AIRFINANCE JOURNAL EVENTS

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Avolon's bond rates are '**unsustainable**': JP Morgan

Avolon's bond rates are 'not competitive' and 'unsustainable' due to the issues with its Chinese parent HNA Group, JP Morgan's managing director, airline/aircraft credit research has said.

Speaking at *Airfinance Journal*'s Investor Day at the 20th Annual Global Airfinance Conference in Dublin on 23 January, Mark Streeter says Avolon's bonds are at "5.5 to 6% levels" because of concerns with HNA.

He says that the "writing on the wall" is that large global aircraft lessors need to have access to the capital markets.

"They need competitive bond market access and at the moment their rates are not competitive given the problems with HNA," he says.

"That is unsustainable where those bond levels are right now."

Asked by *Airfinance Journal* how the problem can be resolved, Streeter replies: "Who knows? What I will tell you is this: most of the investors involved in Avolon feel that the business is not fundamentally broken relative to Air Lease or AerCap...clearly, aircraft leasing fundamentals in terms of the market comfort with them continues to improve, but Avolon has a perception issue in terms of its parent funding."

He notes how the current indenture allows for an unlimited amount of capital to go up to Bohai Leasing, the HNA Group entity that owns Avolon, and ultimately HNA Group. He suggests there could be a "tighter restricted payments test" in the next bond deal that can "limit the amount of capital going upstream".

However, he admits that a 'BB' rated company like Avolon "generates a lot of cash" and its equity holder should be able to take some of that out. He says there needs to be a "middle ground" where the market should be comfortable with how much cash can leave the entity and how much must stay to retain the company's credit profile.

Mark Streeter, Managing director, airline/aircraft credit research, JP Morgan

He concludes that what needs to be fixed is the fact that Avolon cannot fund its $20 billion portfolio long term in the unsecured bond market with costs in the 5 to 6% range, when its competitors are getting better rates.

Lessors and investors **disagree on transparency**

The opacity of the industry in regards to asset prices is one of the main challenges for aircraft lenders and investors, according to a panel of investors speaking at the 20th Annual Global Airfinance Conference in Dublin.

"The lack of transparency on pricing is your biggest challenge as an aircraft lender or holder. The leasing companies were in the best position to hold good pricing information," said David Andrews, managing partner of transport, Hudson Structured Capital Management.

In response to a question from *Airfinance Journal* about whether the industry will see more transparency on pricing in the future, Andrews said: "I think the answer is no. I think the lessors benefit greatly by having control over that information flow. I believe that a long time ago, there was a requirement in the US that every aircraft sale had to be registered with some part of the FAA. I can't remember when that disappeared, but I don't see any airlines pushing to have that reversed and I don't see lessors doing that.

He does not anticipate that investors will create a political bloc to force that kind of change, adding that the appraiser community "is hoping to god there isn't a change, because it will destroy their business".

He adds: "I wish the answer was yes, but I really don't see it."

Bob Peart, portfolio manager, Magnetar Capital, who was also on the panel added: "It all starts at the top with published list prices for aircraft. It's very protected and you really can't tell what sort of price that airline or lessor paid for those aircraft. Discounts vary: you've got the airframe and the engine which can make it even more complex."

He also highlights the clandestine nature of airlines in regards to how much they are paying to lease aircraft.

"There's some many barriers right now, so it's very difficult to see that changing in the near future."

However, Ryan McKenna, chief financial officer of Air Lease (ALC), refuted the investors' views on asset values, using the lessor's Thunderbolt asset backed securitisation transaction as an example.

The Thunderbolt deal detailed aircraft value and lease rates to investors and McKenna said that he hoped other lessors would follow ALC's example of disclosing more information on values to the market.

"I think we do a tonne of disservice to ourselves in not being transparent about this," he says. "What I mean by that is that I don't know what value you create by having this issue of 'I'm not telling you what the price or lease rate is'. I think it creates illiquidity and the lack of transparency creates reduction in price and we're the ones who suffer from that."

He adds that ALC is looking to change that and be less opaque with investors about what the lessor is doing, hoping other lessors will follow suit.

Heard it at the **AFJ lounge**

BA may be looking at a EETC and some Jolco financings for 11 Airbus A320neos and two Boeing 787s. It's not a done deal yet, but Citi are said to be involved. IAG came to the market with the RFP last autumn.

Kenji Kawahara is expected to leave IBJ Leasing at the end of January, sources indicate. Kawahara has been working on the debt side of Japanese operating lease with call option (Jolco) transaction for the Japanese lessor. *Airfinance Journal* understands that an internal candidate is likely to replace Kawahara.

After SMBC head of aviation James Patterson left for DVB, the bank has been trying to hire a replacement. They interviewed two candidates from German banks but did not find them suitable. Therefore Koichi Tanaka, who transferred from SMTB's Toyko office to London recently, may take over oversight of the aviation team.

Boeing and Embraer combination '**will get done**': Hamilton

A Boeing and Embraer deal tie up is likely as the Seattle-based manufacturer needs to shore up human resources for its expanding product line, said Scott Hamilton, founder of Leeham News and Comment.

"I believe a deal eventually will get done as Boeing faces a major exodus of engineering talent as 5,500 engineers and technicians prepare to retire," says Hamilton. "Also, Boeing faces two new programmes soon, the new midsize aircraft (NMA) and new small aircraft (NSA) products."

Hamilton notes there are 1,702 engineers and technicians that are aged 60 and up and 3,823 that are aged 55-59.

He adds: "The layoffs in the Boeing workforce in recent years cut too deeply. Boeing has been rehiring some of those engineers, but there aren't enough of up and coming engineers to replace the 5,550 people that are retiring in the next 10 years."

With the Embraer E2 programme "winding down by 2020", Hamilton indicates Embraer would have "a bunch of engineers and human resources available to help Boeing out on the NMA and the SMA.

He adds that and an "assembly line also might be a possibility in low-cost Brazil."

Hamilton stresses that Embraer and Boeing have had a business relationship for years. "Go back and look as far back as 1999, and even then, they were talking about greater cooperation."

LTVs are '**creeping up**', says Castlelake

Loan-to-value ratios (LTVs) have been "creeping up" over the last three to four years, especially in the mid-life aircraft space, according to Evan Caruthers, managing director of Castlelake.

Caruthers said: "What we've seen over the last three or four years, is the leverage, the LTV, the debt that is being applied, particularly to the younger mid-life aircraft in the ABS space, is creeping up."

He points out that A tranche debt back in 2014 has LTVs of around 50 to 55%, when the ABS structure was being re-established post 2007 financial crisis. "Today you're looking at 65-70% LTV. You had the introduction of B tranches in those 2014 deals, where leverage was in the low 70s, today it's basically in the high 70s."

"And then you started to see the introduction of C tranches on the bottom of the capital stack below the B, that's taking total leverage from 80 to 85%," he adds. "At the end of the day, what that ultimately means from our perspective is the equity strip in that aircraft is thinning. "

"People are applying more leverage to these assets and you really need to think through what is the risk impact of significant amounts of leverage in the alternative space – which is the younger mid-life to end of life. "

He adds that there are potential risks from an increasingly-leveraged market, cautioning that liquidity is not available "when you need it the most".

A380 needs **engine change**

Emirates Airline may have thrown a lifeline to the troubled Airbus A380 programme on 18 January by signing a memorandum of understanding (MoU) for a further 36 aircraft, but Leehman News' managing director Scott Hamilton still has doubts about the future of the programme.

"Airbus continues to say that someday airport capacity will demand the A380 aircraft," he tells delegates.

"Someday that probably be true but my view is that by 2025 the basic design of the A380 will be more than 25-years' old and the engine technology will be 25 years' old," he adds. "If there is a future for the A380, they have got to put on new engines."

For him, the Boeing 777-9 economics on a trip cost and per seat basis are better than the A380.

"The smaller 777-9 model is less risk to airlines. But if you want to jam-seat on the 777-9, you can easily put 500 seats and that puts off the need for the A380 at the so-called congestion airports," he says.

"I still have doubt about the long term future of the A380," he adds.

Airline and Lessor **Deal Activity 2017**

Airfinance Journal's Fleet Tracker has so far recorded a total of 380 deals closed in 2017. This includes debt issuances, structured financings and equity capital markets deals but does not include operating leases, which totalled 431 deals.

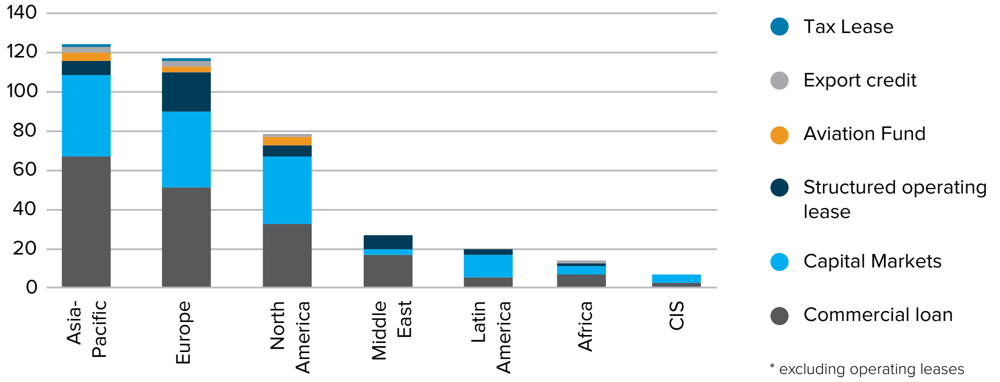
Other deals will be added as details are disclosed to us. The chart shows the breakdown of the deals by region and by market.

Perhaps not surprisingly, Asia-Pacific proved the most active market during the year followed by Europe and North America.

The strength of the commercial loan market is evident across all geographic regions. Capital markets (including ECM) was also strong, with the exception of the Middle East.

The capital markets deals for Africa include three equity raisings by Fastjet.

Total Deals* 2017 - Preliminary



* excluding operating leases

Source: *Airfinance Journal's Deal Tracker*

Funds for investment in operating leases are shown as a discrete category as they showed significant growth from 2016.

Structured operating leases mostly represent Japanese Operating Leases with Call Options (Jolco), which are the subject of a separate *Airfinance Journal* survey that is currently in progress. Jolcos were closed in every region except the CIS and Africa. As can be seen *Airfinance Journal's* Deal Tracker captured very few tax leases and Export Credit Agencies financings in 2017.

AFJ will be publishing a final list of deals and bank league tables during the first quarter. Please submit your deals lists and details to **jack.dutton@airfinancejournal.com**.

Reeling from Spectre And Meltdown, leasing industry on lookout for **Next-Gen data security**

Zeevo Group flags the risks to the aviation finance industry and shows lessors how to safeguard against them.

By now, most have seen the headlines about the security flaws “Spectre” and “Meltdown.” For businesses, including lessors, increasingly reliant upon cloud computing, these warnings are alarming because the risks associated with them are real and pervasive. As shown by the EU’s new General Data Protection Regulation (GDPR) regulations, long-term concerns about data protection are not going away.

What’s it all about?
Spectre and Meltdown affect most modern computers, allowing hackers to steal sensitive data by exploiting vulnerabilities in Central Processing Unit (CPU) chips manufactured by Intel, AMD, and ARM. By utilising a common CPU feature, “speculative execution”, an optimisation practice where a computer pre-emptively executes unnecessary tasks to increase its speed, hackers can extract sensitive data at the hardware level.

The true cost of a breach
With initiatives underway to move asset management and technical records systems to the cloud, there is an increasing risk of a security breach that may leave company and client privileged information vulnerable to cyber theft.

This stolen data could be disseminated to competitors to offset a competitive edge, or be used cybercrimes like identity theft to diminish the public trust in a company.

These security breaches can have a massive financial impact. IBM estimates that the global average cost of a data breach is $3.62 million ($141 for each stolen record).

Protecting data is more than GDPR compliance
As these security flaws are making headlines, the European Union is set to implement its GPDR regulations in May. Among other things, GDPR requires designing and implementing protocols for security breaches, like those associated with Spectre and Meltdown. Breaches must be reported to a local authority within 72 hours.

Businesses can mitigate the risks of breaches and become compliant with the new law by using an internal team or an outside adviser to:

- Adopt adequate controls to enforce policies and procedures;
- Keep records of processing taking place;
- Conduct Privacy Impact Assessments (PIAs) and, if required, consult with the Data Protection Authority (DPA);
- Organise training and awareness sessions; and
- Review privacy compliance (e.g., audits)

The penalties for violating the GDPR are stiff, with organisations subject to a fine of 4% of annual turnover or €20 million ($24.2 million). In other words, protecting your clients’ data is not only essential for internal operations and public relations, but also legally.

Combating Meltdown
The remediation steps to combat Meltdown are less obvious. The primary benefit of cloud computing is to make processing power available to the public. The patches released by processor makers have inevitably made processing less powerful and have an adverse impact on speed. It may take some time for processor makers to rectify them. So, a cloud computing investment may not have the same return as previously envisioned.

Here are a few safeguarding measures to combat Meltdown:

1. **Be on the lookout for the latest updates and patches** for all your devices including iPhones and iPads.
2. **Be extra vigilant when clicking on links in emails**. ‘Phishing’ tactics remain one of the most effective ways for hackers to gain access to your data.
3. **Consider implementing a two-step authentication process** for remote users to access encrypted management and technical records systems. This can be done with use of tokens on top of a password.
4. **Implement protocols for downloading files from third parties** (e.g., vendors and clients) with a system of approvals to mitigate the risk of a security breach, minimising malicious software propagation and software downloads from unknown sources.
5. **In light of GDPR, establish procedures for obtaining consent from employees and clients** to limit liability in the event of a security breach. A well-defined process builds trust and helps protects a company from fines and litigations.
6. **Have a well-controlled email directory** to enable employees to catch emails with malicious links from unknown sources. Knowing what email sources are valid will improve the effectiveness of spam filters and provide clues when employees receive phishing emails. For example, if an employee knows they receive emails from an airline with the domain name **@airxxx.com**, it is easier to catch impersonators using a fake domain name like **@airxxx.net**.

Limit access to sensitive data
More people with access means more opportunity for security breaches. Executives from each department should work with colleagues in compliance, internal audit and/or IT to place employees into certain groups that only have a specified amount of access. Spending time to create a thoughtful permissions list can reduce risk without hampering efficiency.

Keep calm and carry on
Spectre and Meltdown are serious, but there is no need to panic. While processor makers are fastidiously working on more lasting fixes, consultancies like Zeevo Group are “at the ready” when it comes to providing businesses with solutions to implement precautions to protect valued data.

In a data-driven global economy, the expanding capability for lessors to share, analyse, and collect mass quantities of data has opened new frontiers. This allows them to innovate like never before. However, like all new frontiers, it comes with a new class of bandits to challenge the security of those aviation pioneers. With Zeevo Group at your side…challenge accepted!

Learn more about Zeevo Group and its services at **zeevogroup.com**.

Early implementer Air France-KLM weighs IFRS 16 impact

Air France-KLM will become one of the first airlines to implement major new accounting changes if it fulfils plans to report according to the IFRS 16 standard from the first quarter of 2018.

IFRS 16 becomes effective from 1 January 2019, but companies may implement it early. However, only 4% of airlines intend to do so, according to a recent Euromoney Thought Leadership report in partnership with Deloitte.

By classifying an airline's operating leased aircraft as assets and future lease payments as liabilities, IFRS 16 will have major impact on many carriers' debt- and Ebitda-related (earnings before interest, taxes, depreciation and amortisation) metrics. For example, debt will rise for airlines with many years left to run on leases.

Conversely, airlines will only a short time left on their leases will see headline debt fall relative to adjusted figures, which typically capitalise 7x annual lease payments. Air France-KLM notified investors in late 2017 that its debt reported under IFRS 16 would be at least €1.5 billion ($1.7 billion) less than previous adjusted estimates (although it should be noted that debt will spike up again once leases are renewed).

The Franco-Dutch carrier may also benefit from income statement changes that result from IFRS 16, which will usually mean a rise in Ebitda since leases are no longer classified as an operating expense.

"Lufthansa has nearly no operating leases so when we compare Air France-KLM with Lufthansa our operating income and margin are lowered by the operating leases we have," says Marie-Agnès de Peslouan, head of investor relations for Air France-KLM.

She adds that while analysts already include operating leases in their debt analysis, many fail to do the same when comparing KPIs (key performance indicators) such as Ebitda.

On the other hand, IFRS 16 will complicate comparisons with airlines outside the standard's application, such as those in the US.

"If we want to compare Air France-KLM with Delta – one of our biggest partners – it will not be possible without a restatement of the accounts of Delta or of Air France-KLM," says Séverine Guffroy, vice president accounting, Air France-KLM.

Air France-KLM currently leases about 40% of its aircraft, a percentage it is trying to lower, although de Peslouan says this is unrelated to IFRS 16.

"We do not decide to have aircraft on operating leases because of the accounting treatment," she comments.

That said, a majority of the Euromoney survey expects lease contracts to change in light of IFRS 16, with many expecting airlines to angle for shorter lease terms to reduce the new standard's impact on debt.

However, de Peslouan expects lessors to brush of any attempts to change standard lease terms

"I think the lessor community will be rather indifferent to this new rule," she says.

***Balancing The Books** is a major new Euromoney Thought Leadership report assessing aviation's response to IFRS 16.*

Into the great wide open

2018 New Year industry review

The start of another year provides an opportunity to reflect on the past 12 months and suggest some themes for consideration in the year ahead. Over the coming months, Avolon will be expanding further on topics likely to affect our industry with the objective of stimulating informed debate amongst our peers and colleagues.

Looking back over the fifty years since the Concorde was rolled-out, a good deal has changed, but the steady advance of technology means that new models and variants continue to see the light of day. 2017 saw the first deliveries of the Boeing 737 Max8 and the Airbus A321neo, although not the A350-1000, plus first flights for the A330neo, 787-10, A319neo, 737 Max9, E195-E2 and C919. Boeing announced the 737 Max10 and continues to evaluate the potential for a new middle-market aircraft for the mid-2020s.

50 years ago, global passenger traffic was passing the 300 million mark. In 2017, over four billion passengers travelled on 36.8 million flights connecting 20,000 city pairs. And despite a rocky few years, a third of global trade by value still moves by air.

Strong Fundamentals

The industry heads into 2018 in rude health – according to IATA, global passenger traffic will have increased by 7.5% in 2017, a fraction faster than in 2016, with a still solid 6% increase forecast for this year. A 9% increase in freight traffic last year has underpinned the long-delayed recovery in the cargo market.

A billion passengers have been added to the global airline networks in the past five years. Much of this new volume is tourism driven. IATA reports an almost 6% rise in tourism expenditure in 2017 and expects this to top 9% this year. Clearly, with global GDP growth averaging little more than 3%, the growth multiple is still well above the long-run average, confirming that other factors now have a significant influence on passenger demand.

Ticket price will clearly be high on the list of influencers and is benefiting as the market continues to experience relatively low and stable fuel prices. The impact of fuel has moderated from being 35% of total airline operating costs coming out of the last downturn to less than 20%, although we should not lose sight of the fact that, whilst the price of a barrel of WTI oil has increased by a modest 6% since the start of the year, the high-low range was almost 35% and volatility here presents a challenge for non-hedged airlines when setting fares for future travel.

Two other factors are having an even greater influence on demand. This first of these is the sharply rising availability of affordable seats through the rapid growth of LCCs, especially in emerging domestic and regional markets, bringing air travel within reach of ever growing sections of the population.

The second factor is these populations themselves and their demographics, where increasing economic wealth is expanding the so-called middle classes, many of them in the millennial age bracket and increasingly looking for "experiences" as they spend their discretionary income.

The geographic characteristics of many of these emerging markets, such as China, India, Indonesia and the Philippines, further increase the attraction of air travel over surface transport, which is often slow, irregular and in many cases not much cheaper than an air fare.

We are finally seeing a meaningful recovery in the air freight market, with IATA reporting 10.6% year on year growth for 2017. This takes the overall traffic increase since the start of the global financial crisis to 26%, a 2.3% average growth rate which conceals absolute declines in four out of the past ten years. Nevertheless, the number of western jet freighters in storage has fallen by 15% over the past year and is 50% below the level seen five years ago.

Despite the steady rise in aircraft deliveries, capacity is still increasing more slowly than traffic and load factors continue to rise, with average passenger seat utilisation above 81% for the year and peaking at a remarkable 84.5% during the months of July and August.

All of these positive indicators have contributed to another stellar year of global airline profitability, with IATA estimating $34.5 billion of net profit, close to the levels of 2015 and 2016, and with a forecast step up to $38 billion in 2018.

These levels represent an average net margin of 4.6% and a ROIC approaching 10%, however, this result must be caveated by the fact that almost half of the profit is still earned by North American carriers and that, apart from Europe, margins in other regions are below – in some cases well below – the average.

Industry Cycles

The question of the timing of the next cycle downturn remains a hot topic across the industry, along with a broader debate as to whether there is still a cycle to worry about. Avolon remains firmly convinced that the industry remains cyclical, despite the growing influence of non-GDP factors on growth rates.

The current economic cycle has now lasted over eight years, two years more than the average of all post war recessions. However, time based representations of world growth cycles are an oversimplification for a complex system such as the global economy. Lower growth rates in this economic cycle imply that "economic slack" is being absorbed more slowly relative

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Dick Forsberg
Head of Strategy
Avolon

Dick Forsberg has over 45 years' aviation industry experience, working in a variety of roles with airlines, operating lessors, arrangers and capital providers in the Disciplines Of Business Strategy, Industry Analysis and Forecasting, asset valuation, portfolio risk management and airline credit assessment.

As a founding executive and Head of Strategy at Avolon, his responsibilities include defining the trading cycle of the business, primary interface with the aircraft appraisal and valuation community, industry analysis and forecasting, driving thought leadership initiatives, setting portfolio risk management criteria and determining capital allocation targets.

Prior to Avolon, Dick was a founding executive at RBS (now SMBC) Aviation Capital and previously worked with IAMG, GECAS and GPA following a 20-year career in the UK airline industry. Dick has a Diploma in Business Studies and in Marketing from the UK Institute of Marketing is a member of the Royal Aeronautical Society and also a Board Director of ISTAT (The International Society of Transport Aircraft Trading).


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to previous cycles, suggesting that this cycle has some way to go, with remaining lifespan measured in years, not quarters.

From a lessor's perspective, the economic growth cycle does not have a significant bearing on aircraft leasing so long as lessors can continue to fund their capital commitments. Due to the long term nature of lease contracts, which extend beyond the normal business cycle, lessors are insulated from periods of low growth. The past 12 months have underscored the availability of funding to the lessor community, with record number of new aircraft being financed through this channel.

The OEMs

Preliminary figures for 2017 suggest that total commercial jet deliveries will be at or slightly above the 2016 total as the underlying upward trend in aircraft production rates was masked by GTF engine issues on the A320neo programme and by supply-chain problems on the A350.

Improvements are expected for both in 2018, although a full return to normal may take most of the year. On the A320neo programme, Pratt & Whitney have lost their first mover market share advantage and, although the LEAP engines have not had a flawless service entry, Pratt face a tough fight to move the market split back close to 50/50.

Unofficial data for orders placed during the year indicate an increase of around 10%, to approximately 2,300. Within the total, mainstream single aisle types netted 20% more orders, whilst widebody orders declined by 20%.

Amongst the latter, the A380 programme looks increasingly under threat, with no orders in 2017 and a diminishing backlog that has already forced a production rate cut to less than 1 per month next year, with potential to go lower still.

The headline stories for 2018, however, will continue to feature the middle-market segment and the CSeries. The former may or may not result in a launch announcement from Boeing, but both OEMs will be exploring potential new or existing solutions to fill the gap in the market – whatever that is determined to be. The future of the Airbus-Bombardier alliance to re-boot the CSeries programme and save it from what is widely seen as sour American grapes will be determined during 2018 in a combination of regulatory and legal processes that began with International Trade Commission hearings in the week before Christmas.

What would have been a prediction that Boeing and Embraer would also seek closer ties has been overtaken by a formal announcement of discussions, however it is unlikely that either Bombardier or Embraer will be totally subsumed by the larger OEMs.

With senior management changes at both Airbus and Boeing, the world is watching to see how the new teams position their businesses and product lines for future competitive advantage.

Arguably, Airbus faces the greater challenge with more widespread changes at the top of the organisation and, specifically a new hand shaping sales strategy after almost a quarter of a century, with the choice of Eric Schultz to replace John Leahy suggesting that closer relationships could be forged with engine OEMs.

Financing Trends

As the demand for delivery financing continues to rise, approaching $140 billion in 2018, liquidity remains plentiful, diversified and generally well-priced, all of which is supporting a number of emerging lessors on their path to reaching a critical mass.

Access to secured bank lending is still a mainstay of delivery financing, but alternative debt capital markets products are increasingly making their mark. ABS issuance exceeded $6.6 billion in 2017, financing 331 aircraft and 56 engines in 12 transactions. The capital markets also closed more than $2 billion in lessor private placements during the year, with new investors continuing to be attracted to the sector.

Lessors are unlikely to face a liquidity shortage in 2018, although economic deployment of capital will remain challenging for some. However, as interest rates continue their gradual rise, it will become increasingly difficult to sustain the sportier sale and leaseback terms that have been reported and that segment of the leasing market will, in time, revert to more measured activity. Expect also to see a further increase in the levels of assets under management for third party investors.

Fearless Forecast

Looking out over the next 12 months, then, a number of predictions can be made with a reasonably high degree of confidence:

- Passenger traffic growth will continue to perform measurably above trend, led by emerging markets
- OEM deliveries will get back on track and continue to increase in number and value
- Lessors will remain the largest funding channel, although SLBs will remain largely the domain of emerging, or recently emerged, players
- Liquidity from private and fixed income investors will continue to increase, with Asian capital playing a growing role
- Further modest increases in interest rates will have little immediate impact on aircraft supply and demand.

Investing in the aviation industry - taking on the challenge

In the past years the commercial aircraft market has become a vast playground for all kind of investors, from sophisticated equity providers to financiers with limited industry know how, mainly due to the attractiveness and continuously growing aviation market. The broad spectrum of investment opportunities, ranging from purely asset-based investments to various alternative opportunities throughout the complete value chain of the aviation assets have added to the influx of investments. Attractive cash flows, stable residual values and a well regulated aviation authority network, offer a good basis and promising perspectives for investors. In this context established market players like OEM's, airlines, lessors, MRO's and new entrants from the financial industry have to understand each other. Different requirements and expectations can make this sometimes a real challenge. Obviously without the right technical expertise and know-how regarding the operating lease environment, the regulating authorities and the asset, as well as the influencing factors on each of these, it is easy to get lost in a in a continuously growing market.

One of the trends which has added to the attractiveness of this market, is the possibility to vertical integrate various sectors of the asset life cycle. Many investors who originally only invested in the operating lease of the asset, have over the years moved either forward into the sunset phase of an asset to capture some of the rewards under an exit scenario. Others have moved into the origination of assets from the OEM's to bargain from large purchase orders discounts. This has also allowed investors to spread their risk within the aviation sector, as different sectors in the life cycle of the asset react differently and at different times to a trend or crisis.

Dr. Peters Group, Germany's leading initiator of closed-end aviation funds, has since 2007, raised an amount of €1.1 billion equity in the aviation market. In addition to its retail business the multi-aircraft fund DP Aircraft could successfully be established in the UK institutional market. Beside the technical know-how regarding the asset as well as the various stakeholders having an influence on the asset and the profound understanding of the aviation finance and leasing market, it is Dr. Peters involvement in different alternative investment structure which makes the company a perfect partner for any aviation related fund transaction, including those related to the new regulations applicable in Europe.

Through its full-service operating lessor DS Aviation, Dr. Peters offers depth of experience across the whole value chain, from identifying transactions, the managing of the assets through its complete operating lease life, through to the remarketing or other form of exit strategy of the assets. DS Aviation has strengthened its technical, asset management and marketing capabilities over the years and continuous to do so, to ensure that it is well placed in the market to face new challenges. The current aircraft portfolio currently comprises 19 narrowbodies and widebodies including Boeing 777, 787, and Airbus A380 and A319.

Well established industry relationships are key in being successful in this market. This is even more true in the vertical integration market of today as the relationships have to include the stakeholders on both ends of the life cycle of the asset. Often when faced with a challenge in the market, it is the entity which is able to bring together the various parties along value chain of the asset, that is able to achieve the best result. "We believe that our market knowledge and the related asset knowledge linked with our industry wide relationships, have put us in the ideal situation to really manage the asset and maintain the value for our investors throughout this value and life cycle of the asset," says, Dr. Peters Group's head of aviation Christian Mailly. "We make this knowledge available to both airline customers as well as our investors creating a win-win situation. The Dr. Peters team is always sensitive to the needs and requirements of its partners," he adds.

Today's conference agenda

Wednesday 24th January 2018, CCD, Dublin

Day One

08:00 Registration and morning refreshments

08:55 Chairperson's opening remarks
Joe O'Mara, *Partner, Tax, KPMG*

09:00 Primary sessions: Airline CFO Panel: What should the global airline industry be doing next?
Tom Mackay, *Chief Financial Officer, Virgin Atlantic*
Iain Wetherall, *Chief Financial Officer, WizzAir*
Goran Jansson, *Chief Financial Officer, SAS Airlines*
Vitolds Jakovlevs, *Chief Financial Officer, Air Baltic Corporation*
Alex Malfitani, *Chief Financial Officer, Azul Brazilian Airlines*
Moderated by: Steven Udvar-Hazy, *Executive Chairman, Air Lease Corporation*

09:40 Lessor CEO interviews with Laura Mueller & Olivier Bonnassies (Part I)
Alec Burger, *President & Chief Executive Officer, GECAS*
Aengus Kelly, *Chief Executive Officer & President, AerCap*
Firoz Tarapore, *Chief Executive Officer, Dubai Aerospace Enterprise Ltd*
Interviewed by: Laura Mueller, *Managing Director, Airfinance Journal &* ***Olivier Bonnassies***, *Managing Director, Airfinance Journal*

10:40 Networking break

11:15 Data zone: Why should European airlines consider further consolidation?
Daniel Roeska, *Senior Research Analyst, Sanford C. Bernstein*

11:15 Primary session: Lessor CEO Interviews (Part II)
Domhnal Slattery, *Chief Executive Officer, Avolon*
Peter Barrett, *Chief Executive Officer, SMBC Aviation Capital*
Interviewed by: Bertrand Dehouck, *Head of EMEA, BNP Paribas*

11:45 Data zone: Implications of impending fleet renewals for investors
Bryson Monteleone, *Chairman-Elect, ISTAT Appraisers' Program Board of Governors*

12.00 Primary session: Disruption in the medium haul aircraft family: The IRKUT MC-21
Kirill Budaev, *Vice President for Sales and Marketing, IRKUT Corporation*

12.25 Networking lunch

14:00 Data zone: LIVE DEMO - Airline Credit Trends: An introduction to The Airline Analyst Data by *Airfinance Journal*

14.00 Primary session: Financing trends in the global airline industry
Amelia Anderson, *Managing Director, Assistant Treasurer, American Airlines*
Christine Rovelli, *Group Treasurer, Finnair*
Edward McGarvey, *Vice President & Treasurer, Atlas Air Worldwide Holdings*
Moderated by: Guido Schmitz, *Managing Director, Aviation Credit, DVB Bank*

14.40 Primary session: LCLH market assessment - Is it worth it in the long haul?
Tore Ostby, *Chief Financial Officer, Norwegian Air*
Interviewed by: Bertrand Grabowski, *Senior Strategic Advisor, Dubai Aerospace Enterprise Ltd*

15:10 Data zone: LIVE DEMO Global Fleet Insight: An introduction to The Fleet Tracker Data by *Airfinance Journal*

15.10 Primary session: Balloon Debate: "This house believes the cycle is due for a downturn"
Doug Walker, *Managing Director, Seabury Consulting (now part of Accenture)*
Marian Pistik, *Chief Executive Officer, Aerotask*
Bill Cumberlidge, *Managing Partner, GC Aviation Partners Limited (GCAP)*
Mike Cox, *Managing Director, Seabury Consulting (now part of Accenture)*
Moderated by: Justin Benson, *Partner, White and Case LLP*

16.00 Networking break

16:30 Data zone: LIVE DEMO Financial Structures & Sources Over-Time: An introduction to The Deal Tracker Data by *Airfinance Journal*

16.30 Primary session: Are low lease rate factors in the SLB market the new norm?
John Plueger, *Chief Executive Officer, Air Lease Corporation*
David Power, *Chief Executive Officer, Orix Aviation*
Khanh. T. Tran, *President & Chief Executive Officer, Aviation Capital Group*
Peter Chang, *Chief Executive Officer, CDB Aviation*
Doug Winter, *Chief Executive Officer, Intrepid Aviation*
Moderated by: Catherine Duffy, *Partner & Head of Aviation & Transport Finance, A&L Goodbody*

17:15 Data zone: LIVE DEMO Airline Financial Ratings: An introduction to The Airline Analyst Financial Ratings Data by *Airfinance Journal*

17.15 Primary sessions: Future proofing your business in 2018
John Pritchard, *Partner, Hollan & Knight LLP*
Robert Kokonis, *President & Managing Director, AirTrav Inc*
Brian Brennan, *Partner, KPMG*
Moderated by: Kevin Butler, *Managing Director, TMF Group*

17:45 Pilarski Says... Drink!
Adam Pilarski PhD, *Senior Vice-President, AVITAS*

18:10 Chairperson's closing remarks
Joe O'Mara, *Partner, Tax, KPMG*

18:15 NETWORKING – Open cocktail reception hosted by KPMG