

Trustbusters Threaten Airlines' Ascent to Higher Profits

How do you make a small fortune in the airline industry? For some, the old joke, "start with a large one and wait," is merely trite. For industry investors, however, it is not funny. Having lost \$65 billion between 2001 and 2009, and making little in 2010-2012, the industry finally earned [\\$12 billion and \\$7.5 billion](#) back in 2013 and 2014. Looking at economic variables, 2015 and 2016 profits should continue to expand, unless, unexpectedly, passenger traffic slumps due to a nasty recession, or fuel prices spike. Looking further out, the skies are friendly. The FAA, along with major Asian and EU air traffic controllers, is modernizing air traffic control through the NextGen initiative. Replacing tools developed before man walked on the moon, 21st century technology will allow U.S. airlines to provide service to 50 percent more passengers while getting from gate to gate 11 percent faster and cheaper.

Uh-oh, Ice May Be Freezing on the Wings

But sunny skies for the industry suddenly became cloudy because of federal regulators. On June 30, 2015, the [Department of Justice](#) sent letters to United, American Airlines, Delta, and Southwest, asking for each company's internal documents discussing capacity expansion plans. DOJ's Anti-Trust Division smells a possible rat for these reasons:

- These four airlines generate 85 percent of all passenger miles in the U.S. according to [the U.S. Travel Association](#), making collusion possible.
- The CEOs of United (**UAL**), Delta (**DAL**), and American Airlines (**AAL**) all have announced publicly their companies would expand capacity by very little.
- These announcements are being made even though, historically, the number of empty airline seats is very low. Airlines filled [83.4 percent](#) of their seats in 2014, the highest number in decades.
- Furthermore, demand for air travel is expected to continuing growing at more than [2 percent per year](#), from 756 million to 1.1 billion passengers in the next 20 years, a 50 percent increase.
- Meanwhile, [ticket prices](#) have gone up since December 2014, despite plummeting aviation fuel prices.

To the Justice Department, it seems plausible that major airline CEOs' public "signaling" of future capacity plans is a bold and illegal effort to restrain future industry supply. Critics say there must be collusion because any competitive industry operating near full capacity, which anticipates even more business, and is enjoying historically high profit margins, would boost output. [Southwest \(LUV\)](#) might be the least vulnerable Justice Department anti-trust target, because the company has announced plans to expand by 7 or 8 percent.

It is not just the federal government that is taking legal steps. Last week, Wisconsin passengers filed suit, and will ask a federal judge to grant them class action status. Encouraged by the Justice Department's June 30 action, last month aggrieved passengers filed [similar lawsuits](#) in New York, Chicago, San Francisco, Dallas and Washington. If any judge grants class action status, the skies will get stormy. It may take a year or longer for legal risk to dissipate.

After the Court Fights, Investors Will Travel in First Class

Once it passes through anti-trust legal turbulence, the Federal Aviation Administration will help the airline industry as it finally implements its long-delayed NextGen air traffic modernization program. A lot is riding on NextGen. A [Deloitte](#) study (page 39) found that the net present value of "Tier 1 benefits" to the airlines of a global NextGen system is \$246 billion, and it appears that U.S. operators would capture at least a third of this. [Eno Consulting](#) finds (page 10) that NextGen will save the airlines \$1.45 billion annually. The [FAA](#) (page 12) is the most cautious, finding NextGen will boost the net present value of U.S. airlines by \$7 billion while passengers will benefit by \$34 billion. Clearly, NextGen is a material event for the U.S. airline industry, which, after rallying, has a market capitalization of approximately \$130 billion.

The FAA is also working with the EU in [harmonizing cockpit avionics and communication technologies](#). The compatible EU program, also known as *Sesar*, will help airlines cash in savings on both sides of the Atlantic.

How NextGen Will Help

If it works as planned, a modernized air traffic control system will shave several minutes overall off the average time planes burn fuel taxiing to runways, in flight, landing, or pulling up to the gates when the skies are clear. Consider this example of a flight from LaGuardia to Atlanta, which will save 19 minutes of expensive fuel burn, plus another \$751 in non-fuel costs:

Reduction in block time is modeled at the flight plan level

Flight	(sked. dept. 7:00pm EST)	(sked. arr. 9:45pm EST)	Time min	Fuel cost \$	Non-fuel cost \$	Total \$
Base case	LGA (dept. 7:00pm EST) ¹	ATL (arr. 9:37pm EST)	18 min 127 min 12 min	6,729	6,363	13,093
NextGen	LGA (dept. 7:07pm EST) ¹	ATL (arr. 9:25pm EST)	13 min 114 min 11 min	6,011	5,612	11,623
Savings:			19	718	751	1,469

11% OpEx reduction

NextGen will do this in several ways:

- A new communications system called [Data Comm](#) will speed jets from their departure gates to the runways. Instead of relying on two-way radio voice communication, air traffic controllers will send digital messages directly to cockpit displays, where pilots can instantly see them and confirm acceptance to move out into the take off queue. Initial flight paths also will be sent via text and confirmed.
- While in the air, satellites will communicate with onboard "ADS-B out" equipment, providing real time knowledge of the three dimensional GPS coordinates of all commercial traffic to air traffic control by [2020](#) , as mandated by the FAA. With improved positional accuracy, pilots will be free to take the shortest routes, with the best tailwinds, by flying higher or lower as they choose, to their destinations. This will replace flying on longer, mandatory "highways in the sky" despite headwinds, because current ground-based radar systems require them for safety. In the above example, this will shave 13 minutes off flying time. Further savings will occur when planes also have "ADS-B in," which will give pilots the direct ability to relay weather and traffic information directly to each other, giving pilots real-time access to important information.
- Currently, pilots must reduce their altitudes in steep "steps" as they approach their final destinations and landing strips. Under NextGen, they often will throttle back fuel and glide in.
- Upon landing, air traffic controllers and pilots will digitally communicate through Data Comm to get aircraft to gates more quickly.

A demonstration of NextGen's impact on improved routing is available at [WSJ](#) .

Clear Enough, We are Good to Go

NextGen will be even more important during bad weather. As annoying as long waits to take off or to taxi to an arrival gate may be, the FAA finds that bad weather causes [70 percent](#) of all airline delays. NextGen is expected to cut these costly weather-driven delays by a stunning [two-thirds](#) .

Understandably, air traffic controllers will not release any plane into the air during inclement weather until they have very high confidence that there is a safe path for it to land at its intended location. They base their judgments on experience, after synthesizing the inputs from three different legacy weather systems, [Integrated Terminal Weather System \(ITWS\)](#), [Weather and Radar Processor \(WARP\)](#), and [Corridor Integrated Weather Systems \(CIWS\)](#). Until a judgment is made, the plane affected stays on the ground, and once in the air, it is required to fly at a very safe distance from a storm, typically by a large margin around its unpredictable path. This lack of predictability means a large storm front can produce a cascade of delays for hundreds of planes that may remain grounded for hours, compounded by longer flight times once airborne. Weather-driven take off delays, most commonly in major hubs such

as New York City, Atlanta, Chicago, and San Francisco, then ripple throughout the system, leading to blown schedules in much of the country by day's end.

Under NextGen, this will get much better. In some cases, switching from ground-based radars to NextGen satellite-based technology will make it possible to see clear skies above the storms in the flight paths of aircraft awaiting takeoff, enabling air traffic controllers to dispatch numerous aircraft that then will fly safely high above them.

More commonly, improved computer processing of data generated by the ITWS, WARP, and CIWS weather information systems will produce faster and more detailed analyses of storm systems. Overall, air traffic controller "storm visibility" will grow from 2 hours to 8 hours. Rather than being grounded for hours, flights will take off and then safely fly around storms, with much less loss of time. Even in-flight detours will be dynamic. As the paths of storms shift, computer-generated flight paths also will shift, with such shifts safely taking place as often as every 5 minutes.

What Will Congress Do?

There is, and has been for several years, bipartisan support for developing NextGen in Congress. It will continue when Congress approves reauthorization of the Federal Aviation Administration Act, probably a short-term extension this September, with perhaps several more temporizing bills in store thereafter. This uncertainty may provide the FAA with incentives to speed up NextGen implementation. One possible incentive: the Chairman of House Transportation Chairman Bill Shuster (R-PA), plans to [introduce legislation](#) that would spin out air traffic control, a 6,000 person division within the FAA, into a private, non-profit organization.

Chairman Shuster points out that fifty nations have separated and privatized their air traffic control systems from government agencies that also oversee aircraft and pilot safety. Primarily, they use non-profit organizations which collect landing fees from airlines to fund their operations. It is a more stable financing mechanism than one dependent on the funding whims of Congress and the White House.

Over a two-decade planning horizon, half of which is over, Congress expects to spend about \$20 billion on NextGen. It has already spent \$6 billion. NextGen funding is included in the annual appropriation amount given each year to the FAA. This year will be no different. However, FAA funding itself is caught up in the bigger fight between President Obama and the Congress over how much should be spent next fiscal year on guns and butter. Obama wants to spend \$35 billion more on each than will happen under "sequester rules." He has enlisted Senate Democrats who have threatened to filibuster any major funding bill that does not meet Obama's and their higher domestic funding demands. It is safe to say that once the drama is over, the FAA, and NextGen, will receive what they need to continue moving forward. In the unlikely event that the budget hawks win over the next ten years, NextGen perhaps would be delayed by a year. Bureaucratic delay is a more potent threat. However, this is no way to run an airline.

NextGen's Greatest Impact on Individual Airlines' Bottom Lines.

The improvements that NextGen is introducing between now and 2020 have yet to be factored into Wall Street's assessments. For those airlines with higher operating costs and longer delays, NextGen promises additional relief, beyond current lower jet fuel prices. Using data from [MIT](#) and the [Department of Transportation](#), CAN performed a sensitivity analysis concluding that while all airlines will benefit from operational savings due to reduced weather delays, Virgin America (VA), Southwest (LUV), Jet Blue (BLU), and Delta (DAL) could see significant improvements to operating profits on the order of 8% to 19%.

Operations FY 2014 (\$Millions)	Delta	Southwest	JetBlue	Virgin America
Operating Minutes	167,424,840	150,073,440	50,586,120	12,536,160
Total Direct Operating Expenses	\$18,942	\$9,864	\$3,426	\$875
Jet Fuel	\$11,653	\$5,082	\$1,858	\$457
Other Direct Expenses	\$7,289	\$4,782	\$1,568	\$418
Direct Operating Costs / Minute	\$113	\$66	\$68	\$70
Delays in Minutes	7,845,330	17,066,814	3,508,340	667,475
Cost of All Delays*	\$888	\$1,122	\$238	\$47
NextGen Impact on Weather Delays	Delta	Southwest	JetBlue	Virgin America
Delays Caused by Weather in 2014	31%	25%	35%	61%
Weather Delays in Minutes	2,432,052	4,282,064	1,217,394	406,426
NextGen Eliminates 66% of Weather Delays	1,605,155	2,826,162	803,480	268,241
All Delays post-NextGen (minutes)	6,240,175	14,240,652	2,704,860	399,234
Cost of All Delays after NextGen**	\$706	\$936	\$183	\$279
Annual Savings Due to NextGen	\$182	\$186	\$54	\$19
NextGen Impact on Operating Income	Delta	Southwest	JetBlue	Virgin America
Revenues	\$40,362	\$18,605	\$5,817	\$1,490
Operating Income	\$2,206	\$2,225	\$515	\$96
Operating Margin	5.5%	12.0%	8.9%	6.5%
Next Gen Operating Income	\$2,388	\$2,411	\$5,694	\$115
Operating Margins after NextGen	5.9%	13.0%	9.8%	7.7%
Improvement in Operating Income	8%	8%	11%	19%

**(Direct Operating Costs / Minute) x (Delays in Minutes)*

***(Direct Operating Costs / Minute) x (All Delays Post-NextGen)*

Airline stocks outperformed the S&P500 index from 2012 to 2014, up 21.5%, 44.8% and 61.3%, respectively, in the past 3 years. Investors have applauded consolidation and restructuring of the industry, and more recently, the sharp decline in jet fuel prices. Airlines' performance during the next recession will prove whether they are able to sustain profitability through an entire business cycle. The year-to-date performance of the group, down 15.7%, perhaps reveals that investors believe the good times are mostly over, as well as the political risks.

CAN estimates that UPS (**UPS**) and FedEx (**FDX**), with their large fleets and important hubs at Memphis and Louisville, will also benefit from NextGen, with incremental operating earnings of 6 percent to 8 percent.

For further analysis or information, contact Capitol Analysts Network, Inc. at:

2230 Decatur Place, N.W.
Washington, D.C. 20008
Email: capnet@xecu.net

Phone: 202-223-4014

website: www.capitolanalysts.com

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