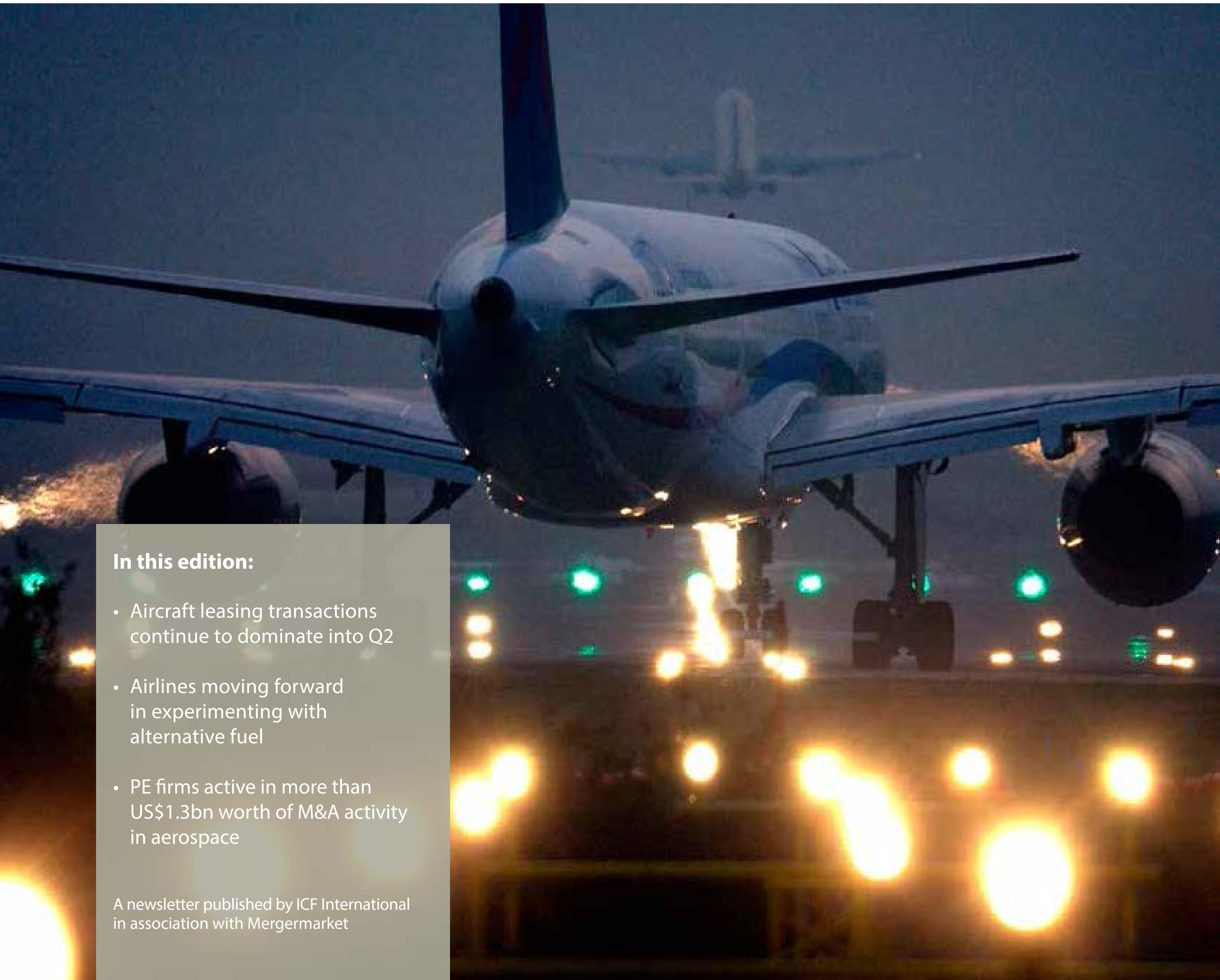
Aviation and Aerospace M&A Quarterly

Q2 2015



In this edition:

- Aircraft leasing transactions continue to dominate into Q2
- Airlines moving forward in experimenting with alternative fuel
- PE firms active in more than US$1.3bn worth of M&A activity in aerospace

A newsletter published by ICF International in association with Mergermarket

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ICF's aviation consulting & services practice (previously SH&E) is one of the world's largest and oldest consultancies dedicated to aviation. ICF provides transaction advisory services and strategic consulting to clients across the spectrum of air transport.

Introduction

ICF International (formerly ICF SH&E) is pleased to present the eighth edition of *Aviation and Aerospace M&A Quarterly* published in association with Mergermarket. The publication highlights activity and trends in aerospace, aircraft, airlines, and airport M&A in Q2 2015.

Top Deals

Merger and acquisitions activity across the aerospace, aircraft, airlines, and airports sectors remained robust in the second quarter. A number of significant and, in some cases, long-awaited deals took place, with no fewer than 13 transactions involving private equity firms.

In the airline sector, the big privatization news was that the Portuguese Government, after years of trying and a previous unsuccessful attempt, finally agreed to sell 61% of national carrier TAP Portugal. The Atlantic Gateway consortium, led by David Neeleman, founder of Brazilian airline Azul and the America's JetBlue Airways, outbid Avianca Holdings owner German Efromovich, with an agreement to acquire the stake for around US$390m.

In China, privately-held Hainan Airlines paid US$3.86bn for a 48.21% stake in sister carrier Tianjin Airlines, which it funded through a share issue. Both airlines are subsidiaries of HNA Group.

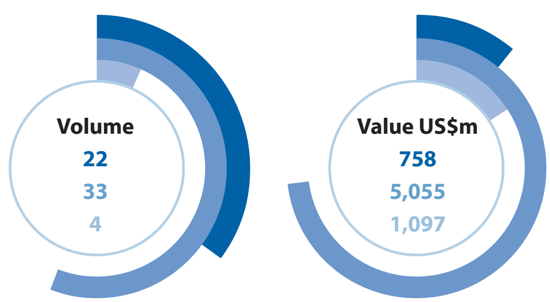
One notable Q2 deal in the aircraft space saw American International Group (AIG) sell most of its 46% stake in the listed Netherlands-based aircraft company AerCap for nearly US$4bn. The shares in AerCap were acquired as part of a 2014 transaction in which AIG sold its lessor ILFC to AerCap. In other developments, Russia's United Aircraft Corporation signed a deal with China to create a leasing company that will promote the sale of Sukhoi Superjet 100 passenger planes in China and Southeast Asia.

On the aerospace side, US-based aircraft components provider TransDigm Group signed a definitive agreement to acquire the aerospace business of Pexco from Odyssey Investment Partners for US$496m in cash. TransDigm was attracted by Pexco's commercial aftermarket activities, where it sees revenue contributions growing from 35% to 60% over the next five years.

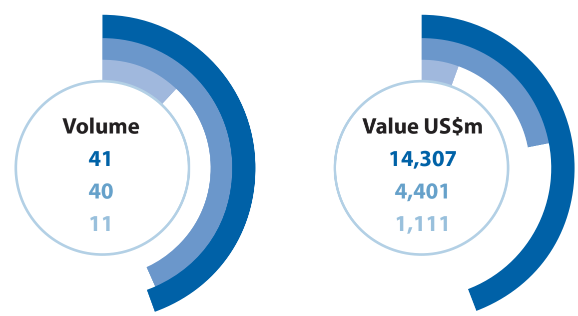
Meanwhile, Sabre Corporation hit the headlines for the second quarter running – this time for an acquisition, following its Q1 sale of Travelocity to Expedia. Sabre agreed to acquire the rest of Asia-Pacific global distribution system (GDS) Abacus International for US$411m. The company previously held a 35% stake in Abacus.

In the airports space, divestitures played a large role in the second quarter. Abertis, a Spanish construction company, exited the airports sector altogether after selling its stakes in Montego Bay Airport (Jamaica) and Santiago Airport (Chile), while AirMedia of China sold a 75% interest in its airport advertising unit for US$342m.

Q1 2015 Aviation, Aerospace, and Airports M&A Activity



Q2 2015 Aviation, Aerospace, and Airports M&A Activity



Elsewhere, the Far East Region Development Fund and Asian partners agreed to build to build a new terminal at Russia's Khabarovsk Airport.

With the exception of the Russia-China leasing partnership outlined in Top Deals, the majority of inter-continental deals were between North America and Europe, and North America and the Asia-Pacific, excluding China.

Regional Trends

In terms of volume, North American firms were the most active buyers in Q2 with 21 deals, while European firms were the most active sellers with 28 deals.

By deal value, however, China dominated both the buyer and seller markets, participating in transactions worth more than US$8bn and US$5bn, respectively. China and North America were the only regions to see a positive inflow of purchases, while Europe saw the largest outflow at more than US$700m.

Private Equity Trends

Q2 saw significant interest from private equity firms across several sectors, a trend that has been growing over recent quarters. Private equity firms were involved in 13 transactions during the quarter.

North American private equity firms led in their acquisitions through their involvement in over US$1bn worth of deals with both North American and European businesses. European private equity firms came second, but only accounted for a quarter of the value of the private equity deals carried out by North American firms.

"Q2 saw huge interest from private equity firms across all sectors, a trend that has been growing over recent quarters."

Aircraft

No Let-up in Leasing Activity

Aircraft leasing transactions have dominated this section of our newsletter for the last several quarters, and Q2 is no exception.

When Netherlands-based leasing company AerCap acquired Los Angeles-based lessor ILFC from the US insurance company American International Group (AIG) in May 2014, AIG in turn acquired a 46% stake in AerCap. In a larger than planned second quarter public offering, AIG raised approximately US$3.7bn through the sale of 71.2 million shares, reducing its stake in AerCap to approximately 5%.

The deal follows on from a flurry of multi-billion dollar transactions between aircraft leasing companies in previous quarters, reflecting the continuing strength of this sector of the market.

Leasing activity also spread to China in the second quarter when the country signed a deal with Russia's United Aircraft Corporation (UAC) to form a leasing company based in Xixian, with the specific purpose of marketing the Sukhoi Superjet 100 aircraft in Asia.

SSJ100 sales outside Russia have been disappointing and this is very much a strategic move aimed at boosting foreign sales of the aircraft. The leasing company has agreed to purchase up to 100 Superjets over the next three years, valued at US$3bn, to place with operators throughout China and Southeast Asia. This represents more than double the number of SSJ100s currently in service globally.

Japan was also active on the aircraft leasing front, with Japanese Operating Lease with Call Option (JOLCO) specialist Financial Products Group (FPG) taking an additional 50% stake in Ireland-based aircraft asset manager Amentum Capital, for a total shareholding of 75%.

JOL and JOLCO financing has been growing in popularity in recent years, as airlines look to finance their assets with a more diverse set of options. Since 2014, Amentum has closed several JOL transactions with FPG, and the Japanese company says its expanded partnership with the Dublin-based lessor will result in a significant upscaling of JOL arranging activities.

"Leasing activity also spread to China in the second quarter when the country signed a deal with Russia's United Aircraft Corporation (UAC) to form a leasing company based in Xixian."

Key Takeaways

- Aircraft leasing continued to be big business in Q2 with AIG raising US$3.7bn from its sale of approximately 40% of Netherlands-based AerCap, and Japan's Financial Products Group taking an additional 50% stake in Ireland's Amentum Capital
- China and Russia agreed to establish a leasing venture aimed at boosting Sukhoi Superjet 100 placements in Asia

Q2 2015 Highlighted Aircraft Transactions

Announced Date	Target Company	Bidder Company	Deal Value US$(m)
6/3/2015	AerCap Holdings	American International Group	3,700
5/9/2015	new leasing company	Russian-Chinese Investment Fund, United Aircraft Corporation, the Xi'an New Area Administrative Committee, and New Century International Leasing	3,000*
5/28/2015	CTC Aviation Group	L-3 Communications	220
4/7/2015	Solar Ship	KuangChi Science	14
4/23/2015	AirIT	Amadeus	N/A
5/13/2015	Amentum Capital	Financial Products Group (FPG)	N/A

* JV valued by assets to be leased and not actual deal value

Airlines

Azul Sees Blue Skies Ahead

Brazilian carrier Azul was at the center of two significant airline M&A transactions in the second quarter.

The airline's founder, David Neeleman – who also founded New York-based JetBlue Airways – led a consortium which won the race to assume control of loss-making Portuguese flag carrier TAP Portugal. The Atlantic Gateway consortium – which also includes the owner of Portuguese bus company Barraqueiro Group, Humberto Pedrosa – outbid Avianca Holdings owner German Efromovich, to acquire a 61% stake in TAP from Portugal's government for US$390m. The long-awaited privatization of TAP will see the carrier strengthening its Lisbon hub and increasing connectivity between Europe and Brazil. The new majority owners plan to launch eight to 10 new routes to Brazil, along with 10 US routes.

Earlier in the quarter, Spain's Globalia pulled out of the TAP privatization race, citing high levels of debt at the Portuguese carrier.

In addition to making an investment in Q2, Azul also attracted United Airlines as an investor. The US carrier acquired a 5% stake in Azul for US$100m as part of a long-term strategic partnership. The two airlines plan to codeshare on flights between North and South America, and expand their joint loyalty program.

Until recently, Azul was the only Brazilian carrier without affiliation with either a global alliance or a US airline partnership. The deal also plugs a gap for United, which opened when TAM left the Star alliance for oneworld in 2014.

"In addition to making an investment in Q2, Azul also attracted United Airlines as an investor. The US carrier acquired a 5% stake in Azul for US$100m as part of a long-term strategic partnership."

United Makes Alternative Fuel Investment

Airlines have been talking about, and experimenting with, alternative fuels for several years, but the issue has always been how to scale up volumes to commercially viable levels and bring down the cost. United Airlines put its money where its mouth is in Q2 when it made a US$30m equity investment in Fulcrum BioEnergy.

Fulcrum converts municipal waste into renewable jet fuel, which it says will provide a greater than 80% reduction in lifecycle carbon dioxide emissions when compared to kerosene. In addition to the equity investment, United has agreed with Fulcrum to jointly establish five projects close to the carrier's hubs to produce up to 180 million gallons of fuel per year. United has also agreed to purchase at least 90 million gallons of the fuel annually for a minimum of 10 years, at a price that is competitive with traditional jet fuel.

On announcing the initiative, United executive vice president and general counsel, Brett Hart, said that in addition to being better for the environment, the investment is "a smart move for our company as biofuels have the potential to hedge against future oil price volatility and carbon regulations."

United is not the first carrier to enter into an agreement with an alternative fuels producer, but it is the first US carrier to make an equity investment in one. On the other side of the Atlantic, British Airways previously made a long-term commitment to buy fuel converted from household waste by Solena Fuels. The producer plans to open its first jet fuel facility to the east of London in 2017, the same year that Fulcrum expects its first plant to become operational.

Air Ambulance Deals Continue Momentum

Following on from two significant transactions in the air ambulance space in Q1, California-based REACH Air Medical Services announced its intention in the second quarter to acquire Summit Air Ambulance from private equity group Texas Next Capital for an undisclosed sum.

REACH says the deal will enable it to expand its operations into Colorado, Nevada and Montana. Summit operates a fleet of eight Agusta helicopters and Pilatus PC-12 single-engined turboprops from six bases in Nevada and Montana and a single base in Colorado.

The transaction follows the US$2bn acquisition in Q1 of Texas-headquartered air ambulance service provider Air Medical by investment firm KKR from affiliates of Bain Capital and Brockway Moran & Partners.

China Takes to the Seas With Harbour Air

China's Zongshen Group acquired a 49% stake in Canadian seaplane operator Harbour Air for almost US$40m, with an agreement to buy the remaining stake within five years. Zongshen plans to export the seaplane commuter business to major cities throughout China.

China recently opened the door to low-altitude commercial flights, making seaplane travel a viable option for many coastal cities. Harbour Air describes itself as the world's largest seaplane airline, operating 60,000 flights a year. The company says that 75% of voting shares will remain in Canadian hands.

L-3 Boosts Pilot-Training Presence

L-3 Communications solidified its position in the increasingly competitive aircraft simulator and pilot training market in Q2 with its acquisition of UK-based training company CTC Aviation Group for £143m (US$220m).

The company will be known as L-3 CTC following the acquisition. The addition of CTC expands L-3's Commercial Aviation Training business, which also includes flight-training and simulation arm L-3 Link UK. L-3 Link UK and L-3 CTC will retain their individual brands.

L-3 describes CTC as a high-margin business with expected sales for the years ending December 31, 2015 and 2016 of US$86m and US$95m, respectively. The flight training and simulator market has become increasingly crowded over the last several years. A number of providers are vying for their share of a market seen as having significant growth potential as airlines around the world seek to train enough pilots to operate their rapidly-expanding growing aircraft fleets.

Travel Technology Deals Keep Momentum

Travel technology provider Sabre Corporation remained in the headlines in Q2, but this time as a buyer rather than a seller. In the previous quarter, Sabre sold its Travelocity division to online travel agency giant Expedia for US$280m in cash, and its Lastminute.com unit to Bravofly Rumbo Group for US$120m.

But the US$400m raised through these transactions did not stay in Sabre's pockets for long. In May the firm announced that it had entered an agreement to acquire the rest of Asia-Pacific global distribution system Abacus International for US$411m.

Airlines and Private Equity

Alvest was not the only airport ground support business divested by LBO France in Q2. The private equity firm also sold air cargo and ground handling company Worldwide Flight Services (WFS) to Platinum Equity for US$335m. LBO France had acquired WFS in 2006 from French construction group Vinci. WFS has a presence at over 140 airports and serves 300 airlines globally.

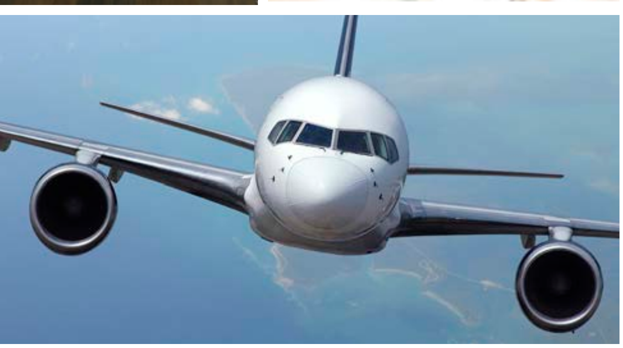
Key Takeaways

- The Portuguese Government finally sold off 61% of flag carrier TAP Portugal for US$390m
- United Airlines acquired a 5% stake in Brazil's Azul for US$100m, and also made a US$30m equity investment in alternative fuels company Fulcrum BioEnergy
- China's Zongshen Group acquired 49% of Canadian seaplane operator Harbour Air for US$40m
- L-3 acquired pilot training firm CTC Aviation for US$220m
- Sabre Corporation kept momentum going in the travel technology arena with its US$411m purchase of the remainder of Abacus International

Q2 2015 Highlighted Airlines Transactions

Announced Date	Target Company	Bidder Company	Deal Value US$(m)
4/13/2015	Tianjin Airlines	Hainan Airlines	3,860
6/19/2015	Xiamen Airlines	Xiamen C&D Corporation	359
4/27/2015	Worldwide Flight Services	Platinum Equity	335
4/22/2015	Skymark	Integral Corp+ ANA Holdings	151
6/26/2015	Azul Brazilian Airlines	United	100
6/9/2015	Aer Lingus	IAG	76
4/13/2015	Harbour Air	Zongshen Group	40
6/30/2015	Fulcrum BioEnergy, Inc	United	30
4/20/2015	Zest Airways	AirAsia Philippines	16
6/24/2015	Panima	Servair	14
6/22/2015	Blue Dart Aviation	Blue Dart Express	8
4/17/2015	Proffice aviation division	OSM Group	6




Aerospace

Engine Alliances

The second quarter saw the signing of two joint venture agreements between aircraft engine original equipment manufacturers (OEMs) and specialist suppliers, to develop next-generation engine technology.

Rolls-Royce joined forces with Germany's Liebherr-Aerospace to develop the power gearbox for the UK-based manufacturer's proposed UltraFan engine. The high-bypass turbofan is being developed to power aircraft of the future. Under the 50/50 joint venture, the components will initially be produced in Germany at Liebherr-Aerospace's Friedrichshafen and Biberach an der Riss facilities.

Meanwhile, GE Aviation and aerospace control system solutions provider Woodward Inc announced a 50/50 joint venture to develop fuel systems for the former's large commercial aircraft engine lines. Woodward will be the preferred supplier to the joint venture, which will design, develop, source, supply and service the fuel system for the GE90, GEnx, GE9X engines, as well as for all future large commercial engines developed by GE Aviation.

Under the terms of the agreement, which is expected to close at the end of the year, Woodward will receive US$250m in cash. GE Aviation says the joint venture is in line with its strategy to ensure a stable supply chain as production volume continues to increase. GE's large commercial engine production rates have more than doubled in the last five years.

TransDigm Spending Spree Continues

Hot on the heels of its Q1 purchase of Telair Cargo Group from aerospace and defense company AAR for US$725m, TransDigm Group agreed to acquire Pexco Aerospace from private equity firm Odyssey Investment Partners for US$496m in Q2.

TransDigm produces highly-engineered components for use on commercial and military aircraft, while Pexco manufactures extruded plastic interior parts for the aerospace industry. TransDigm has a firm eye on Pexco's growing aftermarket business, which today represents 35% of its revenue. "We expect that percentage to grow to close to 60% over the next five years as the Boeing 787 and Boeing Sky Interior of [the] 737 become and increasing share of the installed fleet," TransDigm chairman and chief executive W. Nicholas Howley said on announcing the acquisition in April.

This acquisition is the latest in a string of transactions which have seen TransDigm investing around US$1.3bn since the beginning of 2015. The company made another acquisition on the last day of Q1, in the form of Germany's Franke Aquarotter, which it bought for US$75m in cash. The German firm, which will now be called Adams Rite Aerospace, manufactures proprietary faucets and related products for commercial aircraft such as the Airbus A320, A330 and A380. Like Pexco, it too has a growing aftermarket business.

Private Equity Has Active Quarter

Private equity firms were involved in more than US$1.3bn worth of M&A activity in the aerospace sector in the second quarter. This included the US$496m TransDigm-Pexco deal outlined above, which saw private equity firm Odyssey Investment Partners offloading the aerospace plastics company less than three years after acquiring it.

The second quarter also saw LBO France agree to sell airport ground support equipment company Alvest to fellow French private equity firm Sagard for US$300m. As the new owner, Sagard aims to expand Alvest's presence in emerging markets, increase penetration of the military equipment segment and invest heavily in research and development.

Another private equity acquisition in the aerospace sector saw Veritas Capital purchase US-based aircraft maintenance, repair and overhaul provider StandardAero from Dubai Aerospace Enterprise (DAE) for an undisclosed amount.

The sale leaves DAE without any overseas subsidiaries. The company says it will now focus on its home market, with plans to "aggressively"

expand its aircraft leasing unit, DAE Capital. DAE added StandardAero to its portfolio in 2007.

Meanwhile, in a private equity exit in Q2, Greenbriar Equity sold Align Aerospace to China's AVIC International. California-based Align distributes fasteners to aerospace original equipment manufacturers. AVIC chairman Wu Guangquan says the company plans to "grow Align's relevance with its current customers in parallel with expanding the business globally, especially in the China market."

Another private equity deal saw AE Industrial Partners (AEI) acquire Kellstrom Commercial Aerospace from Inverness Management for an undisclosed sum. Kellstrom provides aftermarket parts, repairs, logistics and supply chain management solutions to the aerospace industry.

On announcing the deal, Kellstrom chief operating officer Oscar E. Torres described the acquisition as "particularly timely", with strong demand expected in the aerospace aftermarket and MRO segment, "driven by increased consumption of aftermarket parts and the growing installed base of aircraft."

KuangChi Science Puts Faith in the Sun

Hong Kong-based Kuangchi Science Limited made good on its Q4 promise to invest in Canadian hybrid cargo aircraft manufacturer Solar Ship. The Chinese company signed a letter of intent in the fourth quarter to acquire up to 54.42% of Solar Ship. In Q2, KuangChi agreed to purchase a 32.58% shareholding in the Toronto-based firm for C$17m (US$14m), with an option to increase this to 54.42% in October 2016 for an additional C$25m.

Solar Ship is developing an aircraft that flies using solar electric power, aerodynamic lift and buoyant gas, which KuangChi is keen to market in mainland China and Hong Kong.

Key Takeaways

- Rolls-Royce and GE Aviation both entered into joint venture deals to support development of future engines, the former with Liebherr-Aerospace and the latter with Woodward Inc
- TransDigm Group agreed to acquire Pexco Aerospace from private equity firm Odyssey Investment Partners for US$496m
- Private equity firms were involved in more than US$1.3bn worth of aerospace M&A transactions in Q2
- Greenbriar Equity sold Align Aerospace to China's AVIC International

Q2 2015 Highlighted Aerospace Transactions

Announced Date	Target Company	Bidder Company	Deal Value US$(m)
5/1/2015	Pexco	TransDigm	496
6/1/2015	Zodiac Aerospace	Fonds Strategique de Participations (FSP)	382
4/21/2015	Alvest	Sagard	300
5/20/2015		GE Aviation, Woodward*	250
5/28/2015	Shimtech Industries	Inflexion, Auction Industries	217
5/24/2015	Zhihui Haipai, Jiangsu Jiecheng	Aerospace Communications Holdings	202
5/8/2015	Global Tubes	AMETEK	200
6/18/2015	Elbe Flugzeugwerke	ST Aerospace	111
5/8/2015	TRaC Global	Element Materials Technology	70
5/11/2015	Xi'an Jiaye Aviation Technology	Anhui Shenjian New Materials	69
5/12/2015	Chengdu Dekun Aviation Equipment	Chengdu Leejun Industrial	60
6/8/2015	Cognex (Surface Inspection Systems Division)	AMETEK	60
4/14/2015	Hunter Technology	Sparton	55
4/1/2015	Hartzell Aerospace	ITT Corp	53
5/15/2015	Euravia Engineering & Supply	Magellan Aerospace	47
6/19/2015	Rafaut	ACE Management	34
6/17/2015		Hindustan Aeronautics, Turbomeca*	31
4/10/2015	2d3	Boeing	25
4/8/2015	Aero-com IT	China TransInfo Technology	14
6/9/2015	Tecnickrome Aeronautique	Sumitomo Precision Products	12
6/19/2015	Spherea	Puissance Plus	12
5/15/2015	Cauquil	Simair	10
4/1/2015	Align Aerospace	AVIC International	N/A
4/6/2015	PHS/MWA Aviation Services	Wencor Group	N/A
4/13/2015	Kellstrom	AE Industrial Partners, LLC	N/A
6/10/2015		Rolls-Royce, Leibherr-Aerospace*	N/A

* Joint venture

Airports

Airport Deal Momentum

Spanish construction group Abertis exited the airport sector in the second quarter after divesting its two remaining interests in the industry, while a sale was also apparent in China's airport advertising space.

Abertis Exits the Airport Business

Spanish construction group Abertis exited the airport sector in the second quarter with the sale of its interests in Jamaica's Montego Bay Airport and Santiago Airport in Chile. Abertis reached an agreement in April with Mexico's Grupo Aeroportuario del Pacifico (GAP) to sell its entire stake in Desarrollo de Concesiones Aeroportuarios (DCA) for a total of €177m (US$192m).

DCA owns a 74.5% stake in Montego Bay concessionary MBJ and a 14.77% stake in SCL, which currently operates Santiago Airport. Santiago was the subject of Q1's biggest airport deal, when the Nuevo Pudahuel consortium won a 20-year concession to operate and develop the airport from October 2015.

With the disposal of these stakes, Abertis will no longer hold any airport assets in its portfolio. Its exit from the airport business began in 2013 with the sale of Cardiff and Belfast airports in the UK, and Stockholm Skavsta in Sweden, as well as well as an airport terminal concession at Orlando Sanford Airport in the USA and a stake in Luton Airport in the UK. In December 2014, Abertis disposed of its stake in GAP – the company to which it has now sold its DCA stake.

Closure also came to an Asia-Pacific airport deal covered in the Q1 edition of this report. In the second quarter, Malaysia Airports completed the sale of its 10% stake in Delhi International Airport to Indian operator GMR Airports for just shy of US$80m. GMR's shareholding in Delhi Airport stands at 64%, following this transaction.

China Sells Stake in Airport Advertising Group

China's AirMedia Group sold 75% of its airport advertizing unit, AM Advertising, to Chinese private equity firm Longde Wenchuang Fund for US$342m. AM Advertising provides billboard and digital television advertising inside and outside airports across China.

AirMedia Group divested the unit in line with its strategy to focus on building up its in-flight Wi-Fi business. The company has obtained concession rights to install and operate Wi-Fi systems on aircraft operated by Hainan Airlines Group.

"Another deal on the airport advertising side saw Thailand's VGI Global Media agree to a acquire a 30% stake in LED advance, which manages various airport advertising platforms."

Another deal on the airport advertising side saw Thailand's VGI Global Media agree to acquire up to a 30% stake in LED Advance, which manages various airport advertising platforms. These include 32 LED screens at 13 airports throughout Thailand.

VGI says it will inject the necessary financial resources to raise LED Advance's capital to finance a plan to expand its out-of-home media solution network, particularly in the aviation sector.

New Airport Developments for Russia

Far East Region Development Fund, through a joint venture with Asian partners, agreed in the second quarter to build a new passenger terminal at Khabarovsk Airport in eastern Russia. The development program aims to more than double the airport's capacity to 4.7 million passengers a year from the current two million.

The project was initiated by South Korea's Incheon International Airport Corporation, Daewoo Engineering and Assmann Beraten + Plannen. The Fund describes Khabarovsk as "the administrative capital of the Far East" and says it "vitally requires a world-standard, modern airport." It will enter into the project – the value of which has not been disclosed – under the terms of guaranteed repayment, with its required rate of return set "below the current market level."

Elsewhere in Russia, Turkey's Limak Construction and local partner Marashtroy won a US238m contract to build a new airport at Rostov, in preparation for the 2018 FIFA World Cup. The new airport will initially have capacity for five million passengers a year, with the potential to expand to eight million in the future.

The airport's design by UK-based Twelve Architects was approved in late 2014. The project is being funded by Airports of Regions, part of Russia's Renova Group.

On the Horizon

While the 2nd quarter have been relatively quiet in terms of airport transactions closing there has been quite a lot of momentum toward new deals that will occur in the next 12 months:

- Brazil announced the selection of 4 new airports to be concessioned and has opened the process to prepare for tenders
- In the Kansai airport privatization, the Japanese government has selected the– Orix/Vinci consortium to progress to the second round and try to negotiate a deal
- The Limak consortium who won the new Istanbul airport project has announced selection of Incheon/Copenhagen Airports to be its operator for the new airport
- The Philippines government has a shortlist to bid on the privatization of 5 regional airports – in two bid packages
- Denver International Airport has shortlisted 4 bidding group for the redevelopment and operation of the "Great Hall" project
- With the help of the ICF, St Lucia has relaunched the tender for Hewanorra International Airport

Key Takeaways

- China's AirMedia Group stepped away from the airport advertising business to focus on its in-flight Wi-Fi activities
- Russia had an active quarter with an agreement for a new passenger terminal at Khabarovsk, and the awarding of a US$238m contract to Turkey's Limak Construction for a new airport at Rostov
- Spain's Abertis ended its involvement in airports with the sale of its interests in Jamaica and Chile to Mexico's GAP for US$192m

Q2 2015 Highlighted Airports Transactions

	Announced Date	Target Company	Bidder Company	Deal Value US$(m)
	6/15/2015	AirMedia Group (Advertising group)	Longde Wenchuang Fund	342
	6/21/2015	Rostov Airport	Limak, Marashstroy	238
*	4/17/2015	Montego Bay and Santiago de Chile airports	Grupo Aeroportuario del Pacifico (GAP)	191
	5/25/2015	Delhi International Airport	GMR Airports	80
	6/21/2015	Era Group	Krasnoyarsk GES	74
	4/24/2015	Lubeck Airport	China PR Group	28
	4/8/2015	AirMedia Group (Advertising group)	Shenzhen Liantronics	24
	5/11/2015	LED Advance	VGI Global Media	5
	4/3/2015	TWC Aviation	Landmark Aviation	N/A
	4/1/2015	Khabarovsk Airport	Far East Region Development Fund / Asian partners	N/A
	4/8/2015	Era FBO	Landmark Aviation	N/A
	4/29/2015	Gestair FBO	Sky Valet	N/A

* Completed with the support of ICF International

Quarterly Spotlights

How Changes in Global Capitalism Are Shaping Business Aircraft Demand – Kevin Michaels

It is conventional wisdom that corporate profits are a leading indicator of business aircraft demand. So here's a conundrum: corporate profits have more than doubled since the depths of the Great Recession in 2008, yet light and medium business jet sales are less than half of pre-recession levels. During the same timeframe, large business jet sales powered ahead and are 25% greater than pre-recession levels. Why the bifurcation?

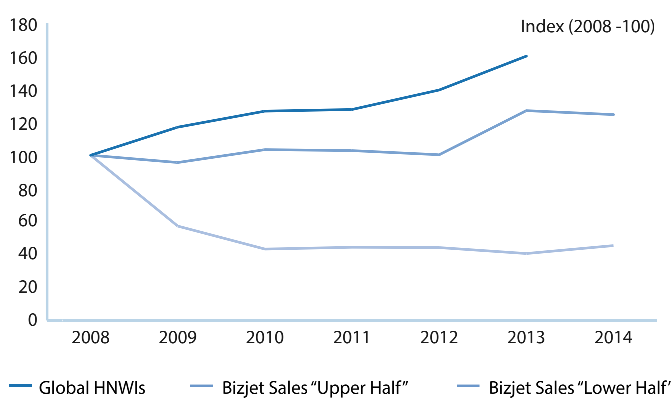
One answer to this conundrum may lie in the recent research by French Economist Thomas Piketty. In his controversial best seller, *Capital in the Twenty-first Century*, he argues that the rate of return on capital is persistently greater than the rate of economic growth (R>G). Given the fact that the super-wealthy earn the majority of their income from capital and the non-wealthy earn most of their income from wages, which is generally linked to economic growth, wealth inequality has grown, and will increase in the future. Wealth inequality is observed in every geographic region, and has become the major political issue of the 2010s in Europe and North America. In their recent *World Wealth Report*, Capgemini and RBC Wealth Management concluded that the investable wealth of High Net Wealth Individuals (HNWIs) grew by nearly 14% in 2013 to reach a staggering $56.6 trillion. Since 2008, the number of HNWIs has increased 60% globally.

The majority of large business jet sales are to high net wealth individuals (HNWI), either through direct sales, or indirectly through fleet operators or shell corporations. While corporate flight departments and governments also buy large cabin aircraft, my sense is that HNWIs underpin 60% or more of sales for this aircraft class. Industry guru Richard Aboulafia notes that the "upper half" of business jet sales – which includes Global 5000, Falcon 2000, G450 and larger aircraft – reached $15.7 Billion in 2014, up 25% from 2008. Large business jet sales powered through the Great Recession with barely a hiccup, and today comprise three-quarters of all business aircraft sales. While the introduction of sexy new models like the G650 and Falcon 7X undoubtedly stimulated demand, it's clear that the rise of the key customer group - HNWIs - underpinned steady market growth.

What a contrast with smaller business jets. During the same timeframe, sales of the "Lower Half" fell from $12.15 Billion to $5.5 Billion. Customers for these aircraft include corporate flight departments, owner-operators, and fleet operators. Business jets are viewed as productivity tools, rather than status symbols. They are often part of a firm's capital expenditure (CAPEX) budget, and must compete for investment dollars versus other potential investments like new plants and machinery.

Despite the fact that corporate profits have doubled since the abyss of 2008 and are 33% higher than pre-recession levels, capital expenditure budgets are stuck in the mud. There are many potential explanations for this, including weakness in Europe, the exit of Hawker Beechcraft, and comparisons to a bubble year (2008), but I believe a critical and overlooked factor is that corporate profits are used increasingly for stock buybacks and dividends rather than capital expenditures. In a recent *Harvard Business Review* article, Will Lazanick demonstrated that over the last decade, a staggering 54% of profits for the publicly-traded S&P500 firms were used to buy back their own stock, and dividends absorbed another 37% of their

Value of Global Business Jet Sales and Number of HNWIs



Source: TealGroup, Capgemini & RBCWealth Management
Aircraft index based on value of business jet sales

earnings. In other words, just 9% of corporate earnings was available for CAPEX or employee wage increases.

Going back to Thomas Piketty, and his equation R>G. It's clear that in 2015, the lion's share of corporate profits are going to major shareholders and HNWIs – the very customers for large cabin aircraft. And escalating returns on capital (R) is underpinning much of the demand for this buying group. Meanwhile, demand for smaller aircraft is correlated with CAPEX, which is receiving a diminishing portion of economic growth, or "G," at a time when economic growth has stagnated.

If this hypothesis is correct, it means that the dramatic shift to large business jets (and corresponding demise in smaller jets) is structural in nature and not likely to change in the near future. And the chief culprit for this phenomenon is the changing nature of global capitalism itself. Call it "Piketty's Revenge."

Globalization 2.0: Is cheap energy the new cheap labor? – Jonathan Berger

"Drill, baby, drill!" At a time when U.S. gasoline prices topped $4 per gallon and the American electorate was facing the biggest financial crisis since the Great Depression, that spirited slogan chanted during the 2008 Republican National Convention was aimed at creating a wedge issue during the Presidential campaign; more domestic drilling and less regulation would reduce dependence on foreign oil and boost the economy.

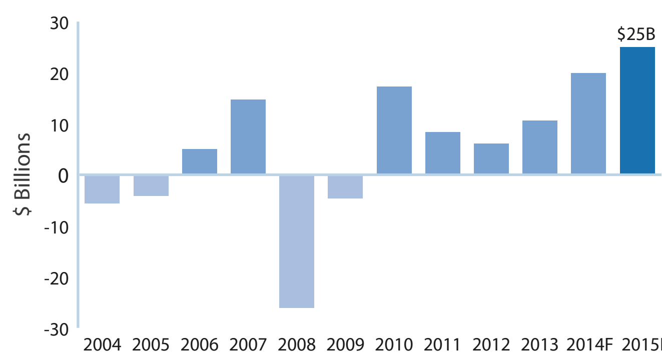
Fast forward seven short years, and the changes in U.S. energy production have been nothing short of revolutionary. As the Energy Information Administration (EIA) recently noted, U.S. oil production increased at its fastest pace in more than 100 years in 2014, and is pumping more than 9 million barrels per day. The U.S recently surpassed Russia as the world's largest natural gas producer, accounting for roughly one-fifth of global production in 2014.

So what caused this American energy revolution? The magic elixir was twofold: first and most importantly, the development of breakthrough technologies such as horizontal drilling and hydraulic fracturing (aka fracking); second, good old American entrepreneurship, risk-taking, and private sector capital deployment. While I'm sure the Obama administration would like to take credit, all they had to do was get out of the way – and they were more than happy to oblige.

The global financial and geopolitical ramifications of America's energy revolution cannot be overstated. In fact, one can argue that we are now entering an entirely new economic cycle. Whereas Globalization 1.0 can be characterized as labor cost arbitrage that induced many industries to shift both manufacturing and aftermarket services to low-cost labor regions, Globalization 2.0 could bring tectonic shifts in where companies choose to locate. This time, however, energy cost arbitrage will be the primary driver. While the U.S. isn't immune to an oil shock courtesy of continued unrest in the Middle East, the U.S. is far better prepared for the effects of a disruption than at any other time in the past few decades.

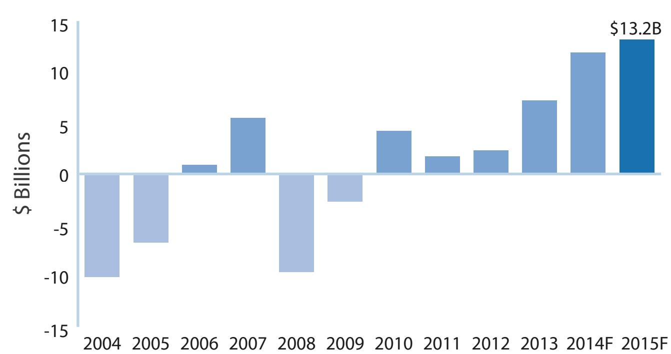
What are the consequences of this new economical world order? For starters, we already see energy-intensive businesses such as aviation, petro-chemical, aluminum, and steel are reaping the benefits. The fuel bill for an airline is typically in the range of 30%-40% of total costs. Not surprisingly, with jet fuel prices down

Global Airline Profitability



Source: IATA Central Forecast Dec 2014

North American Airline Profitability



Source: IATA Central Forecast Dec 2014

over 40% in 2015, North American airlines are reporting record quarterly earnings.

And it's not only aircraft operators that are experiencing record profits. Thanks to low-interest rates and the staggering demand growth for air travel in the emerging markets, aircraft OEM order books are at all-time highs. This bodes well not only for the large airframe manufacturers, but also for the plethora of tier 1 and 2 aerostructure, engine, systems, and component suppliers.

As for geopolitics, those nations whose economies are dependent on high energy prices will suffer most. Should oil and gas prices remain depressed, expect to see further strife in countries such as Russia and Venezuela. On a positive note, cheap energy has provided the U.S. with the additional leverage required to forge a framework agreement to limit potential nuclear capabilities in Iran and has laid the groundwork for improved relations with Cuba now that Venezuela can no longer afford to subsidize the Castro regime.

Globalization 1.0

For the past two decades, the driving force behind globalization was the gap in the price of labor between the developed world and the emerging markets. Further enabling this labor cost arbitrage were several significant events: the end of the Cold War, emergence of the internet, proliferation of free trade agreements such as NAFTA, advanced global communication systems, and China's economic boom.

The outcome of Globalization 1.0 was the strategic dismantling of traditional supply chain structures for many large corporations. Labor intensive jobs were outsourced to the lowest cost provider. As Globalization 1.0 played out over the past two decades, specific aviation and aerospace industry clusters developed. For example, India specialized in software testing and development, Russia in design engineering, Mexico in manufacturing, and China created its own aircraft OEM (COMAC) to compete with the mighty Boeing and Airbus duopoly.

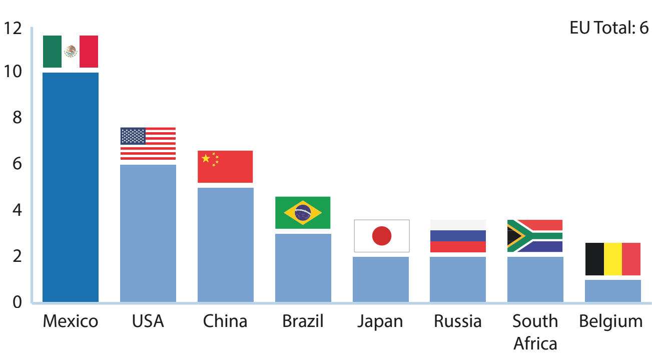
For the last 15 years, my consulting firm, ICF International, has been closely monitoring aerospace industry investments. Clearly, if one follows the money trail, Globalization 1.0 was a boon for emerging market economies.

Globalization 2.0

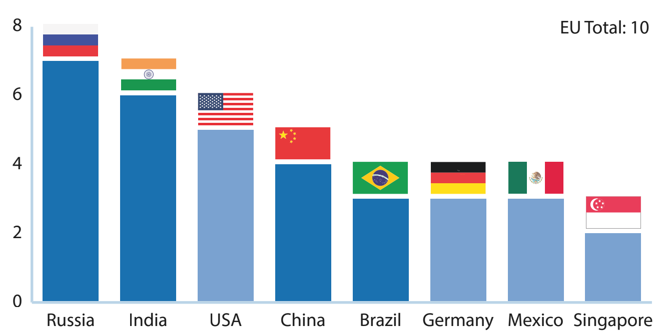
However, over time, emerging markets, well…emerge. The comparative labor advantage leveraged so effectively by the "BRIC" nations (i.e. Brazil, Russia, India, and China) has been slowly eroding. Between 2006 and 2011, Asian wages rose 5.7% per year, compared with 0.4% in the developed economies. Moreover, commercial aircraft maintenance labor rates in the U.S. and Asia continue to converge. Compounding this impact, productivity continues to grow rapidly in the developed world as companies deploy new technologies in automation, robotics, and additive manufacturing. This loss of competitive advantage has significantly changed the calculus for how and where capital is being deployed. In fact, the U.S. now enjoys a significant energy cost advantage over its two historic manufacturing competitors – Germany and Japan.

Historically, U.S. natural gas prices have tended to be lower than Germany's and Japan's, but the differential

Major Aerospace Manufacturing Investments*
2000 – 2003



Major Aerospace Engineering Investments*
2004 - 2007



Source: IATA Central Forecast Dec 2014
BRIC = Brazil, Russia, India, China
* Includes joint ventures and organic investments for over 180 OEMs and service providers; excludes acquisitions

has exploded in favor of the U.S. over the past few years – over 40% less than Germany and one-fourth of Japan's.

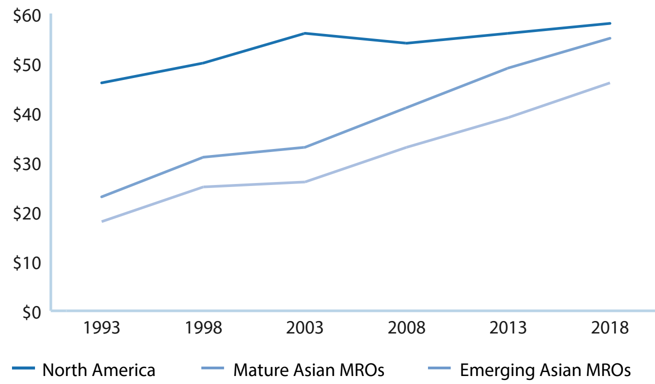
Not surprisingly, investments for energy-intensive products have begun to migrate to the U.S. For example, BASF, the German chemicals company, is said to be allocating a quarter of its $25 billion dollar investment budget over five years to the U.S. and has announced plans to build a $1.68 billion dollar propylene site on the Gulf Coast. Natural gas will provide not only the energy, but also the chemical raw materials. In addition, the Austrian steel company Voestalpine is building a $600 million facility in Texas. It will use natural gas to power its huge furnaces. And late last year, the aerospace aluminum giant Alcoa opened the world's largest aluminum-lithium plant in Lafayette, Indiana.

Consequently, the Southeastern U.S. has emerged as a magnet for aviation-related investments with the big three aircraft manufacturers opening new major final assembly facilities in Charleston (Boeing), Mobile (Airbus) and Florida (Embraer). As ICF International research indicates, the U.S. is clearly the current location of choice for aviation and aerospace capital deployment.

As with Globalization 1.0, there are of course numerous other factors at play helping to fuel Globalization 2.0 other than low energy costs, including state and local tax incentives and Right-to-Work laws that limit/prohibit union security agreements.

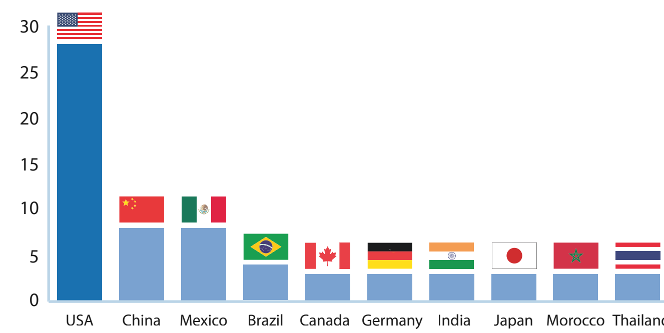
No one knows for sure how long energy costs will remain low. Given the recent constitutional amendment in Mexico to allow foreign investment in its painfully inefficient energy sector, as well as the possible lifting of sanctions in Iran, the potential for further over-supply of oil & gas is real. This portends very well for the commercial aviation sector whose business plans assume oil prices at approximately $100 per barrel. And for any energy-intensive business looking for the ideal location to set up shop, the U.S. is well positioned to be the primary beneficiary of Globalization 2.0. Perhaps cheap energy is indeed the new cheap labor.

Average Widebody Airframe Heavy Maintenance 3rd Party Labor Rates In North America vs. Asia
(USD per Man-Hour)



Source: ICF International

Major Aerospace Manufacturing Investments* 2012 - 2013



Source: ICF International
* Includes joint ventures and organic investments for over 180 OEMs and service providers; excludes acquisitions

About ICF

ICF's Aviation Consulting and Services business was founded as SH&E in 1963 and grew into one of the world's largest consulting firm specializing in aviation. In 2007, SH&E was acquired by ICF, and subsequently acquired the leading aerospace consultancy AeroStrategy in 2011.

Today, ICF's aviation professionals now operate from full-service offices in Ann Arbor, New York, Boston, London, Beijing, and Singapore. Our staff of approximately 100 professionals encompasses expertise in all disciplines of the industry, and the firm has provided consulting, strategic planning, and technical services to airlines, leasing companies, government agencies, airframe and engine manufacturers, corporate flight departments, heads-of-state flight departments, and financial institutions. ICF brings clients solutions through four specialized practices, which collaborate together and with clients to address business challenges: Aerospace & MRO, Aircraft, Airlines, and Airports.

In addition, ICF's aviation professionals provides expert buy-side and sell-side commercial and operational due diligence services to corporate clients, private equity firms, and other institutional investors with respect to investments across the entirety of the aviation ecosystem.

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