



# Aviation Insider

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## ‘Johnny Says’ – The great demand



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We have been witnessing a recovery from COVID-19 since the start of this year. In most markets, business volumes have exceeded the levels of 2019 and a majority of airlines are making satisfactory profits.

Here are some most frequently heard comments from our industry practitioners:

- There are insufficient deliveries from the manufacturers. Supply chain issues have not yet been fully resolved.
- There are insufficient mid-age aircraft available for sale or lease. Airlines have been asking leasing companies for new capacity.
- There is growing investor interest in part-out businesses and trading of spare parts because original equipment manufacturers (OEMs) cannot produce sufficient stock for operators.
- Airlines are struggling to get sufficient manpower to relaunch routes, and airports have problems to recruit sufficient staff to handle new flights.
- Financial institutions and leasing companies are crying for more business.

A great demand on many things in our industry is observed.

We have gone through a historic downturn in 2020-22 but the industry, as it usually and predictably has done in the past, did not vanish but grew resiliently. However, the problems arising from such a long period (3 years) of stoppage of almost everything was unprecedented and the effects of the pandemic therefore will continue to reverberate for some time.

What should be celebrated is the steady performance of airlines which are the powerhouse of the whole industry as almost all sectors rely on the business they award to flourish.

According to the International Air Transport Association (IATA), the airline industry will make a net profit of US\$9.8 billion in 2023, double the previous forecast at the end of 2022.

Customers are coming back in all markets and ticket prices are upheld at healthy levels.

However, we cannot ignore the recurrent issues in this special era:

1. Economic development is slow. The driving forces, such as Asia Pacific countries, including China, are drifting or even dipping. Cargo traffic will be, in short or medium term, difficult to sustain the same momentum as during the COVID-19 years.
2. Interest rates are still on the rise. After inflation is managed in developed economies, central banks will not be shy to continue to stabilise/rectify the over-expanded markets.
3. Geo-political environment is unstable. A lot of potential conflicts are observed in major business areas. Trades and investments are seriously impacted due to investors' concerns.

## The Frequently Asked Questions

I have been asked quite often these days on whether it is a good time to invest in aviation. I would offer different answers depending on your investment interests as different segments have very diverse horizons. From a longer-term perspective, I am still maintaining a very positive view on the whole industry as we have seen the repetition in the cycles and the lasting growth trajectory. However, I would like to point out a few cautions particularly on aircraft leasing; despite there being some quite old theories, and especially critical in current market:

- **Commonality of aircraft:** There is always demand for some exotic types of assets and very conservative investors on the opposite end of the spectrum. Your return needs to be justifying the high or low risks in the investment. Hence, please have no complaints of low return when you select a top tier airline or modern-technology aircraft.
- **Repossession risks:** Aircraft is the best type of aviation asset but some argue that engines alone are better given that it has a longer shelf life and a stable residual value. However, it should be easily repossessed upon a default for remarketing and hence recovery of your relevant investment. Good understanding and management of jurisdictional risks are fundamental to the exercise of analysing legal rights, clearance of liens, de-registration, taxation and export/importation. Notwithstanding, a familiarity of the process with or without the Cape Town Convention protection is absolutely required.
- **Sustainability:** Many financiers would advise you the benefit of green financing but the magnitude of any benefits by bringing in such an element is yet to be determined.
- **Professional and market knowledge:** A good asset and lease manager is of utmost importance to secure the smooth running of the transaction until divestment and to assure the remarketing or sale is at the best terms. Recently, we have found increasing numbers of new teams established with existing players also strengthening the respective service coverage. It is a good alternate approach of using managers.

On the other hand, equity investment – whether it is a direct capital investment or secondary market trade – is usually a more difficult game. Entrepreneurs globally would like to set up airlines as a matter of passion or dream of making multiple times of return. Technical expertise is deployed for establishing Maintenance, Repair and Overhaul ('MRO') services, part-out facilities or developing Supplemental Type Certificates ('STC') holders of cargo conversions. I respect the enthusiasm of these investors (and perhaps also the other objectives in considerations) but in such a volatile market, more resources should be designated in hiring professional firms to assist in strategic and financial planning as well as capital raising. Substantial net assets on balance sheet is key to an everlasting business, whilst the 'high leverage' concept to maintain going concern or to fund the growth of a company is outdated. Major shareholders must procure adequate capital to convince other stakeholders that there is sufficient support for the development of the company. Interest expense is no longer negligible in running a business.

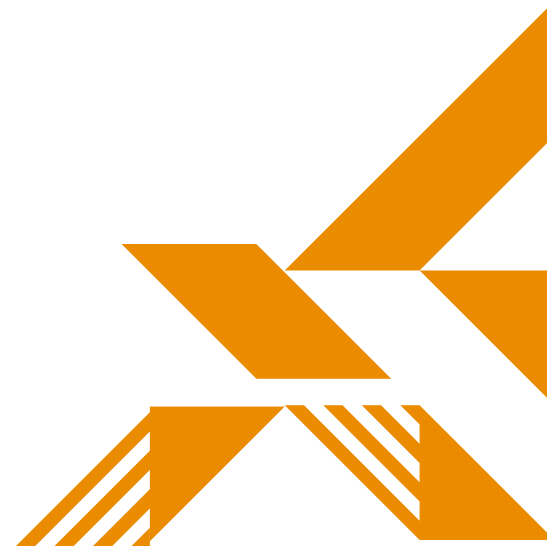
## Closing remarks

Since the launch of our PwC Aviation Business Services in May 2018, our industry has experienced extreme ups-and-downs and many practitioners in different sectors are under huge pressure to survive or in the worse case, at least keep their job.

Some expect that 2023-24 will not be better. It is because few people remember that our last downturn happened in 2008 and the young generation has been enjoying boom days for too long. As someone who started a career in aviation in the 1980s, I am confident that we have been through the correction which may appear to be a blip in the longer run. We have already seen encouraging activity that points to a more positive future.

It is just a matter of time.

Friends, keep up your spirits high and work hard together today!



# Upgrading the Hong Kong SAR dedicated tax regime for aircraft leasing



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## Introduction

Despite the marked shift in global economic conditions since the onset of the pandemic, the fundamentals underpinning Hong Kong SAR's desire to establish and promote a favourable tax regime for aircraft leasing in 2017 have encouraged the Hong Kong SAR (Hong Kong as follows) Government to look at ways to update and improve the competitiveness of the conditions afforded to aircraft lessors and investors in Hong Kong.

The pandemic has also shown a dynamic shift in global supply chains, only furthering Hong Kong's positioning as a global, regional and local financial, logistics and asset management hub, particularly as it lays at the doorstep of many Asian Pacific countries.

Moreover, while a number of major aircraft leasing companies have set up qualifying operating lessors and/or qualifying lease management companies in Hong Kong since 2017, the changes in tax and business landscape have also prompted the Government to re-look and update for certain topics.

In this update, we will take you through what has taken place in Hong Kong's dedicated tax regime for aircraft leasing over the past 12 months.

## Background

In 2017, it was noted that while Hong Kong shared many of the common ingredients for success with the key aircraft leasing jurisdictions such as Ireland and Singapore, the tax regime for aircraft lessors had several weaknesses which made Hong Kong less competitive as compared to those countries.

In particular, it was noted that:

1. Hong Kong-based aircraft lessors are taxed on gross rental income, rather than profits which are taxed at a rate of 16.5%;
2. aircraft lessors are not entitled to tax depreciation on acquisition of aircraft where leased to non-Hong Kong based airlines; and
3. Hong Kong has signed double tax agreements with less jurisdictions than Ireland and Singapore.<sup>1</sup>

The measures introduced as part of the Aircraft Leasing Preferential Regime (the 'Regime') were aimed at levelling the playing field between Hong Kong and the other key jurisdictions by addressing the first two of those weaknesses.



<sup>1</sup> <https://www.legco.gov.hk/research-publications/english/essentials-1516ise17-key-drivers-for-developing-an-aircraft-leasing-centre.htm>



First, the headline tax rate was reduced to 8.25% and secondly, in lieu of allowing lessors to take depreciation allowances, only 20% of the net lease rentals are assessed (effectively, a deemed deduction of 80% is allowed) (the '20% tax base'), which reduces the tax on net lease rentals to 1.65%.

With respect to double tax agreements, while Hong Kong has signed fewer double tax agreements than Ireland and Singapore, the double tax agreement between Chinese mainland and Hong Kong had already been amended ahead of the introduction of the Regime such that it was (slightly) more favourable than Ireland and Singapore, and it was recognised by the industry that Hong Kong's treaties with many nearby airline jurisdictions in the Asia Pacific region is in fact quite competitive to make Hong Kong attractive functionally as a regional hub.

Given the passage of time and upcoming overhaul of the international tax rules aimed at addressing Base Erosion and Profit Shifting concerns (BEPS 2.0)<sup>2</sup>, the Hong Kong Government is looking to update the Regime with a view to maintaining Hong Kong's international competitiveness, while also respecting its commitment to implement BEPS 2.0.

### What has happened in this round so far

On 22 November 2022, the Hong Kong Transport and Logistics Bureau (TLB) launched a trade consultation (the 'Consultation') in relation to the Regime.

#### The key proposed changes are set out as below.<sup>3</sup>

1. A qualifying aircraft lessor should be allowed to deduct the full cost of an aircraft for the year of assessment in which the aircraft is acquired;
2. Relaxation on anti-avoidance rules for internal transfer of aircraft from other jurisdictions to Hong Kong provided that the depreciation allowances given to the aircraft are subject to a claw-back mechanism;
3. Widening the type of leases to be covered within the concessionary tax regime;
4. Widening the scope of aircraft leasing activities in order to cover other type of aircraft leasing activities that have been developed especially during the COVID-19 pandemic when the demand for air travel was low;
5. Allowing tax deduction of interest payable to a financier outside Hong Kong who is not a financial institution and may be an associate of the qualifying aircraft lessor;
6. Introducing threshold requirement to ensure the concessionary tax regime will meet the international standards on anti-base erosion and profit shifting; and
7. Providing clarification that the use of a bare trust model to own an aircraft should be able to fall within the concessionary tax regime.

With the implementation of BEPS 2.0, the absence of depreciation allowance is likely to put Hong Kong aircraft lessors in a relatively disadvantaged position under the 20% tax base concession as the effective tax rate of a Hong Kong aircraft lessor should be well below the minimum rate of 15%. Although under the above proposed changes the headline rate of a qualifying aircraft lessor will still be taxed at 8.25%, the deferred tax adjustments arising on the 'depreciation allowances' given will be taken into account in the calculation of the covered taxes resulting a lower amount of top-up tax required.

In July 2023, following the conclusion of the Consultation, the Legislative Council's Panel on Economic Development was briefed by the Inland Revenue Department (IRD) with respect to the proposed legislative changes.

We understand that the next step will involve the introduction of an amendment bill into the Legislative Counsel in the fourth quarter of 2023, with the legislative amendments having retrospective effect commencing on 1 April 2023. This will allow lessors who are intending to take advantage of the amendments immediately, without having to wait for the amendment bill to be passed prior to implementing their transactions. On the other hand, the likely retrospective effect of the amendments will require lessors and investors to immediately commence their planning for this and upcoming financial year.

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2 These are a set of measures grouped into two sets known as Pillar 1 and Pillar 2, which over 130 jurisdictions including Hong Kong have pledged to implement. These have been discussed from an aircraft leasing perspective in our January 2021 Aviation Insider newsletter: <https://www.tiangandpartners.com/en/aviation-insider-newsletter-jan2021.pdf>.

3 Summary extracted from the Trade Consultation Paper for Enhancing the Aircraft Leasing Preferential Tax Regime, available at: [https://www.tlb.gov.hk/eng/publications/transport/consultation/air02/consultation%20paper\\_en.pdf](https://www.tlb.gov.hk/eng/publications/transport/consultation/air02/consultation%20paper_en.pdf)

## Commentary

Enhancements to the existing regime that will be sustainable in the current global tax climate will be welcomed by industry and go a long way towards bringing new energy for Hong Kong as a key leasing hub jurisdiction.

Furthermore, the proposed changes are likely to provide more opportunities to a wide range of transactions that can be brought into the scope of the 'enhanced' regime so as to not limit the opportunities for investors to enter or broaden their exposure to the sector as a whole.

As always, the devil is in the details and we understand that a number of submissions (including by PwC Hong Kong) were made during the consultation process to ensure that the objectives of the enhancements measures are met or improved.

PwC is well placed to assist clients' strategy in the face of the upcoming changes in Hong Kong, in the context of planning for the next phase of the development of the sector as a whole globally as the lingering effects of the pandemic subside.

## Details

The proposed changes are set out in a number of proposals in the Consultation and summarised by the IRD for the Legislative Counsel's Panel on Economic Development.

### Summary table of changes at a glance, extracted from the IRD's briefing papers:<sup>4</sup>

	Existing law	Proposals	Our comment
<b>Aircraft acquisition cost</b>	<ul style="list-style-type: none"><li>No deduction of aircraft acquisition cost</li><li>Taxable amount of lease payments equal to 20% of the tax base, i.e. gross lease payments less deductible expenses (excluding depreciation allowance)</li></ul>	<ul style="list-style-type: none"><li>Aircraft acquired before 2023/24 – May elect (election made is irrevocable):<ul style="list-style-type: none"><li>To continue to be taxed on 20% tax base; or</li><li>To be taxed on actual profits with deduction of the residual value of the aircraft</li></ul></li><li>Aircraft acquired in or after 2023/24<ul style="list-style-type: none"><li>To be taxed on actual profits – full acquisition cost will be deducted in the year in which the aircraft is acquired</li><li>20% tax base does not apply</li></ul></li></ul>	<p>The disadvantage of this approach post BEPS 2.0 is that owing to the way the effective tax rate (ETR) will be calculated under BEPS 2.0, Hong Kong aircraft lessors who would be subject to Pillar 2 would be subject to a greater amount of top up when compared to other jurisdictions like Ireland which do allow for depreciation allowances.<sup>5</sup></p> <p>To address the above concern, the Hong Kong Government will no longer apply the 20% tax base rule but instead allow 100% of the acquisition cost of the acquisition to be deducted on the year of assessment and presumably allow lessors to carry forward their losses indefinitely.</p> <p>It should be noted that the comparison to other aircraft leasing jurisdictions will still not be 'like for like' in that Hong Kong does not have a 'group relief' concept which allows profits and losses to be consolidated into a group for tax purposes, and therefore while the 100% deduction will be helpful to narrow the gap between Hong Kong and other jurisdictions such as Ireland and Singapore, and without careful planning and favourable business conditions, it may not fully bridge the differences, since the tax losses relating to one special purpose aircraft owning company cannot be used to shelter the profits of other group companies.<sup>6</sup></p>

4. Summary extracted from the Administration's LC Paper No. CB(4)736/2023(1), available at: <https://www.legco.gov.hk/yr2023/chinese/panels/edev/papers/edev20230710cb4-736-1-ec.pdf>

5. While the reasons are somewhat technical, the reason for depreciation allowances giving rise to a higher effective tax rate computation is due to depreciation allowances giving rise to deferred tax adjustments which are taken into account in the effective tax rate calculation, whereas the permanent adjustments are not.

6. It should be noted that while it would be possible to have all aircraft owned by one aircraft owning company, it is still the case that a typical aviation and aircraft financing transactions use specific special purpose companies to hold specific aircraft or groups of aircraft.

	Existing law	Proposals	Our comment		
<b>Type of lease</b>	<ul style="list-style-type: none"><li>Only apply to dry lease that is an operating lease</li></ul>	<ul style="list-style-type: none"><li>Apply to operating (dry and wet leases) and funding leases</li></ul>	<p>The changes in aircraft leasing over the years, including a shift towards lessors offering funding (ie, finance) leases, wet leases and other arrangements (such as power by hour arrangements), have been noted by the IRD.</p> <p>While the manner in which these changes will be implemented remains to be seen, these changes should be generally welcome.</p> <p>In particular, under the previous regime whether the leases concession only available to aircraft operators and hence leasing to private individuals or private companies (as is common in the general aviation (or private jet) space) was not allowed.</p> <p>The specific expansions when taken together will expand the availability of the Regime to cover leasing to all entities who may be lessees as well as the restrictions on what type of leases will qualify will be a welcome one.</p>		
<b>Lease term</b>	<ul style="list-style-type: none"><li>Not less than 1 year</li></ul>	<ul style="list-style-type: none"><li>No restriction</li></ul>			
<b>Leasing activities</b>	<ul style="list-style-type: none"><li>Confined to leasing of aircraft to aircraft operator</li></ul>	<ul style="list-style-type: none"><li>Lease of aircraft to any other person</li></ul>			
<b>Interest payable to non-financial institution financiers outside Hong Kong</b>	<ul style="list-style-type: none"><li>Generally not deductible</li></ul>	<ul style="list-style-type: none"><li>Allowable if the loan is wholly and exclusively used to finance the acquisition of aircraft</li><li>Additional condition has to be satisfied if the financier is the aircraft lessor's associate</li></ul>	<p>While addressing a particular pain point around inter-company group loans, in what will be very welcoming news to the aviation financing community, the Hong Kong Government has recognised the variety of different means of financing aircraft acquisitions, including from entities which are not banks or financial institutions, such as investment funds and private credit lenders.</p>		
<b>Threshold requirements for aircraft lessors and aircraft leasing managers</b>	<ul style="list-style-type: none"><li>Not prescribed in law</li></ul>	<ul style="list-style-type: none"><li>To prescribe the threshold requirements:</li></ul>	<p>While the Regime does have such requirements, the exact thresholds are not currently specified. The IRD proposes to set bright line threshold requirements to remove any uncertainty, which is intended to reinforce compliance from a BEPS 2.0 perspective.</p>		
				<b>Full-time qualified employees</b>	<b>Annual operating expenditure</b>
		<b>Aircraft lessors</b>		1	HK\$2 million
		<b>Aircraft leasing managers</b>	2	HK\$1 million	

## Other non-legislative enhancements

The IRD has also noted that it has already implemented, apart from the above proposals which will require legislative amendment to the Regime, a number of enhancements via administrative means.

### These enhancements include:

1. To recognise the Irish Stock Exchange as an exchange on which interest payments under listed debentures will be allowed for deduction. This will allow interest payable on notes which are listed on the Irish Stock Exchange to be allowed for deduction (including capital markets financings and asset backed securitisations).
2. To specifically clarify that assets held by Hong Kong leasing companies beneficially under bare trust arrangements are eligible for tax concession under the Regime. The IRD noted that these arrangements are already allowed (as ownership covers not only legal ownership, but also economic / beneficial ownership), however the IRD updated the Departmental Interpretation and Practice Notes to clarify this.

## Go First case study: recap and update



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With the growth of the aviation industry in India in recent years, and the establishment of India's Gujarat International Finance Tec-City (GIFT City) and the focus of India's government to continue attracting foreign investors, financiers and lessors<sup>1</sup>, the developments in relation to the Go First insolvency have attracted keen interest among the aviation industry. In this article, we recap the background and provide an update on the latest situation.

### Background

Go First instituted insolvency proceedings on 2 May 2023 under the Indian Insolvency and Bankruptcy Code, 2016 ('IBC') due to its inability to meet payment obligations under their lease agreements, among other things.

Under the IBC, following the admission of the insolvency process, a moratorium is triggered which prevents owners and lessors from instituting court proceedings or commencing enforcement or recovery action against the relevant debtor. The IBC also contains provisions which provide that the IBC prevails over any other inconsistent law in India.

In response to the filing of proceedings, various aircraft lessors served lease termination notices and applied for deregistration of their aircraft with the Directorate General of Civil Aviation (DGCA, India's aviation authority) under the Irrevocable Deregistration and Export Request Authorisation Rules (IDERA Rules, as discussed below) before the admission of the insolvency process on 10 May 2023 (i.e. between 2 May and 10 May 2023). We understand that the DGCA declined to deregister the aircraft on the grounds that insolvency proceedings were admitted by the National Company Law Tribunal ('NCLT') and therefore the DGCA had to comply with the statutory moratorium.

Following the above events, it was widely reported that two different groups of lessors have made urgent interim applications in two separate proceedings requesting interim relief with respect to their aircraft, including that Go First should not operate the aircraft, to allow inspections and maintenance, and other matters relating to the preservation of the aircraft. One group of lessors brought proceedings before the High Court of Delhi (the 'Delhi Proceedings'), and another group of lessors brought proceedings before the NCLT, being the tribunal having jurisdiction over the insolvency proceedings (the 'NCLT Proceedings').

The first of these rulings handed down was by the Delhi High Court, which considered the facts of the case in the context of the Cape Town Convention, the IDERA Rules and the IBC, and held that there was a strong prima facie case that the aircraft should be de-registered in accordance with the IDERA Rules, and that until the case was finally determined certain interim asset preservation orders would be granted, including that the lessors should be permitted to have access to the airports where the aircraft were parked, to carry out inspection and maintenance tasks in respect of the aircraft, and to prevent Go First from removing or replacing or taking out any parts of the aircraft (and their manuals) except with the prior written approval of the relevant lessor of the aircraft. The High Court also held that the effect of the termination of the leasing of the aircraft meant that the aircraft could no longer be flown.

In contrast, the NCLT Proceedings concerned a separate group of lessors and aircraft. The NCLT held that notwithstanding the termination of the leasing prior to the admission of insolvency proceedings, the lessors were not entitled to prevent the aircraft from being operated pending the resolution of the insolvency process, and in fact, since flying the aircraft is required to keep Go First in business, Go First should be allowed to keep the aircraft flying.

1. Many of the largest lessors (such as AerCap / GECAS, Avolon and BOC Aviation) have significant exposures to Indian airlines.



The NCLT also made reference to the Delhi Proceedings and held that since the orders of the High Court were interim orders, they did not have the force of law (and therefore not binding). In any case, the NCLT made the distinction that the NCLT Proceedings were filed in the context of the insolvency resolution process under the IBC itself and therefore the provisions of the IBC need to be separately considered in the circumstances.

While both of these proceedings are interim orders, it appears that very similar facts and circumstances have given rise to very different results (at least at the interim stage). In each case, termination notices were given after the filing of insolvency proceedings, but before admission.

The specific outcomes of the two proceedings seemed to turn not on India's treaty obligations under the Cape Town Convention, but on whether the relevant court or tribunal considered the termination notices and deregistration actions to be allowable under the moratorium provisions in the IBC. In the case of the Delhi Proceedings, the Delhi High Court considered these termination notices to be valid and since they were filed prior to admission of the insolvency proceedings, took the assets entirely out of the insolvency resolution process, whereas the NCLT held that the filing of termination notices was an attempt by the lessors to circumvent the moratorium after finding out about the insolvency filing made on 2 May 2023.

We understand that the NCLT decision to impose a moratorium was upheld by the National Company Law Appellate Tribunal on May 22, and proceedings at the Delhi High Court are still underway with lessors seeking court orders directing the DGCA to deregister the aircraft (in accordance with the IDERA Rules). Given these separate proceedings have resulted in different outcomes for the lessors at first instance, it is likely that these rulings will be appealed given the importance of these cases and their consequences.

## Commentary

With regards to the Cape Town Convention, the position under Indian law as to the extent that the treaties are effective after they have been signed but not specifically implemented by domestic legislation remains unclear at best. As set out in the India Summary Note<sup>2</sup> prepared by Indian counsel as part of the Cape Town Convention Academic Project, it was noted that although international conventions and treaties have the force of law and do not require independent legislation to implement, they have effect only to the extent they do not conflict with India's domestic law.

In this regard, the only piece of implementation legislation that has passed are in relation to the filing of IDERAs and the requirement that the DGCA expeditiously deregister and assist with the export of aircraft (the 'IDERA Rules'). With regards to other implementing legislation which would make it clear that the Cape Town Convention provisions about Article XI and IDERAs will prevail, a draft bill has been put forward, it has not been passed.

Furthermore, consistent with other jurisdictions, we understand that the position in India is that where there may be a conflict between different legislation, then absent any express provisions, the more recent statute will override the earlier legislation. Nevertheless, it may also be the case that where certain legislation specifically applying to a situation precedes legislation of more general application, the former prevails insofar as it relates to the specific subject matter. The determinative factor in the present situation appears to stem from the IBC which provides that the IBC overrides the provisions of any law which is inconsistent with the IBC (and hence the moratorium would prevail whenever it is engaged).



<sup>2</sup> Accessible at: <https://ctcap.org/wp-content/uploads/2020/03/National-Implementation-Material-India-Country-Summary-Note.pdf>.

Given the above, it is perhaps not surprising that different courts/tribunals at first instance may come to a divergence of opinion. The Delhi High Court in this case took the view that the moratorium was not engaged as the lease terminations and deregistration actions were commenced before the insolvency proceedings were actually admitted (and the moratorium thus had not commenced), but the NCLT took the view conversely that once a filing is made, then any action which seeks to defeat the moratorium is an attempt to circumvent the object of the IBC insolvency resolution process and therefore should be caught by the moratorium.

The Delhi High Court also took it one step further and also considered that leased assets were excluded from the IBC as they were not Go First's property, which would put lessors in a much stronger position if followed in India.

The experience in other jurisdictions as well is that these circumstances and rules of statutory interpretation in the event of conflicts can often lead to litigation until finally determined and as such, it is common in many other jurisdictions to include a provision in the Cape Town implementation legislation to provide that the Cape Town Convention prevails in the event of any inconsistency with any domestic law, to clearly signal the intention of the legislature to the judiciary. It is also not uncommon when passing certain types of legislation (for example, relating to insolvency and bankruptcy) to include express provisions to make it clear that such later legislation does not override the provisions of the Cape Town Convention.<sup>3</sup>

Until these matters are finally resolved (either by litigation or by the passing of the Cape Town implementation bill), it would appear that financiers and lessors have viewed these findings with concern and the Aviation Working Group (AWG) has put India on the non-complying watch list.

If it does turn out to be the case that the NCLT is correct and the IBC prevails over other legislation and even steps taken prior to the formal commencement of the insolvency resolution process can be subject to moratorium if they are taken with the object of circumventing or defeating the

moratorium, lenders and lessors will likely take a very conservative approach in their dealings with lessees and airlines in India for the time being. This may lead to perverse outcomes which are in fact contrary to the objects of corporate rehabilitation regimes. For example, in the absence of certainty in the ability to recover and remarket aircraft assets as a result of a moratorium, lessors may be inclined to be more trigger-happy and exercise their termination and repossession rights far earlier than they would otherwise. In the Go First case, the lease termination notices were preceded by a number of deferrals and waivers where the lessors could in fact have validly terminated their leases at a far earlier stage and recovered their aircraft prior to Go First filing for insolvency protection. Had they done so, Go First would have been unable to trade with a bulk of its aircraft at a far earlier stage.

The AWG has already noted that this would likely make it harder for Indian lessees and airlines to obtain financing or to lease assets under the present circumstances and if not addressed, will likely lead to higher funding costs as the moratorium risks will need to be taken into account.

In any case, the insolvency resolution situation has already sparked much concern amongst the aviation leasing and financing community. India is forecast by the International Air Transport Association (IATA) to become the third largest civil aviation market by 2026 (after China and the United States) and given the Indian government's focus on investment into the aviation sector and infrastructure, is well positioned to be one of the fastest, if not the fastest growing aviation markets in the world. This makes India, as an aircraft leasing and financing jurisdiction, hard to ignore and will require huge financing capacity, especially with Air India and IndiGo having made the headlines for signing up very large purchase orders in recent times (adding up to nearly 1000 aircraft between these two Indian airlines alone). The implementation of effective and predictable rules relating to aircraft repossession will go a long way towards easing these concerns and allow for a cheaper and more efficient market to continue to develop based on well understood asset financing principles.

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3. As an example of what we would consider to be 'best practice', when Australia's 'ipso facto' legislation was passed which imposed a stay on the enforcement of certain rights against companies under Australia's insolvency regime, 'agreements' within the meaning of the Cape Town Convention (including security agreements, lease agreements and contracts of sale) were specifically excluded from the 'ipso facto' provisions as part of the enabling legislation. These exclusions were specifically included when the ipso facto legislation was passed in 2018 and following amendments to Australia's Corporations Act 2001 (Cth) to implement a new restructuring regime (under Part 5.3B of the Corporations Act 2001 (Cth)). As a result, it was not in dispute that the Cape Town Convention prevails over domestic Australian legislation to the extent of any inconsistency, even though as we have seen in the Willis engine leasing case, there may still be controversy over the meaning and requirements under the Cape Town Convention, and to what extent domestic Australian legislation can be given effect and is consistent with the Cape Town Convention (the case was discussed in our September 2020 Aviation Insider article: <https://www.tiangandpartners.com/en/aviation-insider-newsletter-sep2020.pdf>).

# Outlook for Passenger-to-Freighter conversions — a promising future?



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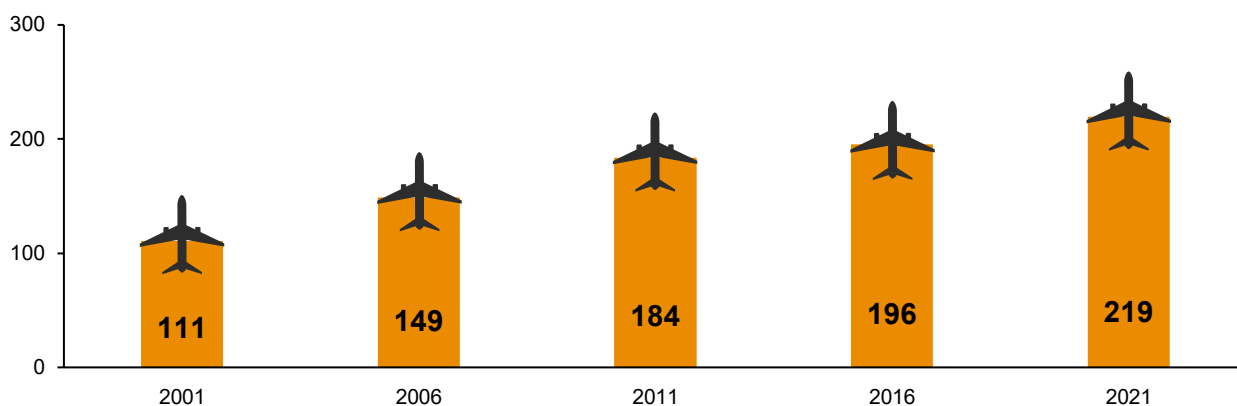


Passenger-to-Freighter conversions, also known as 'P2F', is a business that involves the conversion of passenger aircraft into freighters. The global P2F sector has experienced significant growth in recent times. This article considers the recent developments underpinning growth and opportunities as well as challenges in establishing the right value creation model.

P2F enhances the value of the overall lifecycle of a commercial aircraft, particularly at its mid-life and end of life stages.

The strong demand for air cargo has led to growth in the P2F business. According to data released by the World Bank, global cargo traffic has continued to grow since 2000 at a CAGR of 3.6%. According to Boeing's forecast, air cargo traffic is expected to rise by 4.1% on average each year over the next 20 years. Most importantly, the total cost of a P2F conversion is significantly lower than that of a new freighter, and the shorter lead time makes it attractive to carriers in the air cargo market.

## ► Global Air Cargo Traffic from 2001 to 2021 (billion ton-km)



Source: World Bank





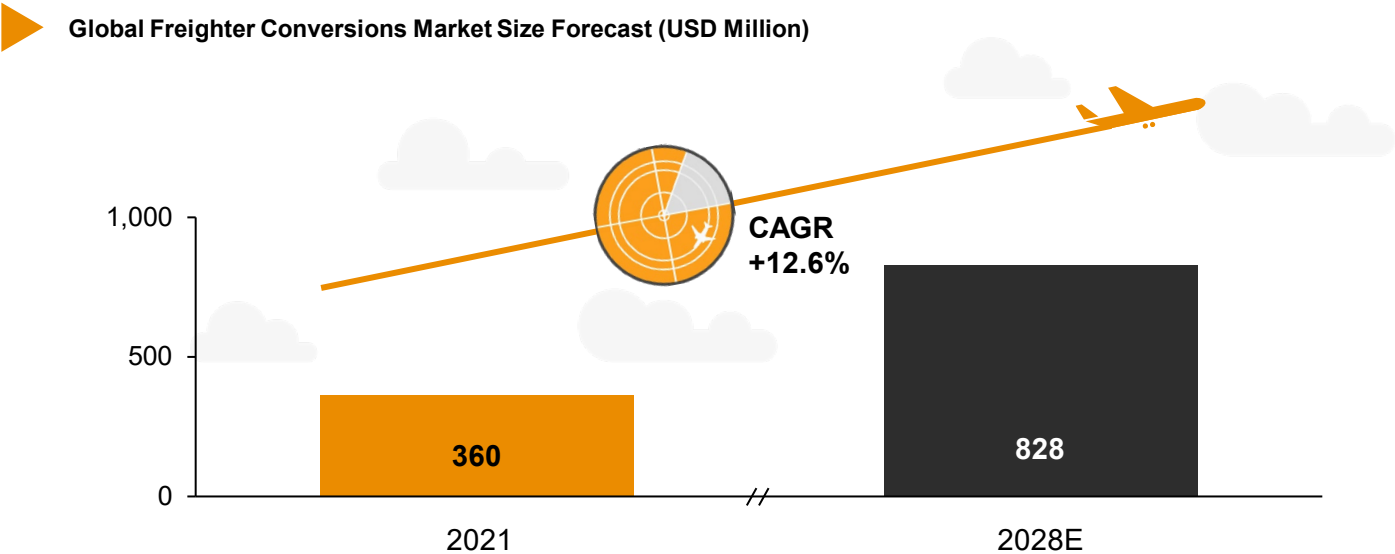
The P2F market continues to exhibit great potential. In terms of the number of converted freighter deliveries, more than 100 P2F aircraft were delivered each year between 2021 and 2022, which is higher than the historical annual average of 60 to 70. According to Statsmarketresearch, the P2F market size reached US\$360 million in 2021 and is expected to hit US\$828 million by 2028, growing at a CAGR of 12.6%. Under such market conditions, major aviation industry suppliers, including Boeing, are setting up or expanding P2F production lines to boost supplies. However, investing in P2F businesses is, by no means, easy, and studies of business models and business value are becoming increasingly critical.

### I. Main business model of P2F conversion

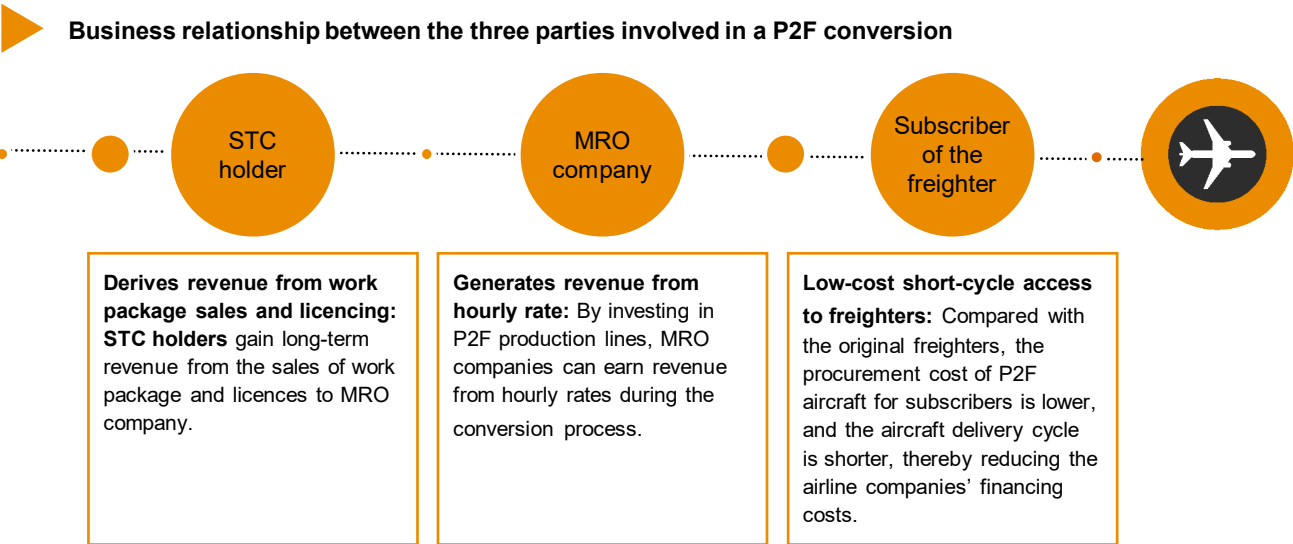
Any changes to the structure, equipment, systems, etc. of the aircraft require revalidation and the issuance of a Supplemental Type Certificate (STC) by the aviation safety agency.

The fundamental value of the P2F business lies in the fact that aircraft conversions can enhance the value of the aircraft over its life cycle. As far as the specific business model is concerned, P2F solution suppliers (STC holders) cooperate with aircraft maintenance companies (Maintenance, Repair and Overhaul ('MRO') companies) to establish P2F production lines, and the MRO companies then deliver the converted freighters to the subscribers. In China, several major MROs have established P2F production lines.

The business model of the P2F conversion involves a three-way business relationship between the STC holder, the MRO company, and the subscriber of the freighter as shown below:



Source: Statsmarketresearch



Source: PwC Analysis

## II. P2F business key production resources and elements of value

The key production resources and elements of value of the P2F business include the aircraft sourcing, the procurement of P2F work packages, the investment in fixed assets and human resources such as aircraft materials and hangars, as well as the qualification of MRO conversion, etc. These key production resources and elements of value are crucial prerequisites for the P2F business to raise its valuation.

### A. Conversion qualification thresholds

The criteria for obtaining maintenance qualifications under the EASA and the FAA system of standards differ from those of CAAC. It can be seen that the difficulty in obtaining different qualifications has a direct impact on the selection of regions for P2F conversions, the initial investment and the timetable for business development.

### B. Aircraft source

One of the key values of freighter conversions is that the converted freighters obtained by cargo carriers gain a good cost advantage over the original freighters. Passenger airlines typically decide to retire their aircraft that are over 15 years old given the rising maintenance and operational costs every year. The salvage value of retired aircraft is between 10 and 20 percent of the cost of a new aircraft, whereas the cost of a conversion is between 20 and 33 percent of the price of a new freighter. Engaging in the cargo business with freighters of equivalent capacity at a lower cost is cost-effective. For aviation groups, it is common to extend their business into P2F conversions using their own reserve of retiring aircraft sources. For non-aviation groups, they may need to seek third-party agencies to secure the sources of aircraft because it may be more difficult for them to find their own sources of aircraft. In this case, the company would need to pay a percentage as commission in order to secure the necessary pipeline of aircraft.

### C. Work package

Another key requirement of the P2F business is the conversion solution and issuance of a STC by the aviation safety agency. Usually, P2F solution providers offer a work package, which includes a series of conversion items such as conversion designs and corresponding aviation

materials. Key contractual terms and conditions, such as the pricing model for the work package and the number of working hours of each work package, have a great impact on the value of P2F businesses.

### D. Fixed assets and human resources

The P2F business requires high fixed assets as well as human resource inputs in the early stage. Fixed assets include hangars, plant facilities, investment in tools and equipment. The key equipment involved includes equipment of hangar heating systems, ladders, standard and specialised tools. In terms of human resources, to achieve the minimum authorised configuration criteria, modifications to a particular model typically require hundreds of mechanics, dozens of engineers and inspectors.

## III. Selection of valuation method for P2F business

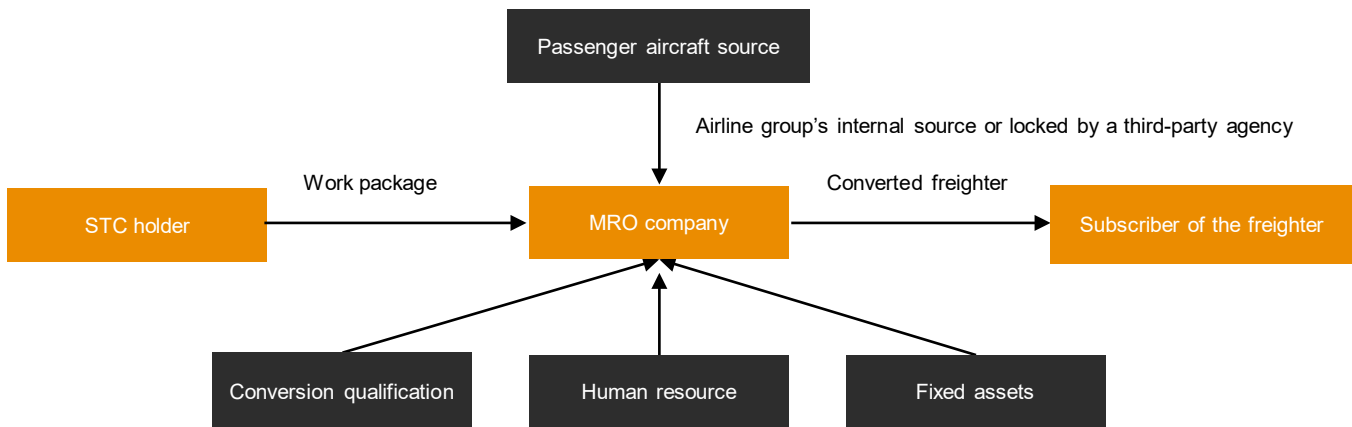
There are three internationally recognised approaches to valuing a business: the income approach, the market approach and the cost approach (asset-based approach).

It is challenging to reflect the value of the core elements of the business under the cost approach, such as qualification thresholds and potential business commercial relationships, in the P2F business because its value comes from the revenue generated by the business as a whole in the conversion of the corresponding models rather than the simple sum of the value of the assets and liabilities in the book. It is more difficult to choose appropriate comparable companies because there are only a handful of listed companies that purely engage in the P2F business of the corresponding models. Therefore, the application of the market approach is also limited. At present, the discounted cash flow method is more commonly used under the income approach.

The three main parameters in the discounted cash flow method are: the payback period, the annual cash flows and the necessary rate of return. Due to technological advancement, the specific models involved in the P2F business are iterative, so the forecast period of the P2F business under a specific model tends to be limited. A complete P2F business requires further consideration of the impact of the capacity building period.







Source: PwC Analysis

## IV. Financial outlook and forecast for P2F business

By investing in the establishment of a P2F production line, MRO companies can realise financial returns through the revenue derived from hourly rates during the conversion process.

### A. Forecast period

The availability of aircraft sources for conversion has a direct impact on the setting up of the business forecast period. In the case of the Airbus A330CEO, for example, its available aircraft sources on the market were manufactured between 2003 and 2011, with ages ranging from 12 to 20 years. Aircraft with an age range of 0 to 12 years from 2011 to 2023 are potential sources. Starting in 2023, the P2F A330 business could last at least 15 years or so. If a new P2F production line is required, a capacity building period of at least another 3 years or so would be needed upfront. Therefore, it would take about 12 years to realise operational revenues.

### B. Operating revenue – hourly rates

The main source of revenue for the P2F business is the effective modification hourly rate, which is hinged upon the number of aircraft converted, the standard modification hours per aircraft and the unit price of the hourly rate. In practice, the number of available slots, the source supply and scheduling plan, and the engineering capability of the MRO companies all affect the estimated number of converted airframes in the forecast period.

The MRO companies may consider the use of peripheral AOG and other treatments to raise the slot turnovers on the production line. The standard number of effective hours for each aircraft modification usually doesn't change significantly during the forecast period, while in the early stage of business development, due to the unstable capacity of the MRO companies, the number of hours invested may exceed the standard of the STC holder and cannot be charged.

In addition, taking into account the differences in the regional inflation level of each country, it is necessary to consider an increase in the rate of the estimated revenue from the hourly rate in the coming years.

### C. Operating costs and expenses

The operating costs of the P2F business consist primarily of depreciation of fixed assets, staff training and payroll costs, fixed asset maintenance costs, and staged storage and continuing airworthiness management (CAMO) costs. The costs and expenses mentioned above depend on the purchasing power of the location in which the P2F business is conducted, as well as industry-specific configurations and talent salary levels. The staged storage and CAMO costs are the parking and maintenance costs incurred when an aircraft is unable to enter the production line for modification immediately after arrival or is unable to leave the warehouse on time after modification.

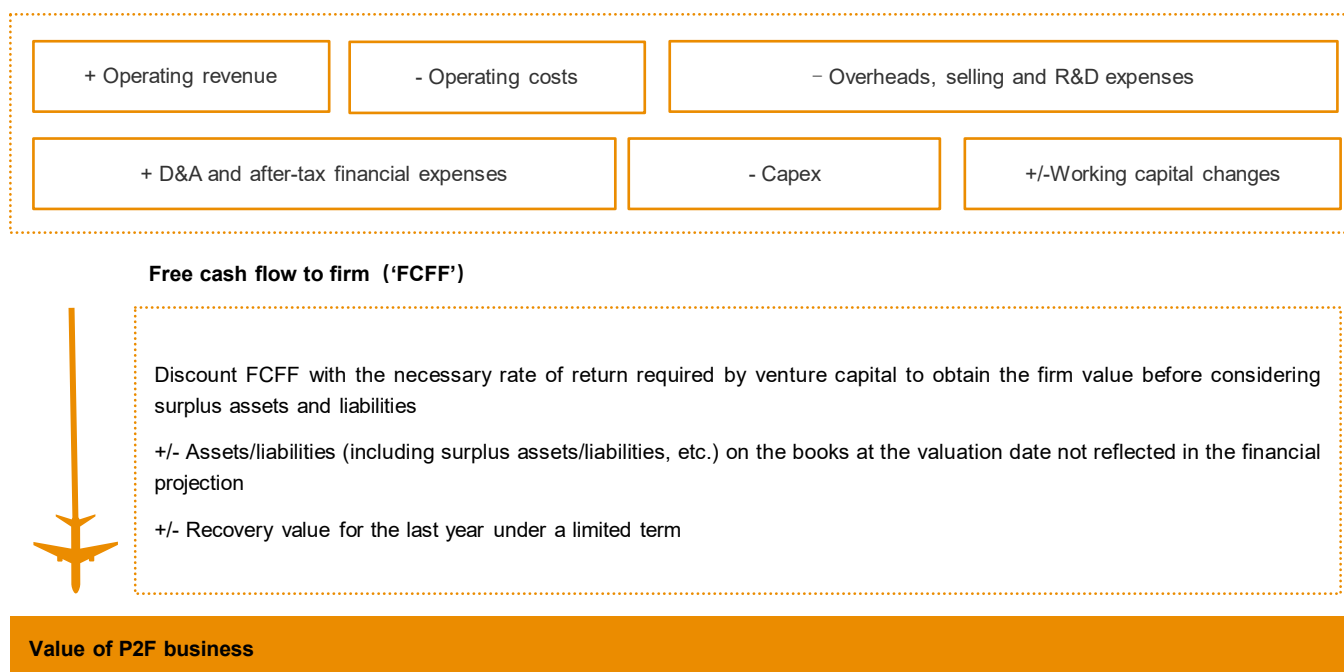
## V. Considerations of rate of returns together with its risk premium factors for P2F business

The weighted average cost of capital ('WACC') is typically used as the discount rate when calculating the value of a mature company/business. For companies/businesses at an early stage of development, such as P2F businesses, the allocation of resources is not yet mature and the businesses are relatively risky, and therefore the investors tend to demand higher returns.

The business risk premium and value of the P2F business are dependent on the demand in the air cargo market, the progress and stability of the allocation of business resources,

and the volatility of prices on the revenue and the cost. MRO companies in the early stages of development yet to see improvements in resource allocation and their building of engineering capacity is not complete. This is mainly reflected in the high uncertainty in the access to aircraft sources, STC solution supply and settlement mechanism, acquisition of conversion qualification, fixed assets and human resources development.

At this time, the P2F business is still being viewed as relatively unstable, and the rate of return required by the investors is also proving to be quite high. The risk premium and the rate of return demanded by investors will eventually decline with the improvement of MRO's resource allocation and the development of their business.



## VI. Concluding remarks

The thriving P2F sector has shown more development possibilities in the air cargo market, but the high market entry barriers have also become a roadblock for some companies. For MRO companies, the ability to improve their resource allocation and operational and management capabilities in the future, and to generate more positive excess cash flow for investors to increase the value of themselves will be crucial to their development.

PwC's accumulated experience in the aviation sector and valuation can aid investors in this process by enabling them to continuously and dynamically track, and analyse the value of the P2F business, offering references for value discovery and business finance.

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