

**Sector note**

21 Oct 2022

**Aviation**

**Welcome international flows**

- Industry outlook will improve following the recovery rate of int'l inflows.
- It's a good time to accumulate aviation stocks given attractive valuation and visible earnings growth profiles.
- Our top picks are ACV and AST for their best representatives of each segment with strong growth and catalysts in endemic.

**International air travel to soar again in 2023**

Most of countries have removed the restriction for tourists which will urge both outbound and inbound travel demand. Int'l pax throughput jumped 35 times yoy in 3Q22, recovering to 49.8% of pre-pandemic level. In base case scenario, we expect China will gradually relax the travel restriction since 2Q23F. Thus, the int'l inflow recovery rate might reach 84% in 2Q23F and 100% in 4Q23 to bring total int'l pax volume to grow 195% yoy in 2023F. Additionally, domestic pax throughput is forecasted to bounce 231% yoy in 2022 (+30.9% higher 2019 level) and grow stably at 8.9% CAGR over 2023-25F.

**The growth opportunities are not equal for everyone**

Having high revenue exposure to int'l air travel, airport retailers will be the most beneficiaries of the recovery of int'l arrivals. We pretty like the business model of airport retailer due to its high entry barrier and its ability to pass through increasing input cost to buyers. For airport, the growth is crystal clear but might be dented since 2024 onwards due to the capacity constraints. The recovery prospect of airlines is overshadowed by high fuel price, exchange rate volatility and rising interest rates. However, we prefer low-cost-carrier than full-service-carrier due to its less sensitivity to economic recession and fuel price hike.

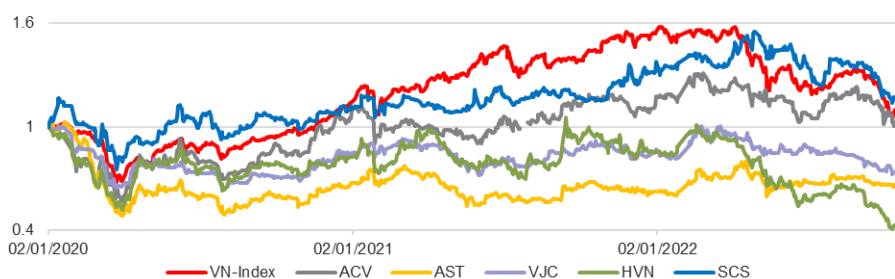
**Why aviation stocks now?**

We believe robust earnings growths over 3Q22 – FY23F across almost aviation segments (port, airlines, retailers) is relatively visible following the recovery of int'l flows. The recent market correction has brought the valuation most of aviation stocks down close to pandemic level (Mar-2020). Thus, we believe it's a good time to accumulate aviation stocks at attractive valuation and clear earnings growth profiles.

**Key downside risks threaten to thwart the industry recovery**

(1) Higher-than-expected fuel price leading to higher operating cost of the airlines, which may lift up ticket price and dent air travel demand, (2) bilateral tourism between Vietnam and China hardly recover to the pre-pandemic level due to the zero-covid policy, and (3) higher-than-expected USD/VND exchange rate and rising USD interest rates may also affect aviation infrastructure investment borrowing in USD in the coming periods.

**Aviation stock price movements since 2020**



Source: BLOOMBERG, VNDIRECT RESEARCH

**Analyst(s):**



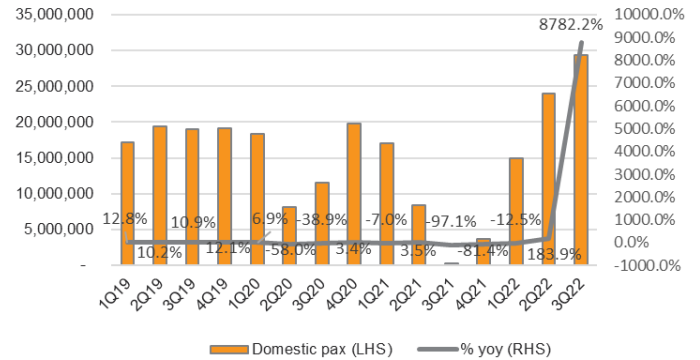
**Dzung Nguyen**

[dung.nguyentien5@vndirect.com.vn](mailto:dung.nguyentien5@vndirect.com.vn)

**VIETNAM AVIATION SNAPSHOT IN 9M22**

**Domestic pax throughput has surpassed the pre-pandemic level (Unit: pax)**

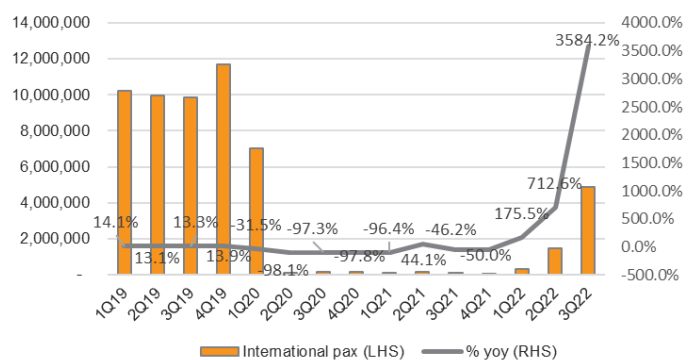
After successfully controlling the Covid-19 epidemic in 1Q22, the domestic air traffic began to recover from Apr-2022 and has surpassed the pre-pandemic level from May-2022 thanks to the strong recovery of domestic tourism demand after the pandemic. As 3Q21 domestic air traffic had a low base when the pandemic broke out strongly nationwide, 3Q22 domestic pax throughput hiked 87 times yoy – equal to 154.7% of pre-pandemic level, bringing 9M22 domestic pax throughput to increase 164.6% yoy – equal to 122.9% of pre-pandemic level.



Sources: CAAV, VNDIRECT RESEARCH

**International pax throughput also witnessed impressive results (Unit: pax)**

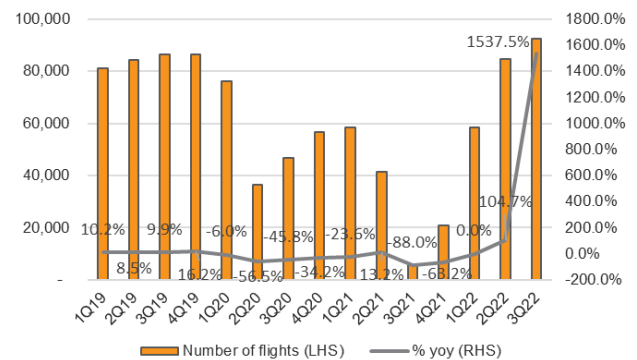
On 15/02/2022, Vietnam has lifted restrictions on the frequency of international flights. Until 15/03/2022, Vietnam has (1) returned the number of regular routes to the pre-pandemic levels, (2) restored pre-pandemic visa policy. Until 15/05/2022, Vietnam has stopped the requirements of validate Covid-19 test results for international passengers and fully resumed international air traffic. As a result, 3Q22 international pax throughput marked a strong recovery with an increase of 35 times yoy, equal to 49.8% of pre-pandemic level, bringing 9M22 international pax throughput to increase 14.5 times yoy – equal to 22.3% of pre-pandemic level.



Sources: CAAV, VNDIRECT RESEARCH

**VJC has the strongest recovery in the number of flights among the airlines**

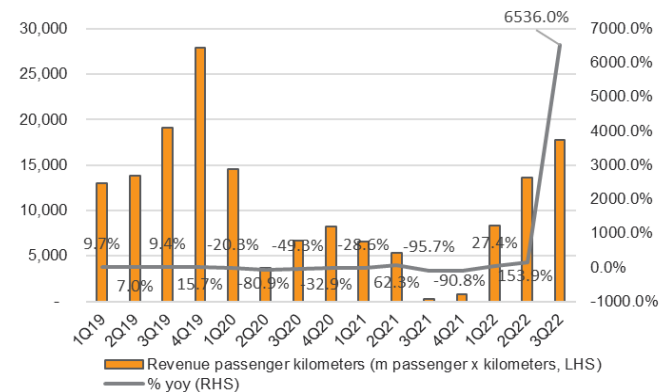
Total flights of Vietnam in 9M22 increased 123.4% yoy to 235,464 flights thanks to the strong recovery of domestic air traffic. HVN ranks first in total flights with 106,706 flights (119.3% yoy; 45.3% market share). VJC had 86,898 flights in the period (147.8% yoy, 36.9% market share), Bamboo Airways with 38,189 flights (+87.6% yoy, 16.2% market share).



Sources: CAAV, VNDIRECT RESEARCH

**Vietnam's air traffic Revenue Passenger Kilometers (RPK)**

According to GSO, 3Q22 RPK hiked 65 times yoy – equal to 93.3% of pre-pandemic level thanks to the strong recovery of domestic air traffic, bringing 9M22 RPK to increase 226.0% yoy – equal to 86.8% of pre-pandemic level.



Sources: GSO, VNDIRECT RESEARCH

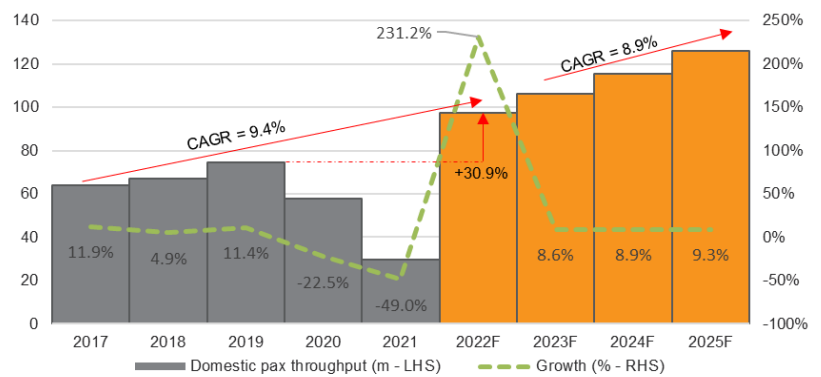
## WELCOME INTERNATIONAL ARRIVALS

### International air traffic will take the spot light in the coming periods

#### Domestic air traffic has regained what was lost during the pandemic

This summer vacation has really untied domestic passengers after more than two years of Covid-19. In particular, many attractive new tourism products deploying in a timely manner in combination with tourism stimulus programs of cities and provinces such as Da Nang, Quy Nhon, Phu Quoc, Nha Trang, Quang Ninh..., have ignited a boom of domestic tourism nationwide. Besides, the domestic airlines have also aggressively exploited and increased the frequency of domestic routes to tourism destinations (for example, the current flight frequency to/from Phu Quoc has reached 100 domestic flights per day, while there were only 72 international and domestic flights per day to/from Phu Quoc before the epidemic in 2019), helping the domestic air traffic to achieve impressive growth numbers. In 9M22, the number of total flights increased 123.4% yoy (mostly domestic flights) and 9M22 domestic pax throughput surged 164.6% yoy – equal to 122.9% of pre-pandemic level.

**Figure 1: Vietnam medium-term domestic pax forecasts**



Source: VNDIRECT RESEARCH, CAAV

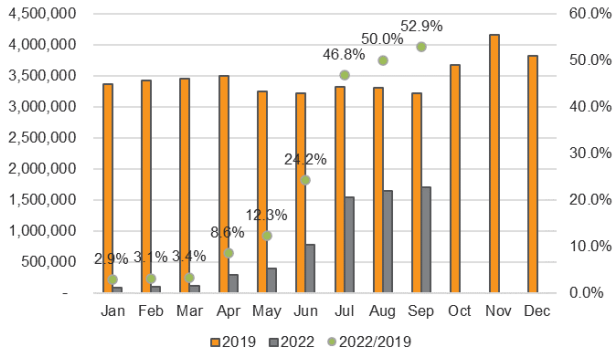
In 2017-2019 period, the volume of domestic pax throughput grew at a CAGR of 9.4%, this can be considered as the natural growth of the domestic air traffic, coming from income growth and demographic conditions of Vietnam. However, the arrival of the Covid-19 epidemic has paralyzed Vietnam's aviation industry. Growth was interrupted and the industry entered a difficult period in 2020-2021. Since 2Q22, nationwide vaccine coverage has helped Vietnam control the pandemic and the domestic aviation industry began to recover, recording impressive growth. Following the growth momentum in 9M22 and the potential natural growth of domestic air traffic, we expect 2022F domestic pax throughput to grow 231.2% yoy and grow by 30.9% compared to 2019 level, maintaining a CAGR of 9.4% in 2017-2022F period. We believe 2022F domestic pax growth is not extraordinary but it shows domestic travel demand has grown reasonably with sustainable natural potential growth. In 2023-2025F period, we expect domestic pax growth may slow down a bit at 8.9% CAGR as (1) people can travel abroad more easily, and (2) many major domestic airports are overloaded.

#### Now it's time for international air travel

3Q22 international pax throughput marked a strong recovery with an increase of 35 times yoy to 4.9m, equal to 49.8% of pre-pandemic level, bringing 9M22 international pax throughput to increase 14.5 times yoy to 14.5m – equal to 22.3% of pre-pandemic level. Currently, there are more than 30 foreign airlines and 4 Vietnamese airlines operating 96 international routes connecting

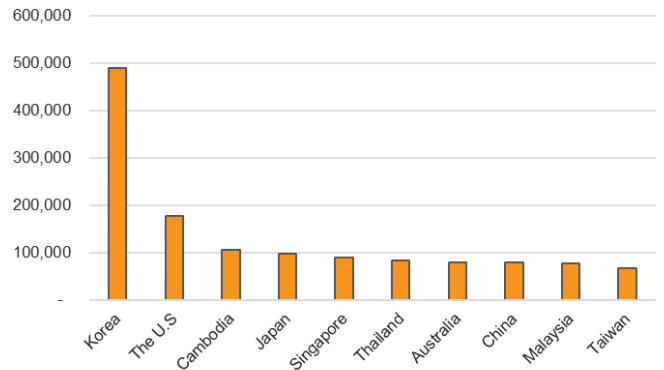
Vietnam with 21 countries/regions. In 9M22, Korea is the country with the highest number of tourists to Vietnam with an increase of 21 times yoy, following by the U.S and SEA countries.

**Figure 2: International pax by month (pax)**



Source: VNDIRECT RESEARCH, CAAV

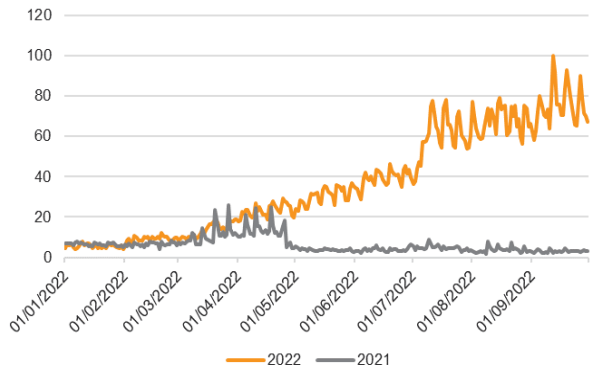
**Figure 3: Top 10 countries with most tourists to Vietnam in 9M22 (pax)**



Source: VNDIRECT RESEARCH, gso.gov.vn

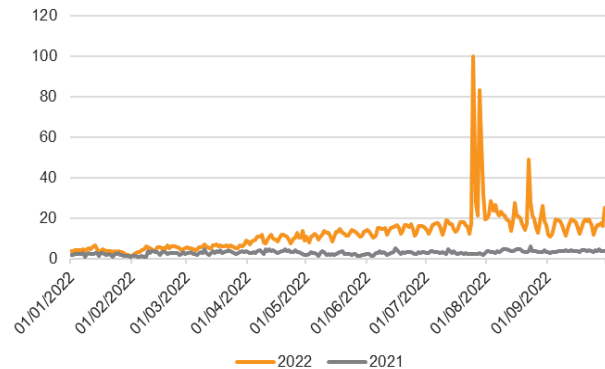
In particular, most international pax are inbound passengers (proportion of 75% in 9M22) with total searches for Vietnam inbound travel increasing 4.9 times yoy in 9M22. Vietnam inbound travel demand increased sharply since 3Q22 as Vietnam has stopped the requirements of validate Covid-19 test results for international passengers and fully resumed international air traffic from May-2022. The contribution of outbound passengers is still low in 9M22 as some countries have not fully opened and Vietnamese people tend to travel domestically.

**Figure 4: Searches for Vietnam inbound travel**



Source: VNDIRECT RESEARCH, Google Destination

**Figure 5: Searches for Vietnam outbound travel**



Source: VNDIRECT RESEARCH, Google Destination

The near-term recovery of Vietnam international tourism heavily depends on the entry requirements of the destination countries. In general, almost every countries have removed entry requirements related to Covid-19 prevention, however the most negative factor to Vietnam tourism recovery is China's zero-covid policy, in which travel to and from China is still strictly limited. We expect the recovery potential of Vietnam's major international air traffic markets in the base case as follows:

**Figure 6: Recovery potential of Vietnam's major international air traffic markets in our base case scenario**

Country	Pre-pandemic weight	Current entry requirements status	Comments
China	34.5%	Strictly limited	Following zero-covid policy, China has strictly limited travel in/out of the country from 1Q20. However, most recently, the Chinese government has issued draft regulations aiming for increasing tourism along its borders and making it simpler for some foreigners to enter China. According to the draft policy, tour groups will have flexible options for port of entrance and exit in border regions. We believe China is on the way to recover its international air traffic but at a slow pace, and this will contribute to Vietnam international pax recovery as China accounts the most in pre-pandemic level (34.5% of Vietnam international pax). We expect international pax from China to recover to pre-pandemic level by 1Q24F.
Korea	25.5%	Fully removed entry requirements related to Covid-19 prevention	From Oct-2020, Korea has removed the Covid-19 test results for entry requirements, which mean all Covi-19 restrictions on travellers have been lifted. We expect the Covid-19 restrictions ease would help boost the air traffic between Vietnam and Korea in the coming period and would bring international pax between Korea and Vietnam to recover to pre-pandemic level by 2Q23F.
SEA	12.5%	Fully removed entry requirements related to Covid-19 prevention	Vietnam's major air traffic market in SEA including Singapore, Thailand and Malaysia have all fully reopened and developed bilateral tourism with Vietnam. We expect international pax from SEA to recover to pre-pandemic level by 1Q23F.
Europe	8.1%	Fully removed entry requirements related to Covid-19 prevention	The Europe has fully removed Covid-19 restrictions from 2Q22. Beside HVN, Bamboo Airways has also launched many new routes to Europe, speeding up the recovery of international pax from Europe. We expect international pax from Europe to recover to pre-pandemic level by 2Q23F.
Japan	5.6%	Almost removed entry requirements related to Covid-19 prevention	From 11/10/2022, travellers to Japan can go on their own without going through any tour agents. Vietnamese travellers now only need qualify vaccine passports for entry into Japan. We believe the Covid-19 restrictions when travelling to Japan will be fully removed in the coming months and international pax between Japan and Vietnam may recover to pre-pandemic level by 2Q23F.
Taiwan	5.5%	Partly removed entry requirements related to Covid-19 prevention	From 13/10/2022, Taiwan will restore pre-pandemic visa policy, however visitors entering Taiwan still need negative-Covid test and buy insurances. We expect international pax between Taiwan and Vietnam to recover to pre-pandemic level by 3Q23F.
U.S	4.4%	Fully removed entry requirements related to Covid-19 prevention	Like Europe, we expect international pax on this route to recover to pre-pandemic level by 2Q23F.
Russia	3.8%	Limited due to geopolitical uncertainties	From 25/10/2022, Vietnam will resume flights between Russia and Nha Trang after being suspended from Mar-2022 due to tension between Russia and Ukraine. We expect international pax on this routes may recover to pre-pandemic level by 3Q23F.
India	0.0%	Fully removed entry requirements related to Covid-19 prevention	India is considered a potential new market for Vietnam's tourism. Vietjet Air, Vietnam Airlines, and India's IndiGo and Spice Jet have launched new routes between Vietnam and India. In particular, Vietjet Air has been granted the right to operate more than 20 new routes from Hanoi, Ho Chi Minh City, Da Nang, Phu Quoc to new destinations in India such as Bangalore, Hyderabad, Ahmedabad, Chennai, Kolkata, Gaya as well as increase the flight frequency to Delhi and Mumbai from Jul-2022. We expect international pax on this route to reach 5% of pre-pandemic total international pax of the whole market by 2Q23F.

Source: VNDIRECT RESEARCH

**Figure 7: Recovery rate of international pax volume estimates, in our base case scenario**

Country	2019 weight	1Q22	2Q22	3Q22	4Q22F	1Q23F	2Q23F	3Q23F	4Q23F
China	34.5%	4%	5%	15%	20%	20%	40%	60%	80%
Korea	25.5%	5%	20%	50%	80%	90%	100%	105%	110%
SEA	12.5%	5%	50%	80%	90%	100%	105%	110%	115%
Europe	8.1%	5%	20%	50%	80%	90%	100%	105%	110%
Japan	5.6%	6%	20%	50%	80%	90%	100%	105%	110%
Taiwan	5.5%	4%	10%	20%	50%	80%	90%	100%	105%
U.S	4.4%	5%	20%	50%	80%	90%	100%	105%	110%
Russia	3.8%	5%	10%	20%	50%	80%	90%	100%	105%
India	0.0%	5%	20%	50%	80%	90%	100%	105%	110%
<b>Total</b>	<b>100.0%</b>	<b>4.9%</b>	<b>18.7%</b>	<b>41.4%</b>	<b>61.8%</b>	<b>70.7%</b>	<b>84.0%</b>	<b>94.9%</b>	<b>105.3%</b>
			<b>31.7%</b>				<b>88.7%</b>		

Source: VNDIRECT RESEARCH

In our base case, air traffic between Vietnam and SEA will recover strongly from 3Q22F as the tourism promotion has been implemented, followed by Korea, Europe, Japan, the U.S and India in 4Q22F, Taiwan and Russia tourism promotion may be implemented in 1Q23F while China tourism promotion may be implemented in 3Q23F. As a results, total number of international pax from SEA market may recover to pre-pandemic level in 1Q23F, followed by Korea, Europe, Japan, U.S in 2Q23F, Taiwan and Russia in 3Q23F and China in 1Q24F.

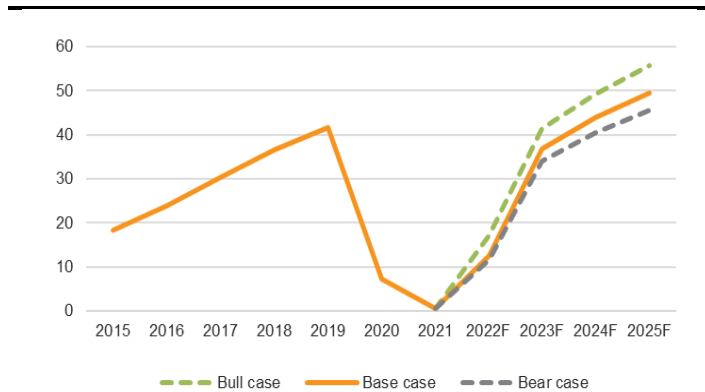
**Figure 8: Three scenarios for the time of recovery to pre-pandemic level of major air travel markets**

Time of recovery to pre-pandemic level	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24
Best case	SEA	Korea, Japan, Europe, US	Taiwan, Russia		China		
Base case		SEA	Korea, Europe, Japan, US	Taiwan, Russia		China	
Worst case			SEA	US, Japan			China

Source: VNDIRECT RESEARCH

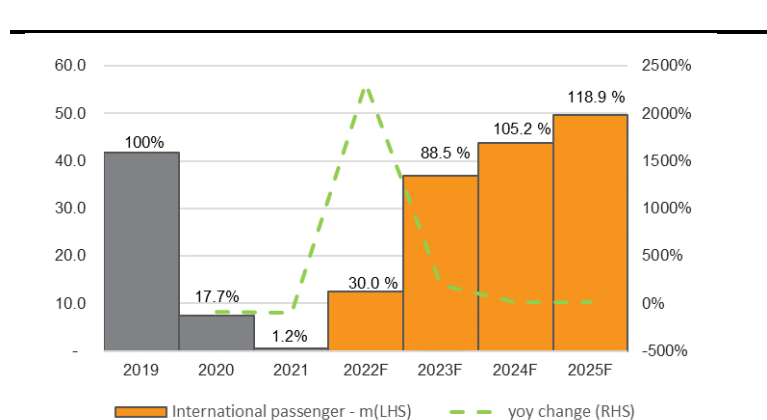
In the base case, we expect Vietnam international pax to reach 12.5m pax in FY22F (versus 0.5m pax in FY21), and may increase 195.2% yoy in FY23F – equal to 88.5% of pre-pandemic level. Since Vietnam aviation businesses’ results have a high exposure to international air traffic, we believe their business results will have an outstanding growth from 2023F thanks to the strong recovery of the international pax. Vietnam international pax may fully recover to pre-pandemic level in FY24F (105.2% of FY19 base) and may reach to 118.9% of FY19 base in FY25F in our forecasts.

**Figure 9: Our forecasts for Vietnam international pax in three scenarios (m pax)**



Source: VNDIRECT RESEARCH, CAAV

**Figure 10: Vietnam medium-term international pax forecasts**



Source: VNDIRECT RESEARCH, CAAV

### Aviation infrastructure to be heavily overloaded in 2023-24F

#### Aviation infrastructure construction to be accelerated

According to government’s air transportation master plan, until 2030F Vietnam will have 28 airports including 15 domestic airports and 13 international airports (from 22 airports including 13 domestic airports and 9 international airports in 2022):

- Four new international airports until 2030F include Long Thanh international airport (LTIA) and 3 upgraded domestic airports (Tho Xuan, Vinh, Chu Lai).
- Five new domestic airports will be developed through BOT which are Phan Thiet, Quang Tri, Sapa, Lai Cha, Na San.
- In addition, some key airports will be expanded including Tan Son Nhat international airport (TIA), Noi Bai international airport (NIA), Cat Bi international airport, Phu Bai international airport.

**Figure 11: Main aviation infrastructure projects in the coming years**

Project	CAPEX until 2030F (VNDbn)	Deployment time	Additional capacity (m pax)	Investor	Current status
Long Thanh international airport	185,600	2020-2030F	50.0	ACV	Under developed T3 project is designed with a capacity of receiving 20 m pax p.a (+67% TIA's designed capacity to total 50 m pax p.a). Currently, ACV is waiting for hand over land to implement the project. By Jul-2022, the Government has issued Resolution No. 93/NQ-CP in which the Government agree with the policy of the Ministry of Defense to hand over about 27.85 ha of defense land in Tan Binh district for the implementation of the T3 Terminal. 16.05 ha will be handed over to ACV in Oct-22 for the terminal construction, while 11.8 ha for road connecting Tran Quoc Hoan - Cong Hoa may be handed over later.
T3 Terminal in TIA	10,990	4Q22F-4Q24F	20.0	ACV	The feasibility study report on the expansion of T2 terminal in Noi Bai has been approved. The project will increase T2 NIA capacity from 10m p.a to 15m p.a (raising total designed capacity of NIA from 25m p.a to 30m p.a). According to the NIA Planning Project in the until 2030 period, in 2025, ACV will implement the T3 terminal and a southern runway with a capacity of 30 m pax p.a. and complete in 2030, raising the total capacity of NIA to 60 m pax p.a by 2030. By 2050, the total capacity of NIA can reach 100 m pax p.a including 5 runways and 4 terminals.
T2 terminal expansion in NIA	4,983	2023F-2025F	5.0	ACV	The project has a capacity of 5 m pax p.a including 4 m domestic pax p.a and 1 m international pax p.a. The project is completing the interior part and expected to complete in Nov-22.
T2 terminal in Phu Bai - Hue	2,249	4Q19 - 4Q22F	5.0	ACV	On Jul-22, the government has approve the investment policy of the T2 terminal construction in Cat Bi airport. When completed, T2 terminal will be a domestic terminal, and T1 terminal with an area of 15,630m2 will be the international terminal of Cat Bi airport. The goveremnt also approved the policy of Cat Bi airport expansion with an expected capacity of 13 m pax p.a by 2030 and 16.6 m pax p.a by 2040.
T2 terminal in Cat Bi - Hai Phong	2,405	18 months from land handover	5.0	ACV	The work of compensation and site clearance has completed. The contractors are leveling and constructing runways (the wokd of Ministry of Defense). The government is reviewing the capacity of the BOT investors to ensure the terminal construction in early 2023F and expected to complete in 2024F.
Phan Thiet domestic airport	13,833	2019-2024F	2.0	BOT	The project is in the contractor selection stage, striving to start construction in early 2023F and finish in 2025F.
Sapa domestic airport	3,651	1Q23F-2025F	1.5	BOT	The People's Committee of Quang Tri assigned T&T Group to prepare a project feasibility study report, which is expected to start construction in 1Q23 and launch in 2025.
Quang Tri domestic airport	2,913	1Q23F-2025F	1.0	T&T group	The project is in the contractor selection stage, striving to start construction in early 2023F and finish in 2025F.
Na San domestic airport	2,500	1Q23F-2025F	1.0	BOT	The project is in the contractor selection stage, striving to start construction in early 2023F and finish in 2025F.
Lai Chau domestic airport	4,350	1Q23F-2025F	0.5	BOT	The project is in the contractor selection stage, striving to start construction in early 2023F and finish in 2025F.
Dien Bien airport expansion	1,467	1Q22-3Q23F	0.2	ACV	The project is in the contractor selection stage, striving to start construction in early 2023F and finish in 2025F.

Source: VNDIRECT RESEARCH

### Long Thanh International Airport construction is on schedule

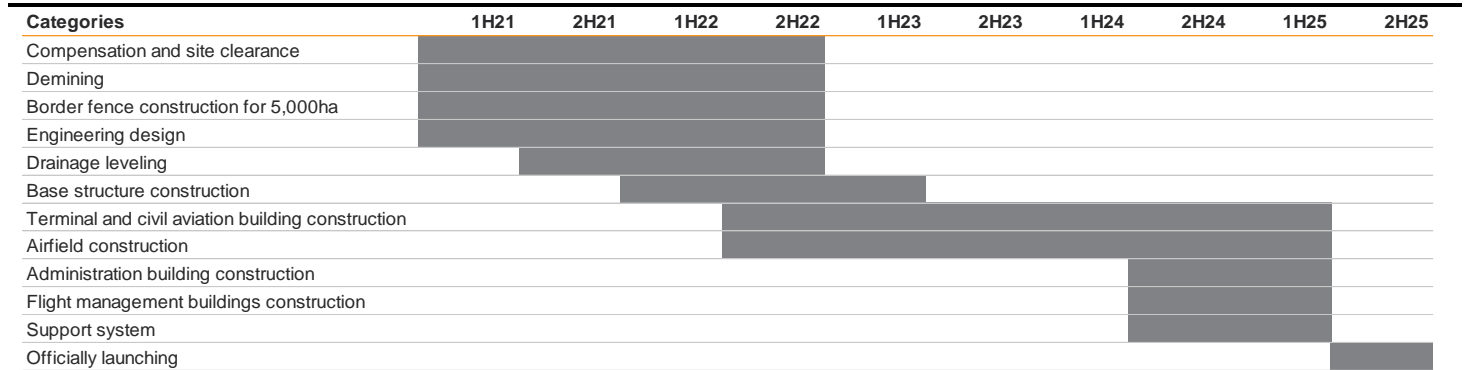
Long Thanh International airport (LTIA) has been officially assigned to ACV as the main developer in Nov-20. Total investment of LTIA is about US\$15bn with total capacity of 100m pax. The project includes 3 phases, in which phase 1 can serve 25m pax throughput with the investment cost US\$4.3bn (VND99,000bn). ACV has started the construction of phase 1 in Dec 20 and expects to complete it in 02/09/2025. The project includes 4 component projects, the current progress is as follows:

- Component project 1 (behind schedule): Building the headquarters of state management agencies, the Ministry of Transport (MOT) has approved the investment policy of the airport authority office construction, but other agencies have not yet allocated capital for their office construction.
- Component project 2 (on schedule): Construction of works for flight management, Vietnam Air Traffic Management Corporation as the investor has opened the bidding package for the construction of the foundation of the air traffic tower, expected to start construction in Oct-22.
- Component project 3 (on schedule): Construction of essential works, ACV as the investor has leveled the ground with 15.97 m cbm/115 m cbm (reaching 13.9%), and completed the pile foundation (1,545 piles) for the station area. ACV has issued bidding documents for the station package, which is expected to start construction in Nov-22. Currently,

a specialized agency of MOT has commented on the technical design documents. For the items of ancillary works, ACV is choosing a technical design consultant.

- Component project 4 (on schedule): Construction of other service works, there are 2/11 projects being in the investor selection procedures by the Civil Aviation Authority of Vietnam (CAAV). 9/11 projects are posting information to look for investors to participate.

**Figure 12: LTIA construction plan**



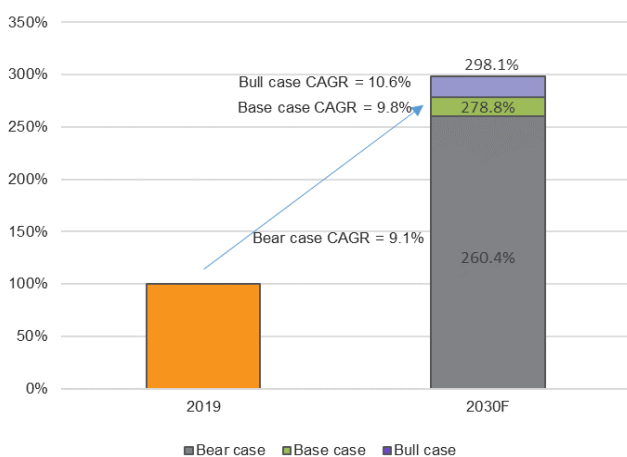
Source: CAAV, VNDIRECT RESEARCH

If Phase 1 launches on time, LTIA will be the growth engine of Vietnam aviation industry from 2025F onwards. LTIA is positioned to become a new transit hub in Southeast Asia, competing with other regional hubs such as Singapore’s Changi Airport, Bangkok’s Suvarnabhumi Airport and Hong Kong International Airport. After phase 3 of LTIA is completed, LTIA will handle 80% of international passenger throughput and 20% of passenger throughput from/to HCMC, as per Civil Aviation Authority of Vietnam’s (CAAV) master plan vision until 2050.

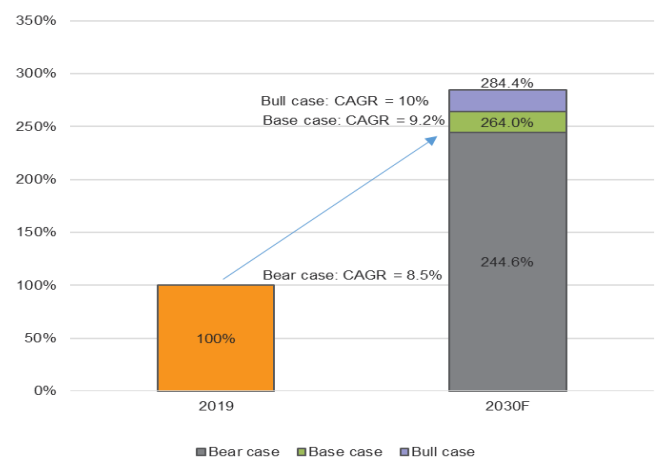
**Aviation infrastructure constraint may become more serious in 2023-24F before easing from 2025F**

**Figure 13: Vietnam’s domestic passenger volume forecast in FY19-30F**

**Figure 14: Vietnam’s international passenger volume forecast in FY19-30F**



Source: VNDIRECT RESEARCH, CAAV



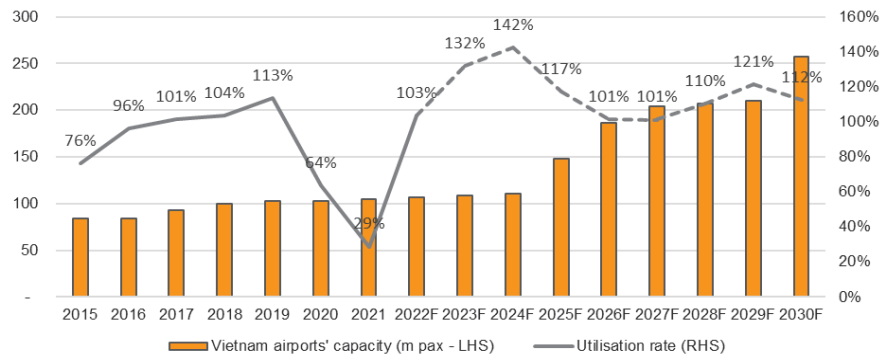
Source: VNDIRECT RESEARCH, CAAV

The government expects total passenger volume throughput to increase by 9.6% p.a. in FY19-30F, in which domestic passenger volume throughput would increase by 9.8% p.a., while international passenger volume would increase by 9.2% p.a., in a base-case scenario. The government is also making a small



allowance for both downside risk and upside risk of FY19-30F total traffic CAGR with an absolute value of 0.7% points. We believe this is a achievable growth as beside the improving capacity at Vietnam’s airports, the potential growth of Vietnam air traffic demand is also huge giving the strong growth of Vietnam aviation in the past.

**Figure 15: Utilisation rate forecasts of Vietnam airports until 2030F**



Source: VNDIRECT RESEARCH, CAAV

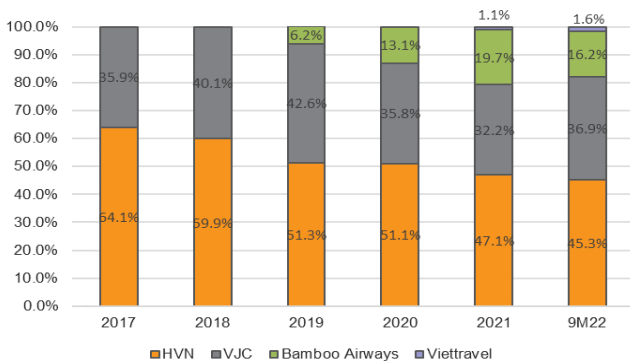
However, as many key aviation infrastructure projects are underdeveloped, the aviation infrastructure cannot keep in pace with the demand growth in near-term and Vietnam aviation infrastructure may become heavily overloaded in 2023-2024F when international visitors are expected to recover strongly. We estimate Vietnam aviation airports may operate at 132%/142% designed capacity in 2023-24F, before offloading from 2025F when many key aviation infrastructure projects launch such as LTIA, T3 terminal in TIA and T2 expansion in NIA.

**Airlines: recovery prospect overshadowed by high fuel price, exchange rate volatility and rising interest rates**

**VJC has the best flights traffic recovery among domestic rivals**

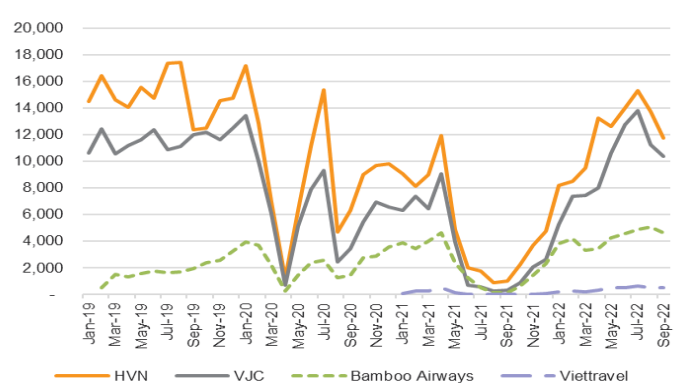
The market shares of the airlines have changed greatly from 2017. HVN has seen its market share decrease year by year, from 54.1% in 2017 to 45.3% in 9M22, while VJC and Bamboo Airways are gradually taking up the market share. Among the airlines, VJC has the strongest recovery in the number of flights with 9M22 growth of 147.8% yoy, followed by HVN (119.3% yoy) and Bamboo Airways (87.6% yoy).

**Figure 16: Market shares of the airlines in terms of total flights**



Source: VNDIRECT RESEARCH, CAAV

**Figure 17: Airlines' total flights per month**



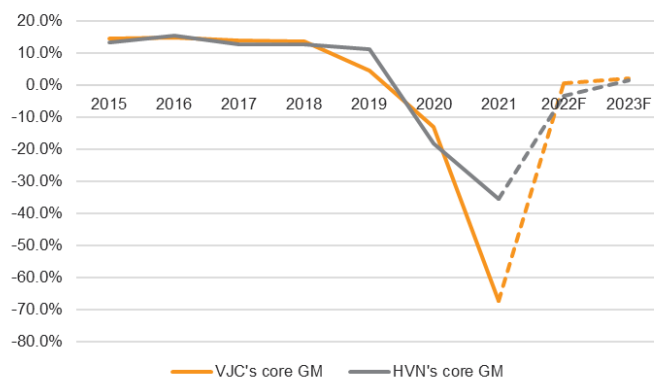
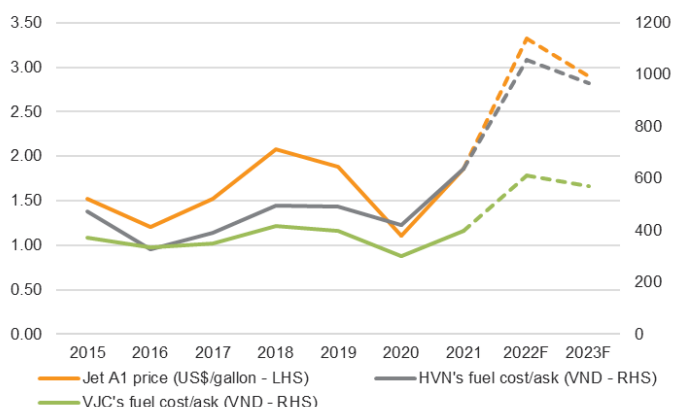
Source: VNDIRECT RESEARCH, CAAV

**Rising fuel prices impose many difficulties for the airlines but LCCs are less affected than FSCs, in our view**

Due to the tension between Russia and Ukraine, we expect global Jet A1 fuel price to surge 79.2% yoy in 2022F before cooling down 13.0% yoy in 2023F. Jet fuel price in 2022-23F maintains at the highest level since 2015, imposing many difficulties for the airlines.

**Figure 18: Vietnam’s domestic passenger volume forecast in FY19-30F**

**Figure 19: Core gross margin of the airlines in FY15-23F**



Source: VNDIRECT RESEARCH, COMPANY REPORTS

Source: VNDIRECT RESEARCH, COMPANY REPORTS

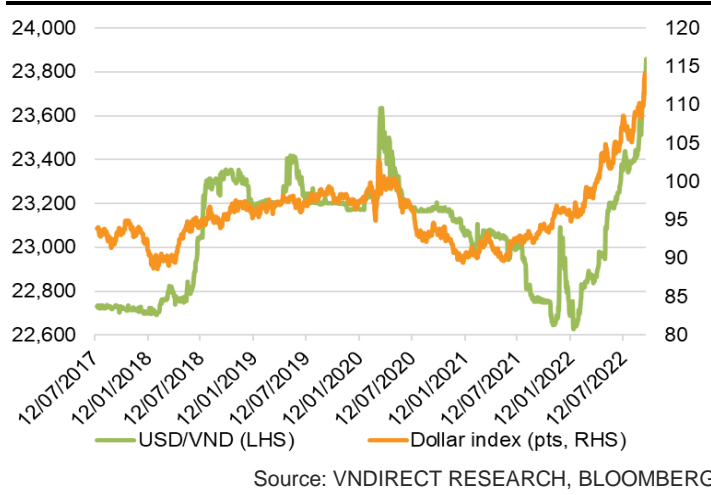
Facing the rising jet fuel, we believe low-cost carriers (LCCs) would be less affected than full-services carriers (FSCs). The fuel consumption of the aircrafts closely depend on its weight. Long-haul aircrafts are usually wide-body aircrafts with larger capacity and heavier weight. In addition, long-haul flights also require a lot of fuel which makes the aircrafts heavier. In contrast, short-haul aircrafts are usually narrow-body aircrafts with lighter weight, thus consuming less fuel for taking-off and altitude maintenance than long-haul aircrafts. VJC’s fleet is all short-haul narrow-body aircrafts which will have lower average fuel consumption/ASK compared to HVN which has nearly 30% of the fleet are wide-body long-haul aircrafts. Details of impacts on the two models are as follows:

- Giving jet fuel price hike in FY22-23F, we forecast HVN’s fuel cost/available-seat-kilometer (ASK) to increase 65.4% yoy in FY22F and cool down 8.3% yoy in FY23F while VJC’s fuel cost/ASK only increase 54.3% yoy in FY22F and cool down 7.1% yoy in FY23F.
- Moreover, despite high jet fuel prices, we estimate VJC’s core gross margin to be positive in FY22-23F at 0.4%/2.0%, respectively, while HVN’s core gross margin may be lower at -3.5%/1.4% in FY22-23F.

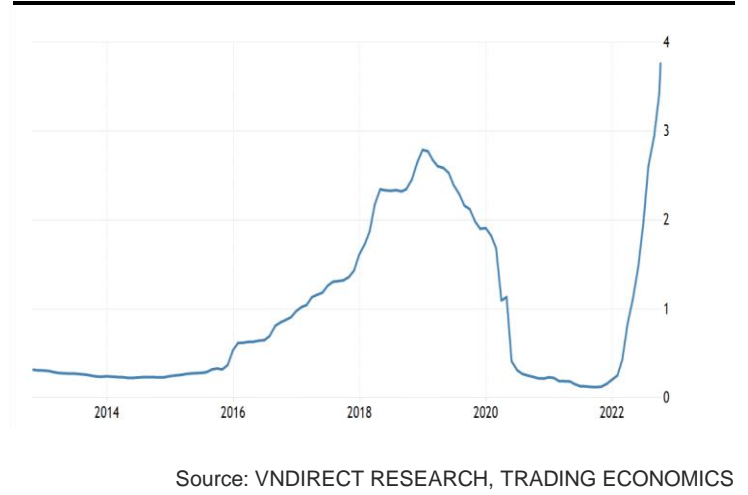
**Rising interest rate and stronger USD also affect business results and the fleet expansion plan of the airlines**

Stronger USD has put pressure on USD/VND exchange rate, making USD/VND rate on the interbank rise to the highest level in history. The USD 3-month-LIBOR also reached its peak over 10 years following FED’s recent interest rate hikes. USD appreciation and surging USD interest rates have negative impacts on capital-intensive businesses such as the airlines when most of the airlines finance their fleet by USD.

**Figure 20: Dollar index has reached its peak over 20 years**



**Figure 21: USD 3-month-LIBOR also reached its peak over 10 years**

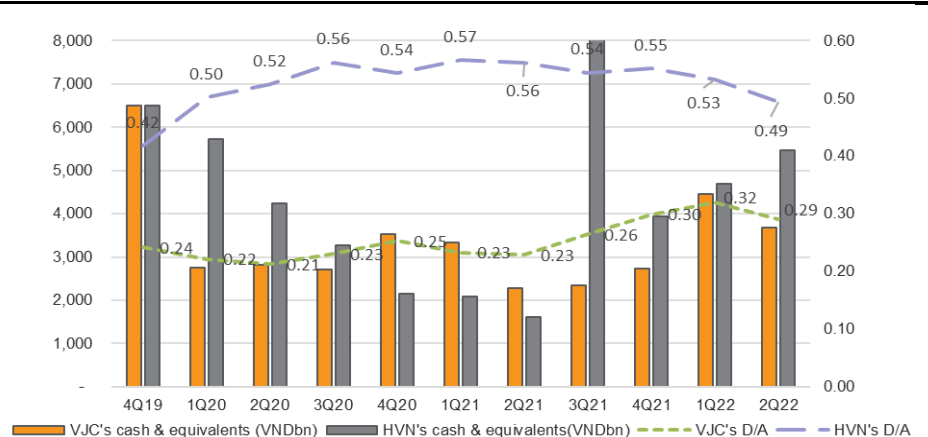


In our view, in terms of exchange rate volatility and USD interest rate rising, the difficulties that the airlines have to face up with include:

- Stronger USD causes the airlines to suffer FX loss when revaluating debt in USD. In addition, aircraft investment costs (sold in USD) also become more expensive causing the fleet expansion of the airlines to be more difficult. However, these difficulties are somehow reduced when the airlines have a revenue source from USD when selling international tickets.
- When interest rates rise, as the interest rates for financing existing fleets are usually fixed, the interest expenses are not affected much, however when financing new fleet in this period, the airlines have to borrow at higher interest rates and it may affect business results in the future.

For the domestic airlines, HVN has the largest ratio of loans in USD to total loans (66.3%) with balance of VND21,815bn in USD loans by 30/06/2022; while the ratio of VJC is only 17.2% with balance of VND3,227bn, therefore VJC has less risk exposures related to stronger USD and rising USD interest rates. Moreover, VJC's leverage ratio is safer than HVN, allowing VJC to have ability to finance for the fleet expansion for the recovery of international air traffic in the coming periods. In contrast, the decrease in HVN's fleet size will reduce recovery potential of HVN while Bamboo Airways encounters problems during the period of restructuring.

**Figure 22: Financial leverage of the airlines**



For the most promising airline – VJC, we have the following assessments:

- Its position as Vietnam leading low-cost carrier – accounting for the largest domestic market share of Vietnam with domestic market share of 40% in 2020. VJC also accounts for the second largest international market share of Vietnam aviation industry.
- We expect VJC’s domestic pax to increase 245.4% yoy in FY22F with recovering travel demand. Growth may slow down to 12% yoy in FY23F from the high base of FY22F. In terms of international air traffic, we expect VJC’s international pax to reach 2.43m in FY22F (versus 0.1m pax in FY21), and may increase 223% yoy in FY23F to 7.83m pax (97,4% of FY19 base). We believe China zero-covid policy risk is lower for VJC because the proportion of Chinese tourists in total VJC’s international pax in the pre-pandemic period (FY19) is quite low. We forecast VJC’s NP to reach VND1,317bn in FY22F from VND175bn in FY21, then increase 168.3% yoy in FY23F to VND3,533bn.
- VJC is currently an airline with lowest financial leverage in Vietnam which can assure for the fleet expansion plan, along with a stable and committed management team. Therefore, we believe VJC has the most chances to capture the upcoming recovery of Vietnam aviation.

**Air cargo terminals: geo-political uncertainties to limit the operation of global air cargo**

Although global goods trade has seen a rebound since May-22, global air cargo transportation volume (tonne-kilometers - CTKs) has not seen a recovery (Figure 23), causing 8M22 global CTKs decreased 5.4% yoy as:

- Air freight rates now become less attractive. Global goods trade rebound mainly attributed to strong activity in Latin America, in which most of the uptake has benefited sea freight.
- The new export orders of major markets – historically a leading indicator for air cargo shipments, maintained the downward trend as sanctions against Russia have disrupted manufacturing in these markets (Figure 24). Chinese export orders also fell further below the 50-mark due to the zero-covid policy.
- However, the latest CTKs by route area data (Figure 25) showed the rebound in some routes including (1) within Asia and North America – Asia thanks to the ease of international travel restrictions in Asia, (2) North America and Europe due to the support from The US to Ukraine.

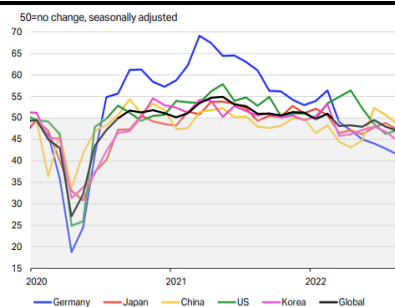
Following the difficulties of global air cargo market, Vietnam air cargo volume throughput in 9M22 decreased 3.1% yoy to 1.0 m tonnes.

**Figure 23: Global trade rebounded but air cargo transportation volume still decreased**



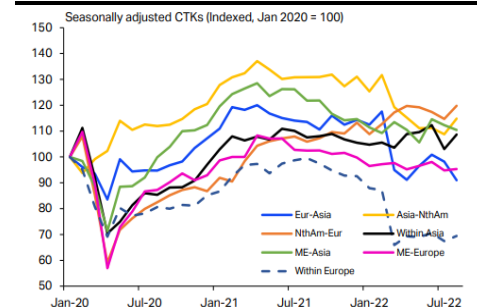
Source: VNDIRECT RESEARCH, IATA

**Figure 24: New export orders are now contracting in all major market**



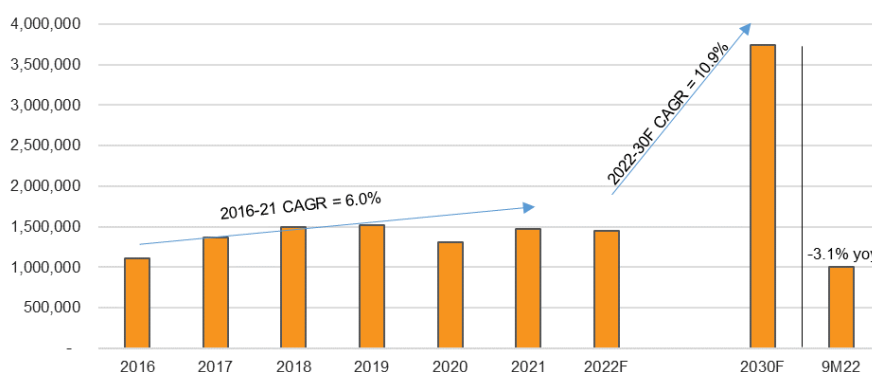
Source: VNDIRECT RESEARCH, IATA

**Figure 25: CTKs by route area**



Source: VNDIRECT RESEARCH, IATA

**Figure 26: Vietnam air cargo volume throughput is forecasted to decrease 2.2% yoy in 2022F but may grow at 10.9% CAGR in 2022-30F (unit: tonnes)**



Source: VNDIRECT RESEARCH, CAAV, GSO

However, we expect the global air cargo market outlook to be brighter from 2023F as:

- Further easing of COVID-19 restrictions in China including factory re-openings will also support the global air cargo market recovery in the coming periods.
- International travel restrictions in Asia will continue to ease, which will help air freight capacity increase and air freight rates become attractive.

We expect Vietnam air cargo volume to stay flat in 4Q22F as (1) geo-political uncertainties over the world, (2) rising inflation and interest rates may shrink global manufacturing, bringing 2022F air cargo volume to decrease 2.2% yoy. However, for a longer-term, Vietnam air cargo market still has a lot of growth potential with the government's goal of becoming a "big factory" for the world. CAAV estimate 2022-30F air cargo volume CAGR of 10.9%.

For the most promising business in the segment – SCS, we have the following assessments:

- In 9M22, SCS' air cargo volume increased at a higher pace of 6.9% yoy with mainly contribution from international cargo volume (+15.9% yoy) as the production of mobile phones and electronic devices remains strong. 9M22 revenue increased 13.7% yoy with gross margin increasing 1.76% pts yoy due to higher contribution of international cargo with higher services fee. With the contribution of financial income (+68.5% yoy) thanks to higher deposit, 9M22 net profit increased 20.5% yoy. For 2022F, we expect SCS's NP to increase 25.8% yoy as 4<sup>th</sup> quarter is the peak season. NP growth may slow down in 2023F (+5.3% yoy) as the company is subjected to the normal tax rate of 20% from 2023F.
- In longer-term, we believe SCS may capture Tan Son Nhat International Airport (TIA)'s air cargo volume growth by expanding its current terminal capacity from 200.000 tonnes p.a to 350.000 tonnes p.a while its sole competitor Tan Son Nhat Cargo service Company JSC (TCS) has no room to expand (without taking into account the expansion plan, SCS's 2022F utilisation rate estimated of 120%). We believe air cargo terminal companies that have the capable of expanding capacity like SCS will benefit from this steady growth.
- Besides, SCS is providing Airport Corporation of Vietnam (ACV) with insights on the air cargo terminal layout based on SCS's experiences

for the LTIA construction. We believe SCS has many advantages in bidding for the air cargo terminal in LTIA and this is a strong upside risk for SCS.

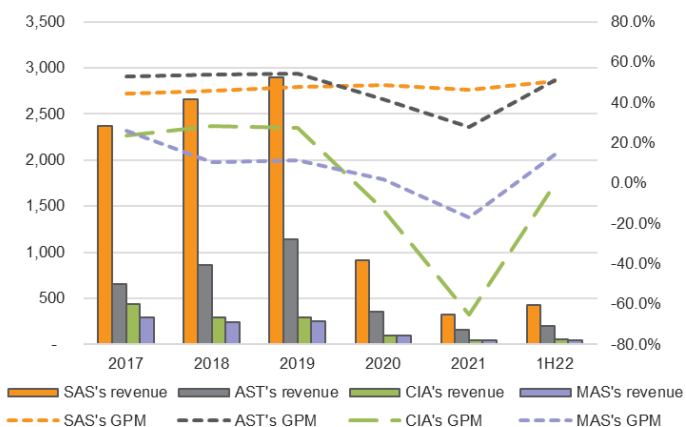
### Airport retail: waiting for international visitors

Airport retail is a business model with superb profitability thanks to its low price sensitivity in consumer behavior of tourists, leading to the airport retailer's ability to set a much higher price of goods for a high GPM without reducing its purchasing power. Operating expenses mainly include cost of goods sold, costs of sales staff and space rental cost, all of which are relatively stable and easy to control. Goods sold are paid in cash with relatively fast turnover, resulting in low receivables, low inventories and low working capital requirements. However, airport retail industry has a high barrier to entry, especially at key airports due to:

- Limited airport space;
- Most airport store leasing contracts allow the lessee to extend the leasing period when the term ends, making it difficult for new competitors to enter, or even existing enterprises to expand their store chain.

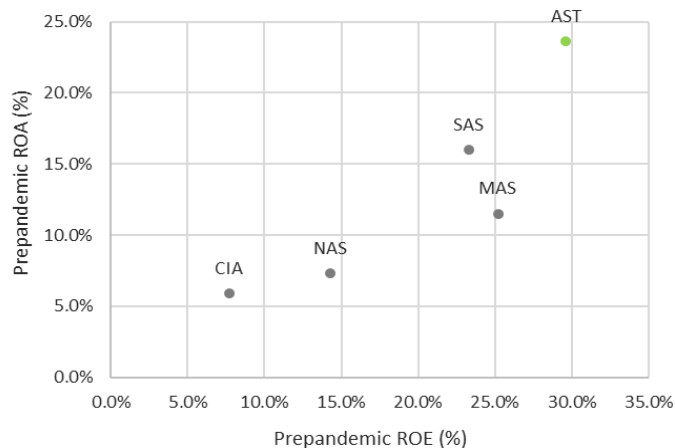
Therefore, there was not much room for airport retailers to expand its airport retail segments before FY19. However, the arrival of the Covid-19 pandemic has caused severe difficulties for the aviation industry, but also brought opportunities for enterprises with strong financial strength to stand firm and expand its retail chain amid the pandemic.

**Figure 27: Airport retail GPM has bottomed out in 2021 and started to recover from 2022**



Source: VNDIRECT RESEARCH, COMPANY REPORTS

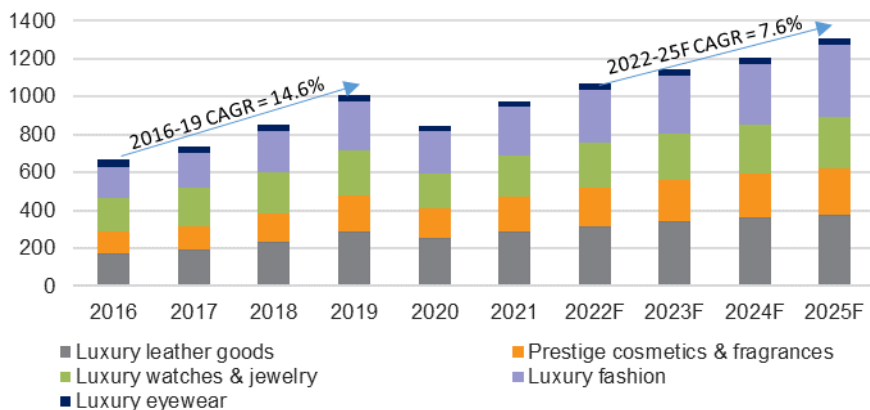
**Figure 28: AST's profitability outperforms its domestic peers in the pre-pandemic period (data as at FY19)**



Source: VNDIRECT RESEARCH, COMPANY REPORTS

Airport retail companies are witnessing their GPM to almost revert to the pre-pandemic level in 1H22. However, as the airport retail business has a high correlation with international passengers, current airport retail revenue is still low. Giving the international air traffic recovery expectation from 4Q22, we believe airport retail companies' results may recover with positive earnings in 2022F and earnings may increase sharply from 2023F when international arrivals recover strongly. Of the airport retailers, we highly appreciate AST as it has turned challenges into opportunities to expand its business in the context of the entire aviation industry being hit hard by the Covid-19 pandemic. AST is also the most profitable business among its peers in the pre-pandemic period.

**Figure 29: Vietnam’s luxury goods market value in FY16-25F**



Source: VNDIRECT RESEARCH, WORLDBANK

Notably, duty free retailing is the most potential business of airport retail segment in the coming years, in our view. According to Adroit Market Research, the global duty-free retailing market is expected to be worth USD112.75bn by 2025F, implying a CAGR of 6.5% in FY22-25F. Increasing number of low-cost airlines is leading to an increase in the number of tourists which is further driving the sales of several goods at duty free retail stores at diverse areas including airports. Increasing foreign tourism in Vietnam is the key aspect driving the growth of the duty-free retailing market. According to Statista, Vietnam’s revenue of luxury goods in FY16-19 grew at a CAGR of 14.6% and may grow at a CAGR of 7.6% in FY22-25F from a high base in FY21. This is a strong support for the prospect of Vietnam duty free retailing in the coming years.

### Three major risks may affect the aviation outlook

Although Vietnam aviation has great opportunities to recover in the post-pandemic period, we still see three major risks which may negatively affect the aviation outlook:

- Amidst the already global crude oil market tightness, the tension between Russia and Ukraine exacerbated this situation, boosting Brent oil price to touch the highest level since 2008. Currently, there are many unpredictable factors that could make oil prices maintain at high levels. Higher than expected oil price leads to higher operating cost of the airlines, which may lift up ticket price and reduce air travel demand.
- China’s zero-Covid strategy also negatively affect the recovery of Vietnam aviation industry as China accounts for 35% of international visitors to Vietnam in the pre-pandemic period. As long as China follows this strategy, we believe the bilateral tourism between Vietnam and China hardly recover to the pre-pandemic level.
- Beside affecting current airlines’ business results and fleet expansion, the increase in USD/VND exchange rate and rising USD interest rates may also affect aviation infrastructure investment borrowing in USD in the coming periods. In particular, ACV intends to borrow US\$2.5bn for the mega project Long Thanh international airport phase 1, in which ACV expects to disburse US\$0.37bn/US\$0.87bn/US\$1.26bn in 2022F/2023F/2024F.

## Stock picks: ACV, AST

### Why aviation stocks now?

The domestic aviation market has witnessed remarkable growth recently and offset the potential growth lost during the pandemic period. However, the revenue proportion from the domestic market is not much, but mainly comes from the international market (in pre-pandemic period, revenue from the domestic market only accounts for about 35% of total revenue, the rest from the international market). We believe Vietnam international air traffic will recover strongly from 4Q22F, leading to a strong recovery and growth of businesses in the aviation industry. The recent decline in the market has brought the stock prices of many aviation business to attractive valuation levels considering attractive upsides and strong growth expectations in the coming periods, since then we believe it's a good time to accumulate aviation stocks.

We select the best representatives of each segment with strong growth and strong catalysts, in 2023-24F, including ACV, AST.

### Airport Corporation of Vietnam (ACV VN, ADD, TP: VND114,000)

In our view, ACV is an interesting stock for long-term investment horizon, based on:

- Solid recovery of business results in the coming years. For FY22F, ACV's net profit may increase 1003% to VND5,291bn thanks to the recovery of domestic pax and financial income. For FY23F, thanks to the expected strong recovery of international pax (+218.5% yoy), ACV's FY23F NP may increase 74% yoy to VND9,206bn.
- In ACV's audited consolidated financial statement, there were still 2 emphasis of matters including (1) ACV has not yet obtained the decision about finalisation of ACV's equitisation since its transformation into a joint stock company from competent authorities, and (2) ACV has not yet obtained the decision about approving the value of airfield assets from Ministry of Transportation. We believe when these problems are resolved, ACV would be wide open to list on HSX in the future.
- Potential share dividend plan: the government has approved for ACV to retain its profit before 2021 for re-investment. At end-2020, ACV's undistributed earnings are VND9,705bn, equivalent to a potential share dividend plan of 44% in 2022F. We believe this is a strong catalyst for ACV in the coming periods.

### Taseco Air Services JSC (AST, ADD, TP: VND85,700)

- Owning the largest chain of airport retail stores in Vietnam with a total of 108 stores covering all of Vietnam key airports.
- Airport retail is also a business model with superb profitability thanks to its low price sensitivity in consumer behavior of tourists.
- AST has been put into the warning status since 2021 as the company recorded a loss in net profit for two consecutive years FY20-21. According to Ho Chi Minh stock exchange's rule, the stock would be removed from the main bourse and then list on UPCOM in case it reported a loss in FY22F earnings. In our view, we expect AST's net profit to increase to VND31bn in FY22F from the net loss of VND118bn in FY21 following domestic air traffic recovery, and may grow 8.05 times to VND279bn (143.6% of pre-pandemic level) in FY23F thanks to the strong recovery of international air traffic.



**Figure 30: FY21-24F forecasted financial summary of stocks under our coverage**

VNDbn	ACV				AST				VJC				SCS			
	2021	2022F	2023F	2024F	2021	2022F	2023F	2024F	2021	2022F	2023F	2024F	2021	2022F	2023F	2024F
Revenue	4,752	13,752	23,276	27,507	154	739	1,797	2,106	12,875	50,385	88,341	96,778	839	979	1,144	1,267
% growth	-38.8%	189.4%	69.3%	18.2%	-57.1%	379.6%	143.3%	17.2%	-29.3%	291.3%	75.3%	9.5%	21.1%	16.7%	16.8%	10.7%
Gross profit	(785)	6,023	14,548	17,166	43	311	975	1,171	(2,039)	2,335	6,538	8,326	652	792	892	1,007
Gross margin (%)	-16.5%	43.8%	62.5%	62.4%	27.9%	42.1%	54.3%	55.6%	-15.8%	4.6%	7.4%	8.6%	77.7%	80.9%	78.0%	79.5%
SG&A	1,316	1,232	1,574	1,840	150	281	576	658	973	1,135	1,920	2,236	78	85	98	108
Net financial income	3,050	2,343	(217)	(1,469)	7	16	39	53	3,227	113	(1,092)	(1,315)	34	58	75	113
Net profit	480	5,291	9,206	9,959	(118)	31	279	300	175	1,317	3,533	4,782	564	711	749	807
% growth	-70.9%	1003%	74.0%	8.2%	NA	NA	805.4%	7.4%	155.6%	651.5%	168.2%	35.3%	21.4%	26.1%	5.4%	7.8%
EPS (VND/share)	220	2,430	4,228	4,574	(2,623)	685	6,199	6,660	335	2,515	6,745	9,128	11,106	7,570	7,975	8,600
BVPS (VND/share)	17,275	19,785	23,802	28,148	8,289	8,974	14,172	15,832	32,136	34,046	40,432	49,367	24,619	17,544	21,611	25,710
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	9.1%	0.0%	0.0%	0.0%	0.0%	3.9%	4.5%	5.3%	6.1%
ROAE (%)	1.3%	13.1%	19.4%	17.6%	-27.3%	7.9%	53.6%	44.4%	1.1%	7.6%	18.1%	20.3%	49.8%	49.1%	40.7%	36.3%
ROAA (%)	0.9%	7.5%	8.9%	7.2%	-20.9%	5.4%	29.6%	21.5%	0.4%	2.3%	5.0%	5.7%	44.9%	44.0%	36.8%	33.0%
EBITDA margin(%)	9.0%	57.5%	70.3%	70.8%	-50.8%	7.6%	22.6%	24.8%	-22.6%	2.7%	5.5%	6.6%	74.8%	77.5%	77.7%	77.8%

Source: VNDIRECT RESEARCH, COMPANY REPORTS

**Figure 31: Peer comparison**

Company name	Ticker	Price	Target price	Recomm.	Mkt cap	P/E	3-year EPS	P/BV	ROE (%)		EV/EBITDA			
		LC\$	LC\$						US\$m	2022F	2023F	CAGR (%)	2022F	2023F
<b>Airports</b>														
Airport Corp of Vietnam	ACV VN	74,100.0	114,000	ADD	6,632.9	36.0	20.7	175.0	4.3	3.6	12.8	19.0	21.1	13.2
Airport of Thailand	AOT TB	70.3	N/A	NR	26,403.5	NA	93.0	NA	9.8	9.0	-9.1	10.2	NA	40.8
Shanghai International Air-A	600009 CH	58.0	N/A	NR	20,038.6	NA	68.4	NA	4.1	3.9	-6.7	5.5	NA	31.5
Beijing Capital Intl Airpo-H	694 HK	4.2	N/A	NR	2,420.8	NA	NA	NA	1.0	1.0	-12.5	-1.9	NA	21.2
Japan Airport Terminal Co	9706 JP	5,990.0	N/A	NR	3,748.8	NA	135.9	NA	3.9	3.8	-4.0	2.3	47.0	19.5
Shenzen Airport Co-A	000089 CH	6.5	N/A	NR	1,863.7	NA	142.2	NA	1.2	1.2	-6.7	0.7	90.8	20.3
Malaysia Airports Holdings	MAHB MK	5.5	N/A	NR	1,917.2	NA	24.1	NA	1.4	1.3	-2.6	5.2	11.2	7.1
<b>Average</b>						<b>36.0</b>	<b>80.7</b>		<b>3.7</b>	<b>3.4</b>	<b>-4.1</b>	<b>5.9</b>	<b>42.6</b>	<b>21.9</b>
<b>Airport retailing</b>														
Southern Airport Services JSC	SAS VN	24,000.00	N/A	NR	142.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cam Ranh International Airport	CIA VN	10,200.00	N/A	NR	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Danang Airport Services JSC	MAS VN	36,100.00	N/A	NR	8.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Taseco Air Services JSC	AST VN	56,700.00	85,700	ADD	116.4	88.3	9.3	281.4	6.3	4.0	7.5	53.1	52.1	8.2
<b>Average</b>						<b>88.3</b>	<b>9.3</b>		<b>6.3</b>	<b>4.0</b>	<b>7.5</b>	<b>53.1</b>	<b>52.1</b>	<b>8.2</b>
<b>Low cost carriers</b>														
VIETJET AVIATION JSC	VJC VN	109,100.0	132,000	ADD	2,856.8	51.4	19.1	-40.6	3.9	3.2	7.6	18.1	34.5	17.3
AIRASIA GROUP BHD	AAGB MK	1	N/A	NR	830.0	NA	NA	NA	NA	NA	47.2	21.1	NA	12.6
CEBU AIR INC	CEB PM	53	N/A	NR	662.4	NA	29.4	NA	1.9	1.5	-45.5	24.4	57.0	4.4
ASIA AVIATION PCL	AAV TB	3	N/A	NR	429.9	NA	NA	NA	1.2	1.3	-26.8	-0.3	NA	10.7
<b>Average</b>						<b>52.7</b>	<b>22.8</b>		<b>2.2</b>	<b>1.9</b>	<b>-4.5</b>	<b>16.1</b>	<b>45.8</b>	<b>10.1</b>
<b>Air cargo terminal</b>														
Atlas Air Worlwide Holdings	AAWW US	99.9	N/A	NR	2,829.0	6.1	7.1	NA	0.9	0.8	15.7	13.1	4.5	4.5
Xiamen Interna-A	600897 CH	14.6	N/A	NR	602.9	17.8	10.4	-27.2	1.1	1.0	4.3	9.8	6.0	4.0
Saigon Cargo Services Corp	SCS VN	72,700.0	104,900	ADD	280.6	9.9	9.4	12.6	4.3	3.5	49.0	40.7	8.0	6.8
<b>Average</b>						<b>11.3</b>	<b>9.0</b>		<b>2.1</b>	<b>1.8</b>	<b>23.0</b>	<b>21.2</b>	<b>6.2</b>	<b>5.1</b>

All prices are based on the closing prices on 20 Oct 2022. All estimates for Non-rated (NR) stocks are based on Bloomberg consensus estimates.

Source: VNDIRECT RESEARCH, BLOOMBERG

## DISCLAIMER

This report has been written and distributed by Research Department, VNDIRECT Securities Corporation. The information contained in this report is prepared from data believed to be correct and reliable at the time of issuance of this report. Unless otherwise stated, this report is based upon sources that VNDIRECT considers to be reliable. These sources may include but are not limited to data from the stock exchange or market where the subject security is listed, or, where appropriate, any other market. Information on the company(ies) are based on published statements, information disclosure and announcements of the company(ies), and information resulting from our research. VNDIRECT has no responsibility for the accuracy, adequacy or completeness of such information.

All estimates, projections, forecasts and expression of opinions contained in this report reflect the personal views and opinions of the analyst(s) responsible for the production of this report. These opinions may not represent the views and position of VNDIRECT and may change without notice.

This report has been prepared for information purposes only. The information and opinions in this report should not be considered as an offer, recommendation or solicitation to buy or sell the subject securities, related investments or other financial instruments. VNDIRECT takes no responsibility for any consequences arising from using the content of this report in any form.

This report and all of its content belongs to VNDIRECT. No part of this report may be copied or reproduced in any form or redistributed in whole or in part, for any purpose without the prior written consent of VNDIRECT.

### RECOMMENDATION FRAMEWORK

#### Stock Ratings

Definition:

Add	The stock's total return is expected to reach 15% or higher over the next 12 months.
Hold	The stock's total return is expected to be between negative 10% and positive 15% over the next 12 months.
Reduce	The stock's total return is expected to fall below negative 10% 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.

### Hien Tran Khanh – Research Director

Email: [hien.trankhanh@vndirect.com.vn](mailto:hien.trankhanh@vndirect.com.vn)

### Dzung Nguyen – Senior Analyst

Email: [dung.nguyentien5@vndirect.com.vn](mailto:dung.nguyentien5@vndirect.com.vn)

### VNDIRECT Securities Corporation

1 Nguyen Thuong Hien Str – Hai Ba Trung Dist – Ha Noi

Tel: +84 2439724568

Email: [research@vndirect.com.vn](mailto:research@vndirect.com.vn)

Website: <https://vndirect.com.vn>