

# Regional Aviation

## What will happen to business travel post COVID-19?

Refer to important disclosures at the end of this report

DBS Group Research . Equity

17 Jun 2021

### Will it still be business as usual?

- COVID-19 has fundamentally altered business travel demand, and we expect to see a 15-20% permanent decline in corporate travel requirements in future
- Airlines and airport hubs that built their business models around corporate travel are thus, likely to be laggards in coming out of the crisis
- Airlines geared towards leisure travel should outperform peers as borders reopen
- Therefore, we maintain BUY on the three Chinese carriers, while we are less positive on prospects for [Cathay Pacific](#) and [Beijing Capital Airport](#)

**COVID-19 an existential threat to business travel.** Dialing back on corporate travel even when the pandemic is over should be intuitive for most companies around the world. Virtual meetings and video conferencing have proven to be effective tools for communication and collaboration, and companies get to slash hefty business travel expenditure. As the pandemic is contained, we could see a surge in premium ticket sales at the onset because of substantial pent-up corporate demand and leisure travellers electing to spend more money, but this is likely to be transitory. The rise of remote working and digital learning could promote leisure travel activity over the medium-term, but it is still unclear how this will pan out.

**Airlines and airports heavily reliant on corporate travellers could take longer to recover.** The prolonged absence of significantly higher-yielding customers will be a daunting challenge for both airlines and airports alike. Airlines that used to derive a large portion of their earnings from the front-end of the cabin may have some flexibility to cope with a lower-for-longer corporate travel demand environment, but business airport hubs are less fortunate due to their less diverse revenue streams and relatively higher fixed cost base.

**China Eastern Airlines (CEA) and China Southern Airlines (CSA) are our preferred picks to capitalise on the turnaround in leisure travel.** We expect leisure travel to normalise at a rapid pace after travel restrictions are eased on colossal pent-up demand. Our top picks to ride on this tailwind are CEA and CSA. Meanwhile, we would remain on the sidelines for Cathay Pacific (CX) and Beijing Capital International Airport until there is more clarity on their recovery trajectory.

HSI : 28,638.53

#### Analyst

Jason SUM +65 66823711  
jasonsum@dbs.com

Paul YONG, CFA +65 6682 3712  
pauylong@dbs.com

#### STOCKS

	Price HK\$	Mkt Cap US\$m	12-mth		Rating
			Target Price HK\$	Performance (%) 3 mth 12 mth	
<a href="#">Cathay Pacific</a>	6.95	3,541	6.30	(7.5) (3.3)	HOLD
<a href="#">China Southern Airlines</a>	5.10	2,899	6.90	(15.4) 44.1	BUY
<a href="#">Air China</a>	6.04	4,753	7.60	(16.2) 23.0	BUY
<a href="#">China Eastern Airlines</a>	3.38	2,448	5.00	(15.3) 18.3	BUY
<a href="#">Beijing Capital Intl Airport</a>	5.16	1,387	6.00	(12.7) 6.9	HOLD

Source: DBS Bank, DBS HK, Bloomberg Finance L.P.  
Closing price as of 16 Jun 2021



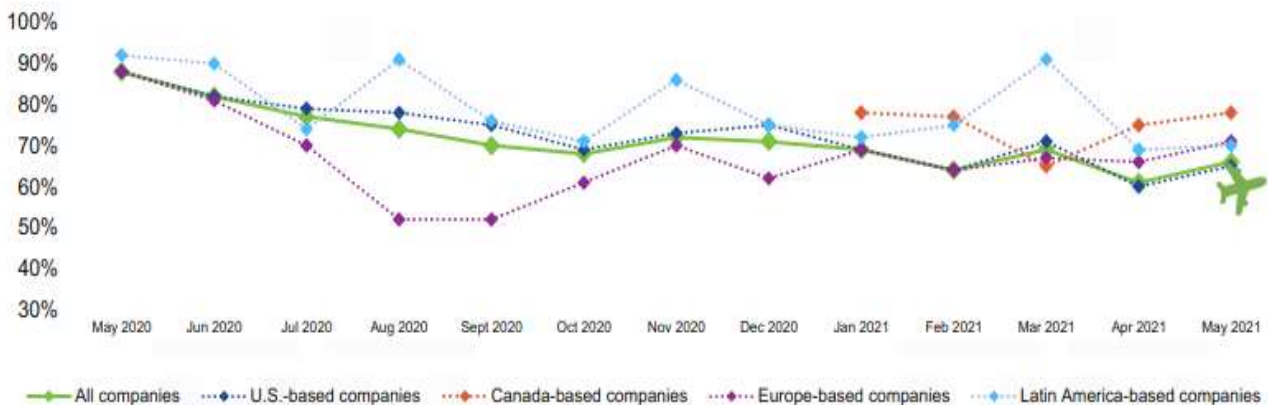
## What will happen to business travel post COVID-19?

### What is the state of business travel today?

Corporate travel has regained some lost ground during the crisis but still remains in the doldrums. Global Business Travel Association (GBTA)'s latest survey in May-2021 indicated that around 66% and 92% of domestic and international business trips have been postponed. However, we do note that there is some divergence across geographies. Key American carriers like Delta Airlines, United Airlines and American Airlines reported that US business travel was only at 20-30% of pre-crisis levels

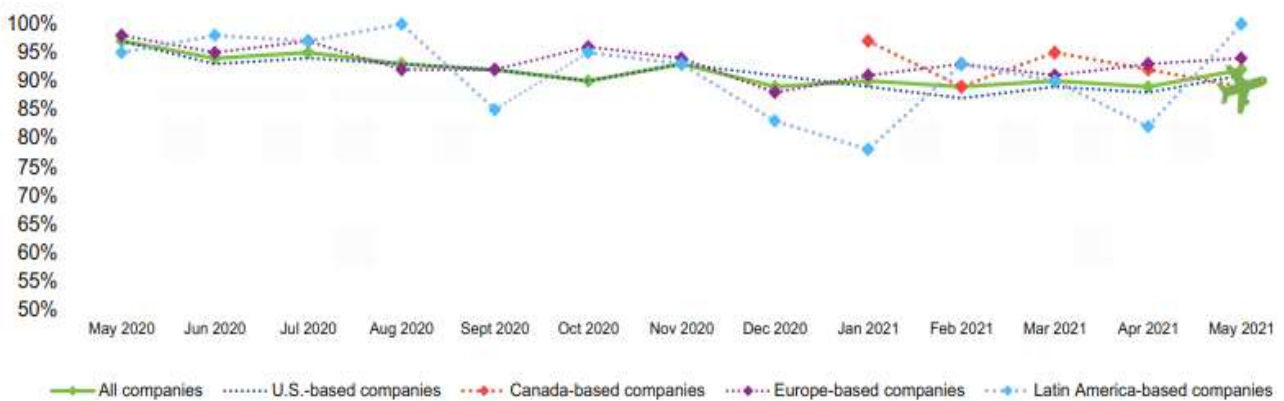
as of March-21, but the situation appeared much better in Australia and New Zealand, with Qantas Airways and Air New Zealand sharing that domestic corporate flights were at 65% and 90% of pre-COVID19 levels respectively. Meanwhile, Hyatt reported that business travel volumes in May 2021 on an overall basis was back at 50% of 2019's level, but higher at 75% in certain markets like China.

### % of companies that have cancelled or suspended most or all domestic business travel



Source: Global Business Travel Association, DBS Bank,

### % of companies that have cancelled or suspended most or all international business travel



Source: Global Travel Business Association, DBS Bank

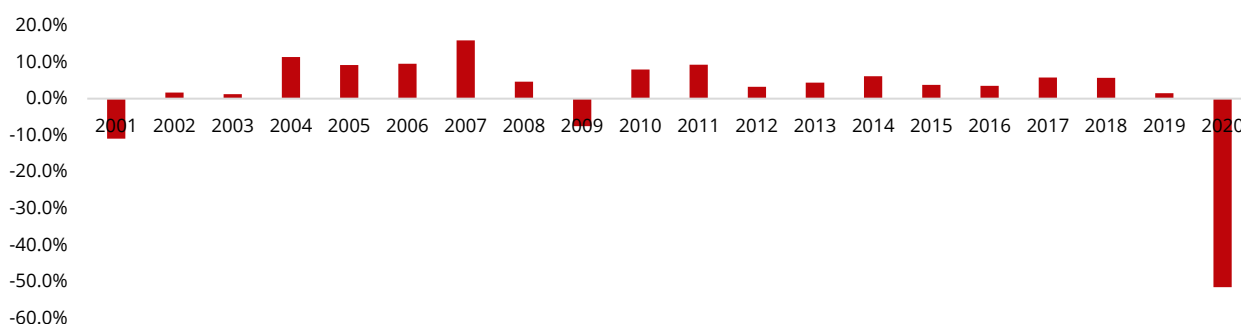
## What will happen to business travel post COVID-19?

### When will business travel return to pre-pandemic levels?

Global business travel expenditure rebounded to pre-recession levels after three years in previous crises like 9/11 and Great Financial Crisis, but the jury is still out on whether it will ever fully recover to 2019 levels. GBTA expects global spending on business travel to normalise by 2025 in its base case and remain around 11% below pre-pandemic levels in a pessimistic scenario. Similarly, there is a wide range of predictions reported by companies globally,

with the CEO of the Star Alliance (world's largest airline group) looking at a permanent 30% drop in the business travel segment, Southwest Airlines expecting a long-lasting 10-20% decline in business travel demand, Lufthansa anticipating 90% of corporate travel returning by 2025, and American Express seeing business travel spending reverting to 2019 levels in 2023. Only time can tell who is correct, but we are more inclined to believe that the **new normal will involve 15-20% less corporate travel** due to a profound shift in working habits and displacement by technology.

### Year-on-year change in global business travel expenditure (2001-2020)



Source: Global Travel Business Association, DBS Bank

### Why do we expect a 15-20% permanent drop in corporate travel?

COVID-19 has accelerated a structural shift in business travel that is irreversible in nature, in our view. Remote working has become somewhat ingrained in many of us after spending months working at home. It is true that the need to be physically present is essential, and not replaceable by technology for some business functions like establishing new relationships with potential clients, or technical support like the setting-up and maintenance of physical assets. Nonetheless, there is a large portion of business trips that is non-critical in nature and could potentially be addressed by virtual meetings and collaborations, such as internal company meetings and training sessions, and after-sales customer support. Oliver Wyman, a leading industry consultant, estimates that the internal travel category, which is the most susceptible to disruption, represented 40% of all business trips, consistent with GBTA's findings from a poll conducted in 2019. The table on the right illustrates the breakdown of business trip activity by trip purpose, and our assessment of the impact to each segment.

### Expected decline in business travel spending by category

Trip purpose	Share of overall travel budget	Trip Loss
Sales/account management meetings with prospective clients	24%	5%
Internal company meetings	21%	40%
Conferences, trade shows and industry events	18%	10%
Service trips with current customers	15%	15%
Employee training and development	9%	30%
Supplier meetings	7%	20%
Others	6%	10%
<b>Net impact</b>		<b>18%</b>

Source: Global Travel Business Association, DBS Bank

**What about the limitations of Zoom and other video conferencing applications?**

Humans inherently crave for face-to-face interactions, and Zoom fatigue is becoming a more common issue for many after being confined to virtual meetings for an extended period of time, while some technical issues cannot be solved by a video call. At the same time, however, making the switch means that companies stand to accrue substantial cost savings, given that companies on average spend 10% or more of revenue on employee travel, according to a study done by The New York Business Journal. Additionally, technology is constantly evolving and could resolve most of the constraints surrounding remote communication tools in the near future.

Leaders in the fields of Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) are working to create platforms that enable people to feel true presence and better collaborate via interactive virtual meetings. One example would be Microsoft Mesh, an immersive MR platform recently launched by Microsoft where users can collaborate with both 2D and 3D content. Microsoft disclosed that 50% of companies on the Fortune 500 list have purchased a HoloLens 2 (Microsoft's MR smartglasses), which shows how readily large corporations are embracing new technological tools to enhance the virtual workplace experience.

**The future of virtual meetings will be very different from today**

Source: Microsoft, DBS Bank

Are there any mitigating factors?

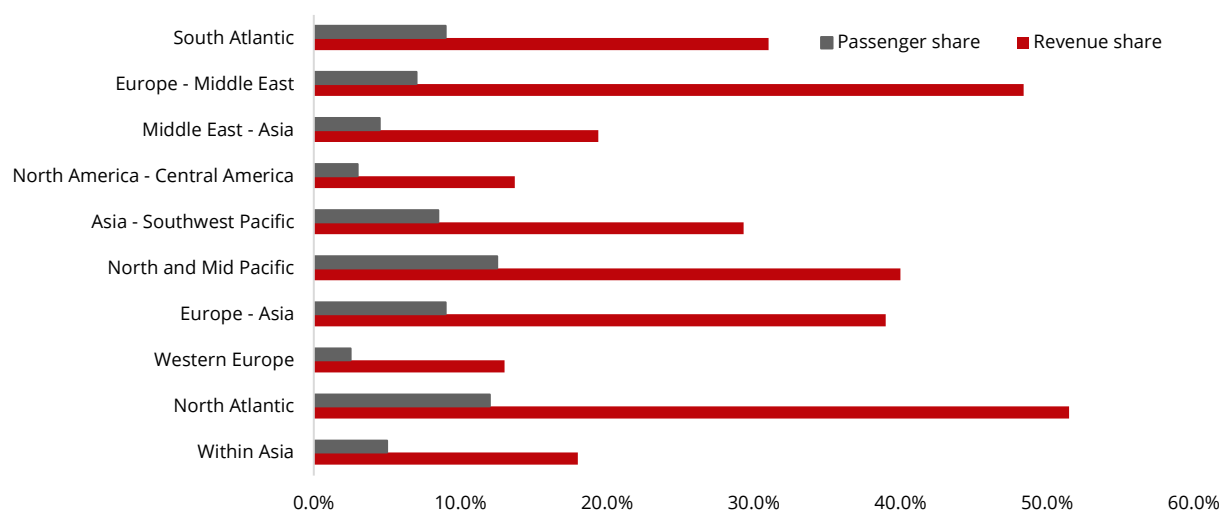
Massive pent-up travel demand should kick in in the short run; proliferation of remote working and digital learning could bolster leisure travel over the medium-term. We believe that we will see an initial burst in premium ticket sales after border controls loosen because of pent-up demand from corporates after postponing business trips for months, and leisure travellers indulging in exorbitant business class seats due to their bloated savings or safety concerns. However, we do not believe this is sustainable, as the backlog of business trips will eventually be cleared, and leisure travellers are ultimately price-conscious and will prioritise value over other factors when conditions normalise. One potential mitigant that could materialise over time would be leisure travellers taking more trips because of increased work and education flexibility with remote working and digital learning, but it will take time to see how that plays out.

What does this mean for airlines?

Business travel was a vital profit generator for the airline industry prior to the pandemic, accounting for as much as 50% of revenue on certain flight routes despite 5-15% passenger share. A lower for longer commercial demand environment suggests that airlines that built their business models around corporate travel will have to rethink their strategies. Fleet rationalisation and aircraft reconfiguration may be necessary to replace some business and first-class seats into premium economy seats to cater to a more resilient leisure market. Frequencies of routes previously dominated by business travellers might have to be cut, and economy seat prices may need to be revised upwards to render these routes profitable. Stringent cost control measures and boosting other revenue streams will be imperative to fill the void left by a dearth of business travellers.

Although we ceased coverage on low cost carriers (LCCs) in the region, as most of them are struggling to stay afloat, this implies that LCCs should outperform after they get their balance sheets in order. Moreover, legacy carriers with robust balance sheets and adequate financial flexibility can still pivot to adapt to changing demand.

Passenger and revenue share of premium class on flight routes



Source: IATA, DBS Bank

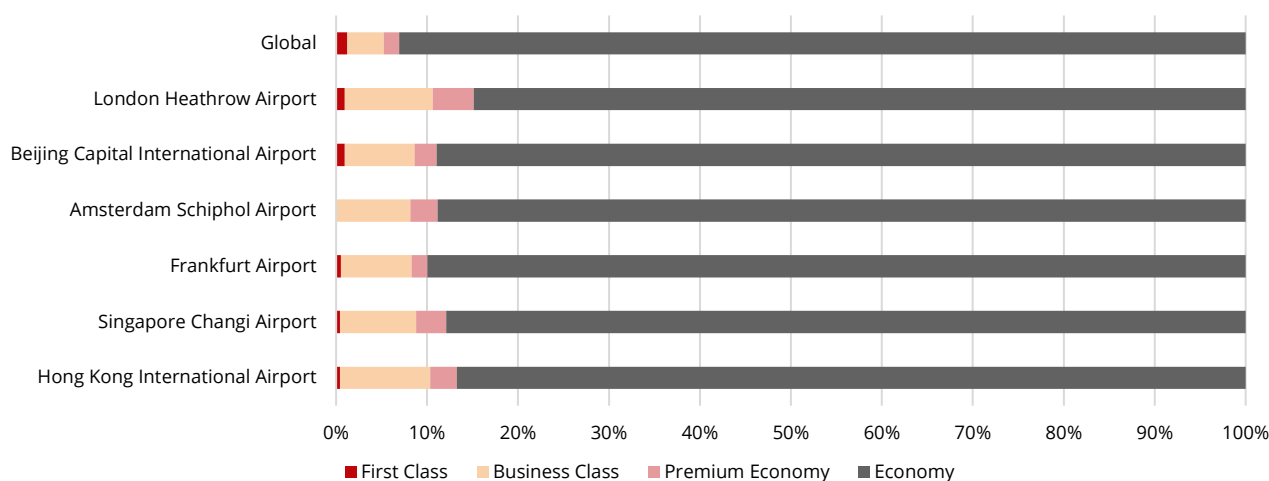
## What will happen to business travel post COVID-19?

### What does this mean for airport operators?

Like the airlines they serve, the fortunes of airports are inextricably linked with business travel. Business hubs will be particularly impacted, as airlines will likely cut service or slash the frequency of flights until corporate demand returns. Lost passenger volumes can be substantial, given that travellers that fly for business can account up to a third of passenger throughput in prominent hubs like Heathrow and Zurich. The impact on airport operators' earnings could be even more

pronounced, as airlines opt to fly less widebody aircraft (typically filled with premium passengers) which fetch a considerably higher aircraft charge, and business class travellers tend to have stronger spending power to splurge on duty-free and retail sales. Furthermore, airports may not only be forced to offer rent waivers and discounts to airlines until the situation improves, but they generally have an elevated degree of fixed costs in their cost structures, which means that there are less levers to manage their costs.

### One-way total seat capacity by cabin class at key business airport hubs (Week commencing 30-Dec-2019)



Source: CAPA and DBS Bank

### Implications on stocks

We are less sanguine on the recovery prospects of full-service carriers and airport hubs that are highly dependent on long-haul international business travel due to reasons elaborated above. Cathay Pacific (CX) and Beijing Capital International Airport (BCIA) fall into this category. Prior to COVID-19, premium passengers accounted for around 40-45% of CX's revenue, while business and first-class seats accounted for around 10-12% of total capacity at BCIA, significantly greater than the global average of 5%.

On the other hand, we continue to be bullish on airlines whose business models are more centred around leisure travel, including names like China Eastern Airlines and China Southern Airlines. The two Chinese airlines typically derive only about 10-15% of revenue from premium passengers and are already witnessing a remarkable resurgence in passenger volumes, which was at 70-80% of pre-crisis levels as of April-2021.

DBS Bank, recommendations are based on an Absolute Total Return\* Rating system, defined as follows:

**STRONG BUY** (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

**BUY** (>15% total return over the next 12 months for small caps, >10% for large caps)

**HOLD** (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

**FULLY VALUED** (negative total return, i.e., > -10% over the next 12 months)

**SELL** (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

\*Share price appreciation + dividends

Completed Date: 17 Jun 2021 07:45:13 (SGT)

Dissemination Date: 17 Jun 2021 07:49:22 (SGT)

Sources for all charts and tables are DB Bank, unless otherwise specified.

#### GENERAL DISCLOSURE/DISCLAIMER

**This report is prepared by DBS Bank Ltd.** This report is solely intended for the clients of DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS Bank Ltd.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies.

Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report.

This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that:

- (a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and
- (b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets.

Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

DBSVUSA, a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

#### **ANALYST CERTIFICATION**

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible for the content of this research report, in part or in whole, certifies that he or his associate<sup>1</sup> does not serve as an officer of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant) and the research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests<sup>2</sup> in relation to an issuer or a new listing applicant that the analyst reviews. DBS Group has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the DBS Group and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of DBS Group's compensation to any specific investment banking function of the DBS Group.

#### **COMPANY-SPECIFIC / REGULATORY DISCLOSURES**

1. DBS Bank Ltd, DBS HK, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS") or their subsidiaries and/or other affiliates have proprietary positions in Cathay Pacific, Air China, Beijing Capital Intl Airport recommended in this report as of 31 May 2021.
2. Neither DBS Bank Ltd nor DBS HK market makes in equity securities of the issuer(s) or company(ies) mentioned in this Research Report.

#### **Compensation for investment banking services:**

3. DBSVUSA does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.

#### **Disclosure of previous investment recommendation produced:**

4. DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed in the first page of this report to view previous investment recommendations published by DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates in the preceding 12 months.


---

<sup>1</sup> An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

<sup>2</sup> Financial interest is defined as interests that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.



**RESTRICTIONS ON DISTRIBUTION**

<b>General</b>	This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation.
<b>Australia</b>	<p>This report is being distributed in Australia by DBS Bank Ltd, DBSVS or DBSV HK. DBS Bank Ltd holds Australian Financial Services Licence no. 475946.</p> <p>DBSVS and DBSV HK are exempted from the requirement to hold an Australian Financial Services Licence under the Corporation Act 2001 ("CA") in respect of financial services provided to the recipients. Both DBS Bank Ltd and DBSVS are regulated by the Monetary Authority of Singapore under the laws of Singapore, and DBSV HK is regulated by the Hong Kong Securities and Futures Commission under the laws of Hong Kong, which differ from Australian laws.</p> <p>Distribution of this report is intended only for "wholesale investors" within the meaning of the CA.</p>
<b>Hong Kong</b>	<p>This report has been prepared by a person(s) who is not licensed by the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities in Hong Kong pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). This report is being distributed in Hong Kong and is attributable to DBS Bank (Hong Kong) Limited, a registered institution registered with the Hong Kong Securities and Futures Commission to carry on the regulated activity of advising on securities pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). DBS Bank Ltd., Hong Kong Branch is a limited liability company incorporated in Singapore.</p> <p>This report is being distributed in Hong Kong by DBS Bank Ltd, DBS Bank (Hong Kong) Limited and DBS Vickers (Hong Kong) Limited, all of which are registered with or licensed by the Hong Kong Securities and Futures Commission to carry out the regulated activity of advising on securities. DBS Bank Ltd., Hong Kong Branch is a limited liability company incorporated in Singapore.</p> <p>For any query regarding the materials herein, please contact Carol Wu (Reg No. AH8283) at <a href="mailto:dbsvhk@dbs.com">dbsvhk@dbs.com</a></p>
<b>Indonesia</b>	This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia.
<b>Malaysia</b>	<p>This report is distributed in Malaysia by AllianceDBS Research Sdn Bhd ("ADBSR"). Recipients of this report, received from ADBSR are to contact the undersigned at 603-2604 3333 in respect of any matters arising from or in connection with this report. In addition to the General Disclosure/Disclaimer found at the preceding page, recipients of this report are advised that ADBSR (the preparer of this report), its holding company Alliance Investment Bank Berhad, their respective connected and associated corporations, affiliates, their directors, officers, employees, agents and parties related or associated with any of them may have positions in, and may effect transactions in the securities mentioned herein and may also perform or seek to perform broking, investment banking/corporate advisory and other services for the subject companies. They may also have received compensation and/or seek to obtain compensation for broking, investment banking/corporate advisory and other services from the subject companies.</p> <p style="text-align: right;">         Wong Ming Tek, Executive Director, ADBSR     </p>

<b>Singapore</b>	This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 196800306E) or DBSVS (Company Regn No. 198600294G), both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, DBS Bank Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact DBS Bank Ltd at 6327 2288 for matters arising from, or in connection with the report.
<b>Thailand</b>	This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.
<b>United Kingdom</b>	<p>This report is produced by DBS Bank Ltd which is regulated by the Monetary Authority of Singapore.</p> <p>This report is disseminated in the United Kingdom by DBS Vickers Securities (UK) Ltd, ("DBSVUK"). DBSVUK is authorised and regulated by the Financial Conduct Authority in the United Kingdom.</p> <p>In respect of the United Kingdom, this report is solely intended for the clients of DBSVUK, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBSVUK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication.</p>
<b>Dubai International Financial Centre</b>	This research report is being distributed by DBS Bank Ltd., (DIFC Branch) having its office at units 608 - 610, 6 <sup>th</sup> Floor, Gate Precinct Building 5, PO Box 506538, DIFC, Dubai, United Arab Emirates. DBS Bank Ltd., (DIFC Branch) is regulated by The Dubai Financial Services Authority. This research report is intended only for professional clients (as defined in the DFSA rulebook) and no other person may act upon it.
<b>United Arab Emirates</b>	This report is provided by DBS Bank Ltd (Company Regn. No. 196800306E) which is an Exempt Financial Adviser as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. This report is for information purposes only and should not be relied upon or acted on by the recipient or considered as a solicitation or inducement to buy or sell any financial product. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situation, or needs of individual clients. You should contact your relationship manager or investment adviser if you need advice on the merits of buying, selling or holding a particular investment. You should note that the information in this report may be out of date and it is not represented or warranted to be accurate, timely or complete. This report or any portion thereof may not be reprinted, sold or redistributed without our written consent.
<b>United States</b>	This report was prepared by DBS Bank Ltd. DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate.
<b>Other jurisdictions</b>	In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.

---

**DBS Regional Research Offices**

---

**HONG KONG**

**DBS (Hong Kong) Ltd**

Contact: Carol Wu  
13th Floor One Island East,  
18 Westlands Road,  
Quarry Bay, Hong Kong  
Tel: 852 3668 4181  
Fax: 852 2521 1812  
e-mail: dbsvhk@dbs.com

**MALAYSIA**

**AllianceDBS Research Sdn Bhd**

Contact: Wong Ming Tek  
19th Floor, Menara Multi-Purpose,  
Capital Square,  
8 Jalan Munshi Abdullah 50100  
Kuala Lumpur, Malaysia.  
Tel.: 603 2604 3333  
Fax: 603 2604 3921  
e-mail: general@alliancedbs.com  
Co. Regn No. 198401015984  
(128540-U)

**SINGAPORE**

**DBS Bank Ltd**

Contact: Janice Chua  
12 Marina Boulevard,  
Marina Bay Financial Centre Tower 3  
Singapore 018982  
Tel: 65 6878 8888  
e-mail: groupresearch@dbs.com  
Company Regn. No. 196800306E

**THAILAND**

**DBS Vickers Securities (Thailand) Co Ltd**

Contact: Chanpen Sirithanarattanakul  
989 Siam Piwat Tower Building,  
9th, 14th-15th Floor  
Rama 1 Road, Pathumwan,  
Bangkok Thailand 10330  
Tel. 66 2 857 7831  
Fax: 66 2 658 1269  
e-mail: research@th.dbs.com  
Company Regn. No 0105539127012  
Securities and Exchange Commission,  
Thailand

**INDONESIA**

**PT DBS Vickers Sekuritas (Indonesia)**

Contact: Maynard Priajaya Arif  
DBS Bank Tower  
Ciputra World 1, 32/F  
Jl. Prof. Dr. Satrio Kav. 3-5  
Jakarta 12940, Indonesia  
Tel: 62 21 3003 4900  
Fax: 6221 3003 4943  
e-mail: indonesiaresearch@dbs.com