
BVPS	161.9	169.9	157.1	156.6	159.9

Cash Flow

Cash Flow					
Y/E Mar, SGD 'Mn	FY21	FY22	FY23	FY24e	FY25e
<u>CFO</u>					
Profit before tax	754	2,621	2,598	2,459	2,799
Adjustments	3,002	1,136	1,048	1,160	1,061
WC changes	584	270	(70)	(396)	(11)
Cash generated from ops	4,340	4,027	3,576	3,223	3,850
Tax paid	(164)	(352)	(347)	(443)	(504)
Cashflow from ops	5,609	5,298	4,776	4,114	4,866
<u>CFI</u>					
CAPEX & IA, net	(2,214)	(2,217)	(2,162)	(2,500)	(2,300)
Others	(238)	1,850	(21)	44	46
Cashflow from investments	(2,666)	(644)	(2,302)	(2,456)	(2,254)
<u>CFF</u>					
Share issuance, net	-	-	-	-	-
Loans, net of repayments	(1,067)	(1,650)	542	(500)	(500)
Dividends	(1,273)	(1,139)	(1,964)	(2 <i>,</i> 086)	(1,738)
Others	(850)	(477)	(1,519)	(405)	(386)
Cashflow from financing	(3,190)	(3,266)	(2,941)	(2,991)	(2,624)
Net change in cash	(247)	1,387	(467)	(1,333)	(13)
CCE, end	741	2,149	1,644	311	299

Source: Company, Phillip Securities Research (Singapore) Estimates

Balance Sheet					
Y/E Mar, SGD 'Mn	FY21	FY22	FY23	FY24e	FY25e
ASSETS					
Accounts receivables	5,444	5,245	5,013	4,894	5,012
Cash	755	2,130	1,668	335	322
Inventories	272	270	346	297	304
Others	62	485	1,556	1,556	1,556
Total current assets	6,532	8,130	8,583	7,081	7,194
PPE & IA	24,663	22,870	21,374	21,101	20,525
Others	16,803	18,131	16,573	17,214	17,849
Total non-current assets	41,466	41,001	37,947	38,315	38,374
Total Assets	47,998	49,131	46,530	45,396	45,567
LIABILITIES					
Accounts payables	5,977	5,596	5,310	4,745	4,860
Short term loans	1,880	1,841	1,202	1,202	1,202
Tax payable	268	769	731	731	731
Total current liabilities	9,137	9,055	8,299	7,735	7,849
Long term loans	10,826	10,254	9,911	9,411	8,911
Deferred tax liabilites	499	499	543	543	543
Others	1,026	1,213	1,764	1,764	1,764
Total non-current liabilities	12,350	11,967	12,217	11,717	11,217
Total Liabilities	21,487	21,022	20,516	19,451	19,066
EQUITY					
Non-controlling interests	26	(15)	9	19	31
Shareholder Equity	26,486	28,124	26,005	25,925	26,471
Valuation Ratios					
Y/E Mar	FY21	FY22	FY23	FY24e	FY25e
P/E(X)-adj.	69.1	19.9	17.4	19.3	17.0
P/B (X)	1.4	1.4	1.5	1.5	1.5
EV/EBITDA (X)	13.1	12.8	12.9	13.1	12.4
Growth & Margins					
<u>Growth</u>					
Revenue	-5.4%	-1.9%	-4.7%	1.4%	2.4%
EBITDA	-15.6%	-1.7%	-2.2%	0.6%	4.1%
EBIT	-41.5%	-8.9%	6.4%	-16.0%	5.3%
Net profit, adj.	-29.5%	11.0%	6.7%	2.0%	9.1%
<u>Margins</u>					
Gross margin	23.6%	23.6%	23.9%	24.0%	24.2%









return bands. We consider qualitative factors like (but not limited to) a stock's risk reward profile, market sentiment, recent rate of share price appreciation, presence or absence of stock price catalysts, and speculative undertones surrounding the stock, before making our final recommendation

Singtel Limited Update

PPhillipCapital

Head of Research

Paul Chew - paulchewkl@phillip.com.sg

Technical Analyst Zane Aw – <u>zaneawyx@phillip.com.sg</u>

Credit Analyst Shawn Sng – <u>shawnsngkh@phillip.com.sg</u>

US Technology Analyst (Hardware & Marketplaces) Maximilian Koeswoyo – maximilian@phillip.com.sg

Contact Information (Singapore Research Team)

Property | REITs Darren Chan – <u>darrenchanrx@phillip.com.sg</u>

Property | REITs Liu Miaomiao – <u>liumm@phillip.com.sg</u>

US Technology Analyst (Digital Media & Entertainment) Jonathan Woo – jonathanwookj@phillip.com.sg

Contact Information (Regional Member Companies)

MALAYSIA Phillip Capital Management Sdn Bhd B-3-6 Block B Level 3 Megan Avenue II, No. 12, Jalan Yap Kwan Seng, 50450 Kuala Lumpur Tel +603 2162 8841 Fax +603 2166 5099 Website: www.poems.com.my

> INDONESIA PT Phillip Securities Indonesia ANZ Tower Level 23B, JI Jend Sudirman Kav 33A Jakarta 10220 – Indonesia Tel +62-21 5790 0800 Fax +62-21 5790 0809 Website: www.phillip.co.id

FRANCE King & Shaxson Capital Limited 3rd Floor, 35 Rue de la Bienfaisance 75008 Paris France Tel +33-1 45633100 Fax +33-1 45636017 Website: www.kingandshaxson.com

AUSTRALIA Phillip Capital Limited Level 10, 330 Collins Street Melbourne, Victoria 3000, Australia Tel +61-03 8633 9803 Fax +61-03 8633 9899 Website: www.phillipcapital.com.au

TURKEY PhillipCapital Menkul Degerler Dr. Cemil Bengü Cad. Hak Is Merkezi No. 2 Kat. 6A Caglayan 34403 Istanbul, Turkey Tel: 0212 296 84 84 Fax: 0212 233 69 29 Website: www.phillipcapital.com.tr Research Admin Qystina Azli - <u>gystina@phillip.com.sg</u>

Banking & Finance Glenn Thum – glennthumjc@phillip.com.sg

Conglomerate | Transport Peggy Mak – peggymak@phillip.com.sg

US Technology Analyst (Software/Services) Ambrish Shah – <u>amshah@phillipventuresifsc.in</u>

SINGAPORE Phillip Securities Pte Ltd Raffles City Tower 250, North Bridge Road #06-00 Singapore 179101 Tel +65 6533 6001 Fax +65 6535 6631 Website: www.poems.com.sg

JAPAN

Phillip Securities Japan, Ltd. 4-2 Nihonbashi Kabuto-cho Chuo-ku, Tokyo 103-0026 Tel +81-3 3666 2101 Fax +81-3 3666 6090 Website: www.phillip.co.jp

THAILAND

Phillip Securities (Thailand) Public Co. Ltd 15th Floor, Vorawat Building, 849 Silom Road, Silom, Bangrak, Bangkok 10500 Thailand Tel +66-2 6351700 / 22680999 Fax +66-2 22680921 Website www.phillip.co.th

UNITED STATES

Phillip Capital Inc 141 W Jackson Blvd Ste 3050 The Chicago Board of Trade Building Chicago, IL 60604 USA Tel +1-312 356 9000 Fax +1-312 356 9005 Website: www.phillipusa.com

INDIA

PhillipCapital (India) Private Limited No.1, 18th Floor, Urmi Estate 95, Ganpatrao Kadam Marg Lower Parel West, Mumbai 400-013 Maharashtra, India Tel: +91-22-2300 2999 / Fax: +91-22-2300 2969 Website: www.phillipcapital.in HONG KONG Phillip Securities (HK) Ltd 11/F United Centre 95 Queensway Hong Kong Tel +852 2277 6600 Fax +852 2868 5307 Websites: www.phillip.com.hk

CHINA

Phillip Financial Advisory (Shanghai) Co Ltd No 550 Yan An East Road, Ocean Tower Unit 2318, Postal code 200001 Tel +86-21 5169 9200 Fax +86-21 6351 2940 Website: www.phillip.com.cn

UNITED KINGDOM

King & Shaxson Capital Limited 6th Floor, Candlewick House, 120 Cannon Street, London, EC4N 6AS Tel +44-20 7426 5950 Fax +44-20 7626 1757 Website: www.kingandshaxson.com

CAMBODIA Phillip Bank Plc

Ground Floor of B-Office Centre,#61-64, Norodom Blvd Corner Street 306,Sangkat Boeung Keng Kang 1, Khan Chamkamorn, Phnom Penh, Cambodia Tel: 855 (0) 7796 6151/855 (0) 1620 0769 Website: www.phillipbank.com.kh

DUBAI

Phillip Futures DMCC Member of the Dubai Gold and Commodities Exchange (DGCX) Unit No 601, Plot No 58, White Crown Bldg, Sheikh Zayed Road, P.O.Box 212291 Dubai-UAE Tel: +971-4-3325052 / Fax: + 971-4-3328895



Important Information

This report is prepared and/or distributed by Phillip Securities Research Pte Ltd ("Phillip Securities Research"), which is a holder of a financial adviser's license under the Financial Advisers Act, Chapter 110 in Singapore.

By receiving or reading this report, you agree to be bound by the terms and limitations set out below. Any failure to comply with these terms and limitations may constitute a violation of law. This report has been provided to you for personal use only and shall not be reproduced, distributed or published by you in whole or in part, for any purpose. If you have received this report by mistake, please delete or destroy it, and notify the sender immediately.

The information and any analysis, forecasts, projections, expectations and opinions (collectively, the "Research") contained in this report has been obtained from public sources which Phillip Securities Research believes to be reliable. However, Phillip Securities Research does not make any representation or warranty, express or implied that such information or Research is accurate, complete or appropriate or should be relied upon as such. Any such information or Research contained in this report is subject to change, and Phillip Securities Research shall not have any responsibility to maintain or update the information or Research made available or to supply any corrections, updates or releases in connection therewith.

Any opinions, forecasts, assumptions, estimates, valuations and prices contained in this report are as of the date indicated and are subject to change at any time without prior notice. Past performance of any product referred to in this report is not indicative of future results.

This report does not constitute, and should not be used as a substitute for, tax, legal or investment advice. This report should not be relied upon exclusively or as authoritative, without further being subject to the recipient's own independent verification and exercise of judgment. The fact that this report has been made available constitutes neither a recommendation to enter into a particular transaction, nor a representation that any product described in this report is suitable or appropriate for the recipient. Recipients should be aware that many of the products, which may be described in this report involve significant risks and may not be suitable for all investors, and that any decision to enter into transactions involving such products should not be made, unless all such risks are understood and an independent determination has been made that such transactions would be appropriate. Any discussion of the risks contained herein with respect to any product should not be considered to be a disclosure of all risks or a complete discussion of such risks.

Nothing in this report shall be construed to be an offer or solicitation for the purchase or sale of any product. Any decision to purchase any product mentioned in this report should take into account existing public information, including any registered prospectus in respect of such product.

Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may provide an array of financial services to a large number of corporations in Singapore and worldwide, including but not limited to commercial / investment banking activities (including sponsorship, financial advisory or underwriting activities), brokerage or securities trading activities. Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may have participated in or invested in transactions with the issuer(s) of the securities mentioned in this report, and may have performed services for or solicited business from such issuers. Additionally, Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may have provided advice or persons involved in the issuance of this report, may have provided advice or persons involved in the issuance of this report, may have provided advice or persons involved in the issuance of this report, may have provided advice or investment services to such companies and investments or related investments, as may be mentioned in this report.

Phillip Securities Research or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report may, from time to time maintain a long or short position in securities referred to herein, or in related futures or options, purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation in respect of the foregoing. Investments will be denominated in various currencies including US dollars and Euro and thus will be subject to any fluctuation in exchange rates between US dollars and Euro or foreign currencies and the currency of your own jurisdiction. Such fluctuations may have an adverse effect on the value, price or income return of the investment.

To the extent permitted by law, Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may at any time engage in any of the above activities as set out above or otherwise hold an interest, whether material or not, in respect of companies and investments or related investments, which may be mentioned in this report. Accordingly, information may be available to Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, which is not reflected in this report, and Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, which is not reflected in this report, and Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited to its officers, directors, employees or persons involved in the issuance of this report, may, to the extent permitted by law, have acted upon or used the information prior to or immediately following its publication. Phillip Securities Research, or persons associated with or connected to Phillip Securities Research, including but not limited its officers, directors, employees or persons involved in the issuance of this report, may have issued other material that is inconsistent with, or reach different conclusions from, the contents of this report.

The information, tools and material presented herein are not directed, intended for distribution to or use by, any person or entity in any jurisdiction or country where such distribution, publication, availability or use would be contrary to the applicable law or regulation or which would subject Phillip Securities Research to any registration or licensing or other requirement, or penalty for contravention of such requirements within such jurisdiction.

This report is intended for general circulation only and does not take into account the specific investment objectives, financial situation or particular needs of any particular person. The products mentioned in this report may not be suitable for all investors and a person receiving or reading this report should seek advice from a professional and financial adviser regarding the legal, business, financial, tax and other aspects including the suitability of such products, taking into account the specific investment objectives, financial situation or particular needs of that person, before making a commitment to invest in any of such products.

This report is not intended for distribution, publication to or use by any person in any jurisdiction outside of Singapore or any other jurisdiction as Phillip Securities Research may determine in its absolute discretion.

IMPORTANT DISCLOSURES FOR INCLUDED RESEARCH ANALYSES OR REPORTS OF FOREIGN RESEARCH HOUSES

Where the report contains research analyses or reports from a foreign research house, please note:

- (i) recipients of the analyses or reports are to contact Phillip Securities Research (and not the relevant foreign research house) in Singapore at 250 North Bridge Road, #06-00 Raffles City Tower, Singapore 179101, telephone number +65 6533 6001, in respect of any matters arising from, or in connection with, the analyses or reports; and
- (ii) to the extent that the analyses or reports are delivered to and intended to be received by any person in Singapore who is not an accredited investor, expert investor or institutional investor, Phillip Securities Research accepts legal responsibility for the contents of the analyses or reports.