Rolls-Royce® (RR/ LN): MIND THE GAP

One Page Summary **Thursday, June 25, 2015**

In A Nutshell:
As a new CEO with a great track record assumes the cockpit in July, Rolls Royce represents a very compelling investment, particularly for a new CEO that can craft a new flight path for restoring the company's competitiveness back to a level compatible with its perceived brand awareness. The aerospace division of Rolls, which represents roughly two thirds of its revenue, is under-earning its main competitor, GE Aviation, by over half. Rolls Royce's strategy of using outsourced third parties for 75% of the value of the jet engine has put the company at a significant disadvantage versus its American competitor. Yet, we view this entire margin gap as a very fixable situation. We have sought to lay out a playbook for the company to use that will allow it to profitably reap the benefits of significant investments it has made in the most fuel efficient engines in the world. The company's installed base of wide-body engines will be growing at twice the rate of the fastest-growing segment of the commercial aerospace industry, which enjoys a very deep order book as the current fleet of aircraft is at its oldest age ever. Order books for key twin aisle aircraft stretch well into the 2020s, and Rolls exclusively powers the most efficient planes. We believe if Warren East can pull inefficiencies out of Rolls' supply chain, he can add more than the entire market capitalization in incremental value. Thankfully, East will have a daily reminder on his commute to "Mind the Gap."

Valuation Considerations

All figures in millions, except per share amounts

Share Price	**£9.04**		**2014**	**Multiple**
x Shares	1,839	Sales	£13,736	1.15x
= Market Cap	16,455	EBITDA	£2,281	6.93x
- Net Cash	654	EBIT	£1,681	9.40x
= Enterprise Value (EV)	15,801	EPS	£0.65	13.38x

Entering a Growth Phase

Better Managed	**2016**	**2017**	**2018**	**2019**
Revenue	14,715	16,086	17,193	18,209
EBIT	1,776	2,172	2,603	3,040
Margins	12.3%	13.8%	15.4%	16.7%
Fair Value	£15.42	£20.02	£25.42	£31.01

Key Investment Highlights:

1) Great underlying business fundamentals being masked by company-specific factors
2) Industry-leading product in the wide-body segment
3) Very significant barriers to entry
4) Favorable macroeconomic tailwinds in the industry
5) New CEO with favorable track-record
6) Low hanging fruit in streamlining the supply chain
7) Stock buyback program ongoing ahead of profitability ramp

Key Value Levers:

- ☑ **Margins** have a path to more than doubling in the medium term
- ☑ Apathetic **valuation**, which should appreciate with traction on margins
- ☑ Significant purchasing and manufacturing **synergies** in the supply chain
- ☑ Accelerated **Buyback**

Suggestivist Flight Path We would kindly suggest the following:

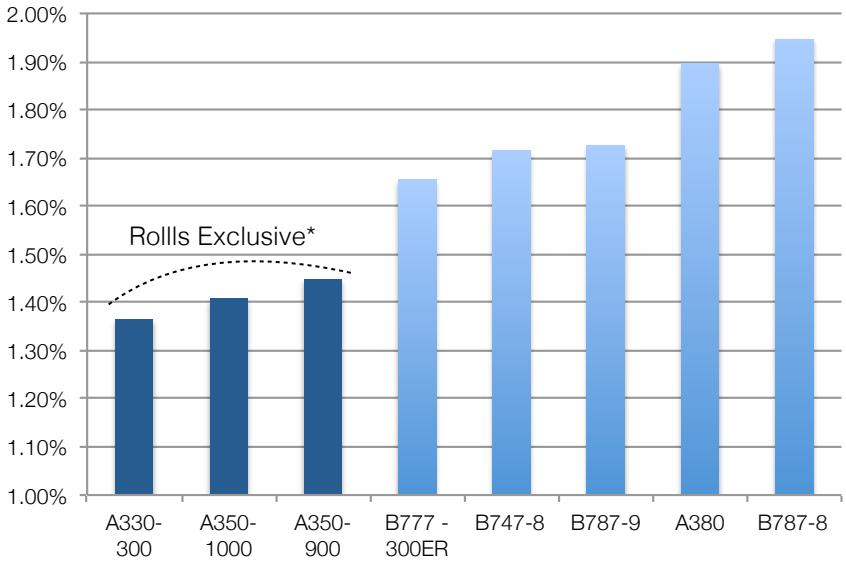
1) Vertical integration: in-source key component manufacturing capabilities, and 3D printing capacity
2) Acquire suppliers where Rolls has significant concentration and purchasing synergy opportunities
3) Eliminate sole-source suppliers and re-introduce more price competition in the value chain
4) Hiring freeze, mild overhead pruning; duplicative engineering reduced through vertical integration
5) Robust stock repurchases while clean balance sheet and apathetic valuation supportive

Full Report

Rolls Royce ("Rolls," symbol: RR/ LN) is a high-quality manufacturer or engines, primarily for aircraft, but it also has a division that focuses on marine and terrestrial applications (the source of a recent controversial acquisition). Roughly two-thirds of the company's revenues are generated by commercial and military aircraft engines, and these divisions are not only the most valuable parts of the business, but have the most robust growth trajectory, and also offer the largest opportunity for Rolls to improve its profitability. This will, in turn, lift the value investors are willing to pay for this business. On July 2, 2015, the company will replace its under-performing CEO with the former CEO of ARM Holdings, Warren East. We believe the timing is perfect for East to restore Rolls Royce back to being an international competitor worthy of the respect its brand name often receives. Currently, it's the cheapest company competing in the commercial aerospace industry, yet it has one of the best trajectories for top line growth. The primary reason for this discount is the underwhelming nature of the company's profit goals, which are currently half that of GE Aviation. We've built a very detailed roadmap for East to use as he prepares to assume the cockpit, which leverages his experience from ARM Holdings. An engineer with a very technical focus on operating businesses, East will need to in-source core capabilities of engine production, capitalize on the significant synergies which exist in its outsourced supply chain, and continue to repurchase shares while the valuation reflects very tepid prospects for the company. From our conversations with former ARM shareholders, these were the key characteristics of his outstanding management.

Rolls has made considerable progress in developing some of the most fuel efficient engines in the world, and because of heavy investments in its Trent engine platform, it was able to secure exclusive placements on nearly the entire Airbus fleet of wide-body planes. The one exception to the Airbus exclusive is the behemoth A380, the largest commercial plane available, where it has just over a 50% market share of engine placements. Because of the heavy investment, which will continue into the next decade, Rolls has been able to secure exclusives on the most fuel efficient wide-body planes on the planet. The A330, currently the wide-body leader in efficiency, will be refreshing to the A330neo in late 2017 which will be 14% more fuel efficient than its leading metrics today. Rolls has an exclusive on the aircraft engine supply for the A330neo.

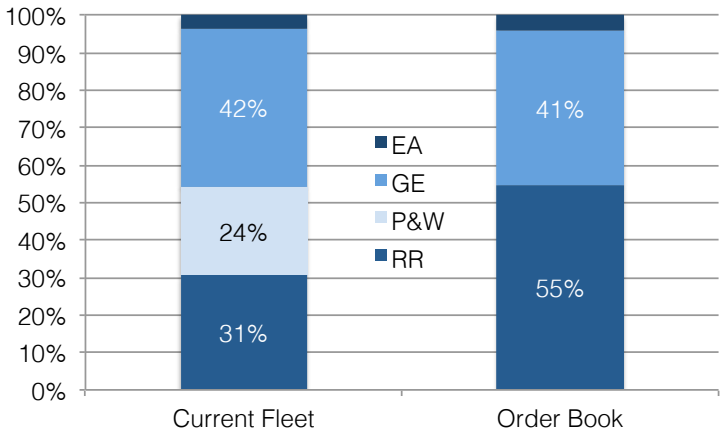
Exhibit 1: Jet Fuel Efficiency, measured by gallons of fuel consumed per seat, per nautical mile



Sources: Company Disclosure, GreenWood Research, axlegeeks.com
*Exclusive on the A330 Neo, which will enter into service in 2017, & 59% market share on the legacy A330 order book

Because of the terrific position Rolls finds itself in the wide-body segment of the commercial aviation business, with the most efficient wide-body engines on the market, Rolls is nearly doubling its presence in the wide-body fleet of planes from a roughly 31% share to roughly 55% of the order book. The company was able to secure a position as the exclusive provider of wide-body engines to nearly the entire fleet of Airbus twin aisle planes. As we'll later show, the wide-body fleet, while smaller in number relative to the narrow body fleet, already takes up nearly half the current deliveries by value, and is projected to grow faster than the narrow-body fleet. Furthermore, contrary to popular wisdom, GE earns less on its narrow-body engine joint venture with Safran (CFM International) than it does on its fleet of wide-body and regional jet engines.

Exhibit 2: Mix of Wide-Body Installed Base Order Book



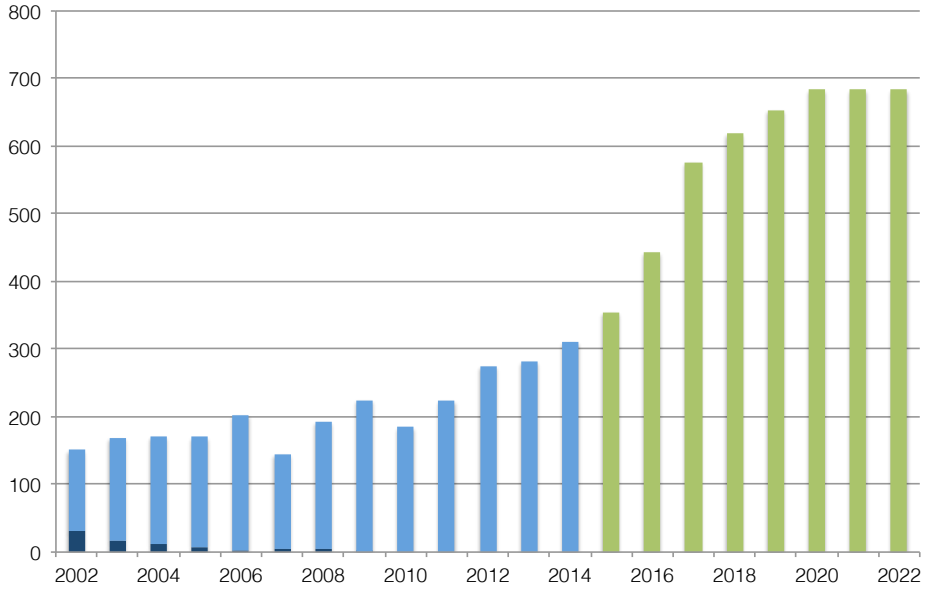
There are many compelling aspects to the Rolls Royce story, such as the incredibly high barriers to entry in the industry, and the significant longer-term visibility the company has with its order book and delivery schedule. Perhaps the most interesting feature of an investment in Rolls is the fact that large effort has already been spent on ensuring a very robust growth rate for its existing business lines. While the company's re-entry into the narrow-body engine market would carry a high growth reward (and also a high risk, given GE's current dominant position in the segment), any successful re-entry with the next generation Boeing 737 or Airbus A320 (not expected until mid 2020's), would just be additional upside from the company's current rapid growth projections.

While the beautiful part of the investment case in Rolls Royce is that the growth rate is robust, predictable and nearly assured, the ugly part is the company's low profit margins relative to its main peer GE. This disgraceful gap is also the major culprit for the valuation gap between Rolls and GE (which we believe is temporarily justified). GE, which one would think would be large and slow-moving, has been incredibly agile at taking a dominant position in the jet engine market, through technology gains, impressive efficiency gains, and through product investment. It has done so with profit margins that Rolls and Pratt & Whitney ("Pratt," or "P&W," is a division of United Technologies [UTX]) can only envy. As we'll detail later in the report (page 5), GE earns significantly more from its wide-bodied and regional jet engines than it earns through its near monopoly via the CFM narrow-body joint venture with Safran (SAF FP). We estimate that GE earns 22.1% from its wide-body and regional jet engine business, as Safran's propulsion division (dominated by the CFM joint venture) earns a GAAP equivalent profit margins of 14.2%, as CFM earns an estimated 17.5%. GE's 22.1% margin is roughly double Rolls' current civil aerospace margin.

Given Rolls derives all of its profits from the exact same market segment (wide-body and regional / business jet engines), sporting 10-11% profit margins vs. GE Aviation generating low to mid 20%

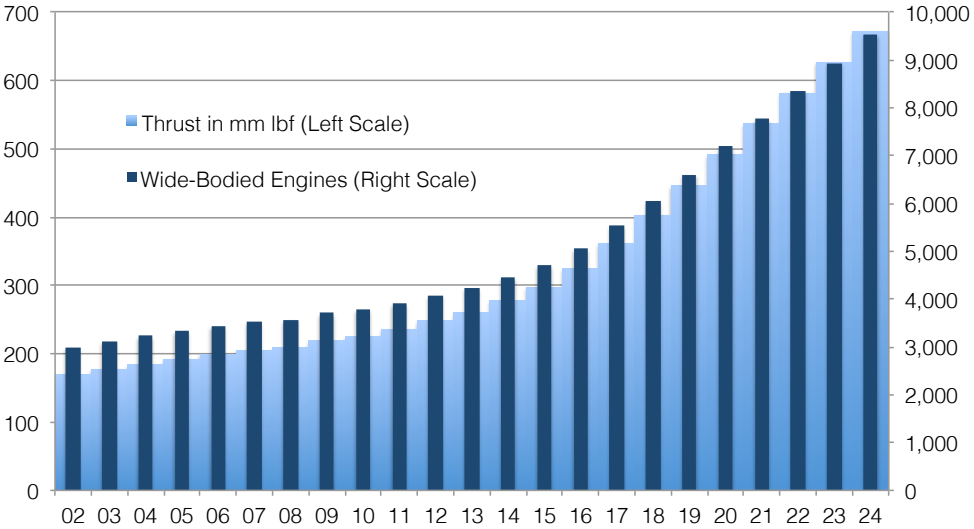
profit margins will lead Rolls Royce on a longer-term road to ruin if the company doesn't work to improve its competitiveness. Thankfully, we believe much of restoring the competitive disadvantage is fixable, as the company doesn't sell its engines at a materially cheaper price than does GE. Raising price in a market vs. a superior competitor is always a difficult, if not impossible task. The task in front of Rolls' new CEO, Warren East, is a far easier one of cost-cutting, and manufacturing and component investment. Thankfully, East will be executing this proposed strategy in the face of robust product and services growth. The wind is at his back.

Exhibit 3: Rolls Royce's Historical & Projected Deliveries of Large Jet Engines



This incredibly robust pace of scheduled engine deliveries will dramatically increase Rolls Royce's installed base of engines, by over 60% from now until 2020. Because many of the older RB211s have already been converted to freighter aircraft (which have a lower usage and therefore lower service revenues), this growth in installed thrust modestly understates estimated revenue growth. Thrust growth is expected to outpace engine growth, as Trent XWBs and Trent 1000s replace lower-thrust RB211s, such that Rolls' installed thrust will grow by over 75% over the next six years.

Exhibit 4: Rolls Royce's Historical & Projected Wide Body Installed Base

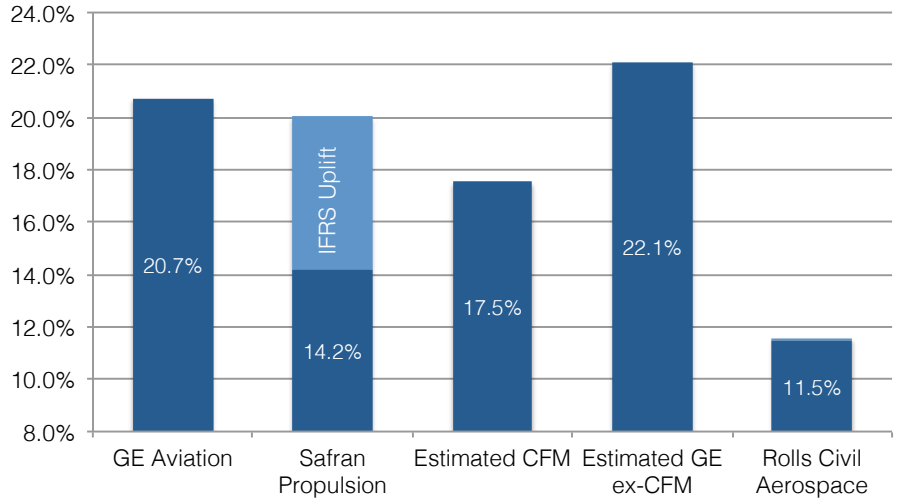


This significant runway the company has for growth is similar to the prior ramp GE experienced from 2008 to 2013, as it significantly increased production of both narrow and wide-body engines. In the five years ending in 2013, GE Aviation increased its engine installed base by 57%, and the mix of revenue coming from equipment ramped from under 44% in 2007 to over 50% in 2013. Yet, GE was able to maintain stable operating margins even as the mix shifted to marginally profitable equipment sales. Clearly the company was able to transform its own equipment margins, just as we believe Rolls needs to do for its upcoming growth spurt. In order for Rolls to become more competitive in the industry and fund technology investment in the coming decade, it must address the equipment segment of its business, which the previous management team abdicated to a breakeven profitability status. Rolls must undertake initiatives to improve the profitability of its equipment sales, particularly as the company transitions from generating under 46% of its civil aerospace revenue from equipment sales in 2013 to nearly 52% in 2017. The deep margin gap to GE must be addressed, and it must be addressed now, as the company begins a significant production ramp in wide-body engines.

The Opportunity: A Deep Margin Problem

Many analysts, engineers and traders believe the narrow-body market to be the most profitable segment in the jet engine market. In fact, a former engineer at Pratt & Whitney said one of the company's goals was to focus on developing a leading narrow-body jet engine (which it did with the Geared Turbo-Fan PurePower), because the more frequent take-offs and landings of narrow-body planes generate more service work. Given jet engine manufacturers historically earned next to nothing on the sale of the actual engines and made nearly all operating profit from the long-term service agreements on the installed base, simple logic would suggest that servicing a narrow-body fleet is more profitable than servicing a wide-bodied fleet of aircraft. This assumption is a false one as it relates to today's market dynamics.

Exhibit 5: Divergent GAAP-Equivalent Operating Margins



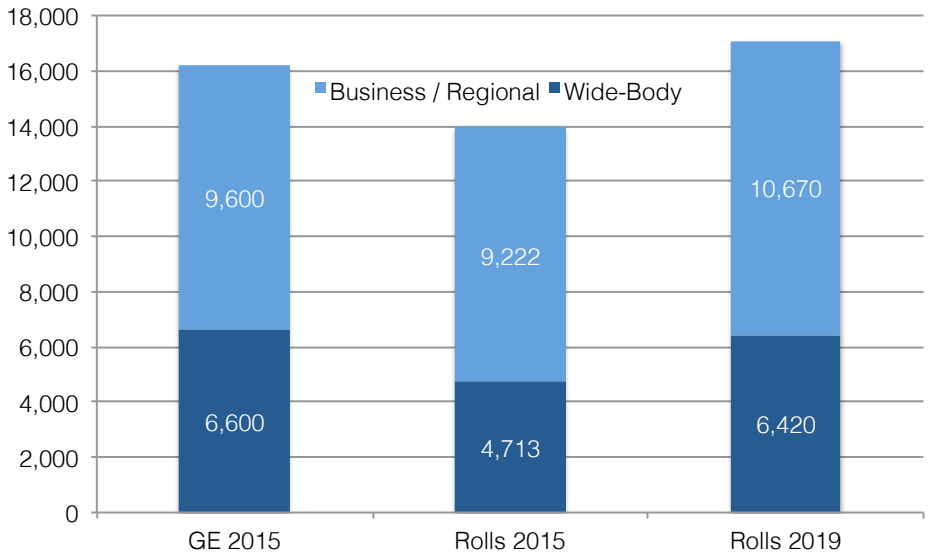
Note: Rolls Royce's 11.5% margin eliminates the positive one-time accounting benefit it recorded in 2014

One needs to look no further than a simple comparison of GE Aviation's operating margins to Safran's propulsion operating income margins. Adjusting for capitalized R&D (to show a closer result to GE's GAAP figures), Safran's margins are dramatically lower than its trans-Atlantic partner. Given CFM is a 50/50 joint venture partnership between GE and SNECMA (a Safran subsidiary), if the margins resulting from the CFM joint-venture (which manufactures the LEAP and CFM engines,

both of which have a monopolistic strangle on the narrow-body engine market) were similar to GE's wide-body engine offering, then SNECMA would logically have very similar margins to GE. Yet the opposite is actually true: Safran's propulsion division, the lion's share of which is comprised of the CFM joint-venture, records significantly lower margins than its US peer. Part of this difference lies in the fact that a large portion of the installed base of CFM engines are older and aren't tied to long-term service agreements.

Thus, despite most perceptions in the industry, GE has higher margins on its wide-body business, and this is at a time when it is shipping its latest and greatest wide-body engine, the GEnx engine, at a loss until 2016. Thus, even if Rolls Royce's management team tries to caveat its own profitability by the significant product launch cadence the firm has, with the recent startup of the Trent 1000, the Trent XWB, and the coming Trent 7000, GE is going through a similar product launch cadence, yet is likely sporting operating profit margins in the low to mid 20% range. And although GE's current installed base is modestly larger than Rolls Royce's (16% larger), within the next five years, Rolls' installed base will exceed GE's current installed base of engines, which is generating operating profit margins north of 20%. These >20% operating margins are being generated while GE is currently undergoing the peak of its unprofitable launch of the GEnx and LEAP next-generation engines. In fact, in the first quarter of 2015, GE missed some GEnx shipments relative to its plan (29 to be exact) and gave some color on the financial impact of the missed shipments. If we were to back out the negative margin effect the GEnx shipments had on the first quarter, the division sports operating margins of 26.6%.[1]

Exhibit 6: Installed Base of Wide-Body and Regional Engines



Rolls Royce's medium-term targets[2] of 15% operating profit margins at its civil aerospace division will simply not cut it. As GE Aviation continues to ascend to mid 20% operating margin range, maintaining a profit margin gap of as much 10 points would ensure the long-term obsolescence of Rolls Royce. Competing against a company that earns two thirds more per jet engine will ensure

[1] The impact of the 29 missed shipments (GE actually shipped 51) was a 90 bps positive EBIT effect in Q1 2015. That means the full effect of the 51 shipments on EBIT is a negative $89.8 million. Backing this out of EBIT, means that without the GEnx shipments, the company would have earned $1,404 million in operating income on $5,284 in revenue, thus 26.6% Operating Margin ex-GEnx.

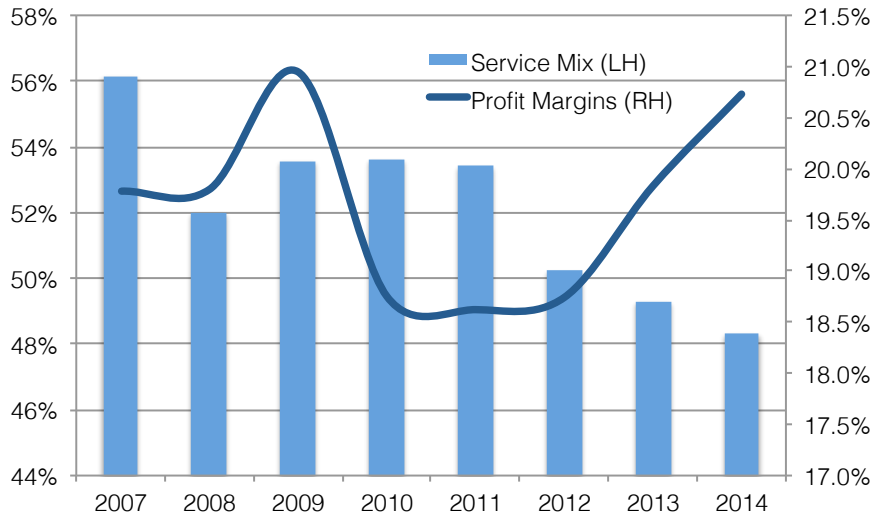
[2] See Rolls Royce's October 2014 Medium-Term Target Presentation

Rolls cannot outspend GE on next generation technology, and losing the fuel efficiency battle will obsolete an aged product line-up, as it did to Pratt & Whitney in the 1980s.

Further, Rolls has ambitions to re-enter the narrow-body engine market when Boeing and Airbus update the B737 and A320 at some point in the next decade. While CFM has spent nowhere near the amount to develop its own next-generation LEAP engine, Pratt & Whitney has told the community that it took them $10 billion in spending to develop its next generation GTF engine, which will enter into service later this year as the A320 Neo launches. For Rolls to be able to afford any narrow-body re-entry without "betting the ranch," on the capital investment required, it will need to significantly boost profitability. Thus, evolving Rolls' business to a more vertically-integrated, lower staffed and more capable engine manufacturer is crucial both to defend its own competitiveness as well as secure a runway for growth in the next decade. The steps the company needs to take have already been publicly demonstrated to work and are largely de-risked. The only thing standing between Rolls Royce and 20% operating profit margins is good execution. Thankfully, the company's most recent under-achieving CEO has announced his departure, and the incoming pilot has a great track record at another British corporate champion.

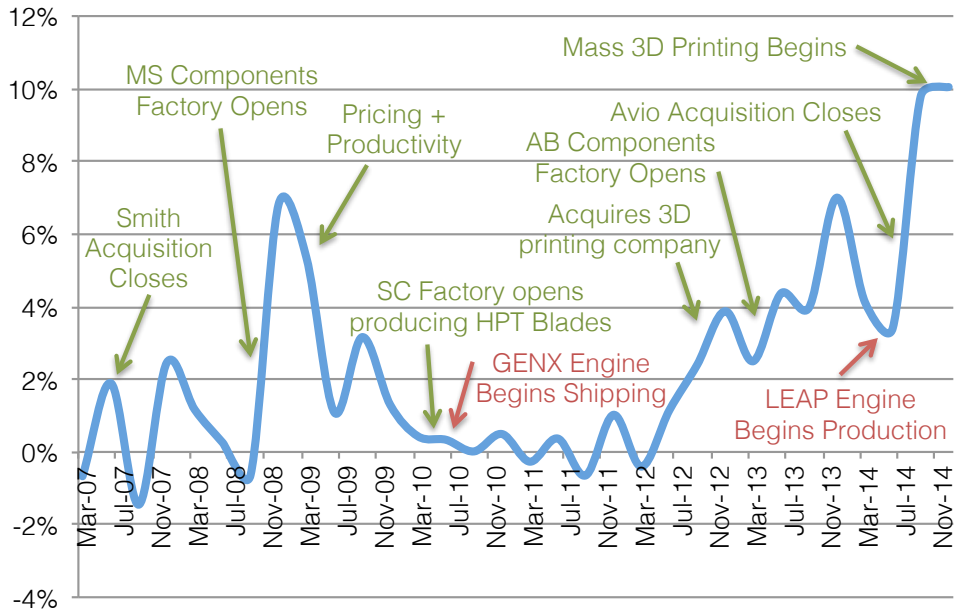
Warren East has some work to do in order to improve Rolls' competitiveness, but the game plan is relatively straight forward. GE Aviation has transformed its own business over the last four years by implementing a process of in-sourcing components, increasing its in-house technologic capability, adding 3D printing capability and acquiring a key supplier (Avio) where it was able to use its scale to bring substantial supply chain and revenue synergies. If one were to simply look at the profit margins of GE Aviation over the last decade, to the naked eye, it would appear that the margins have hovered right around 20%, sometimes a bit above, sometimes a bit below. Not a big deal.

Exhibit 7: GE's Aviation Division Profit Margins & Service Revenue Share



Upon closer inspection, as exhibit 8 demonstrates, one can see the tremendous progress the company has made by keeping operating margins stable, and in recent years, expanding. Numerous discussions in the industry have confirmed that nearly all of the profits at the "Big Three," are made from service and parts business, and equipment sales are typically sold around break-even. It is the well understood razor / razor-blade model of selling the razors at break-even or at a loss, and selling the blades for hefty premiums once you've guaranteed a long tail of razor-blade sales. Yet GE has pulled so many efficiencies out of its supply chain, that it has actually gotten its equipment sales to pull some of their weight on the firm's profits.

Exhibit 8: Hypothetical GE Aviation OE Margins Assuming Flat Service Margin of ~35%



Please pardon the very busy exhibit 8, but we've attempted to show that if we hold GE Aviation Service's business flat at roughly a 35% operating profit margin, the margin GE earns on its equipment sales has expanded at least 5-10% over the last few years. Our contacts at Safran and components suppliers have confirmed our speculation that GE is now profitable on its equipment sales. Even if we were to use the industry scuttlebutt figure that GE earns nearly 50% on its parts & services business (we believe this is dramatically overstated), exhibit 8 would still look identical in its improvement of the equipment sales (yet would show that it is just now getting equipment sales to a near break-even result, up from operating loss margins in the high teens. Seeing the very robust equipment order book and growth rate over the next couple of decades, GE made a conscientious move in the late 2000's to improve the operating margin on its equipment sales. As the mix of services at GE's Aviation division fell precipitously, it countered this negative mix shift with a number of acquisitions and initiatives aimed at improving the core profitability of GE's engine sales.

We've annotated this theoretical chart with key positive (colored green) and negative (colored red) operational milestones and initiatives to help explain some of the key impacts of the company's actions. GE is undergoing one of the biggest engine change-overs in its aviation history, with both the GEnx continuing to ramp up the production curve (it has been loss making, and will be until early 2016), and the narrow-bodied LEAP engine undergoing ramp-up efforts in order to allow Airbus to meet its target of a late 2015 entry into service for its latest and greatest, the A320 Neo. The two engine platforms will power nearly all of GE's commercial deliveries in the next decade. Accordingly, one would expect GE's profit margins to be bottoming at deeply unprofitable levels right now. Instead, the profit margins have been restored to previous peaks, with the company publicly committing to continued margin expansion. Rolls is going through a much more robust production growth period right now than GE, and its peer has provided evidence that in its own industry segment, in which it is a formidable player, the company has the opportunity to more than double its operating profit margins even through this product launch cycle.

The 2012 acquisition of Morris Technologies added key 3D printing technology to GE Aviation's list of capabilities. The company spent a couple of years testing out components manufactured through the additive layer process, particularly ones that were complex and sole-sourced from a

single supplier. Suddenly highly complex, sophisticated components were able to be developed and manufactured by GE Aviation without significant investments. The company then used this added capability to have pricing discussions with some of its part suppliers. A couple years later, GE would add mass additive manufacturing to its components factory in Alabama. This has achieved two crucially important things for GE.

First, it has allowed the company to replicate components that previously required heavily-specialized fabrication technology. We've spoken with a retired jet engineer who worked on multiple major joint-ventured engines in the past, and prior to his retirement in 2008, the fabrication companies Precision Castparts (PCP) and Alcoa's (AA) Howmet were the only companies capable of competitively fabricating many crucial components of a jet engine. In fact, in the 1970s, Pratt & Whitney invested heavily in an automated casting facility that was able to produce a turbine blade from a single crystal alloy. After all the development had been completed, it turned out that PCP was able to fabricate the blades at a much more competitive cost than Pratt could, so the company transferred the technology and PCP ended up becoming the fabricator despite Pratt's best efforts. Additive manufacturing has greatly reduced the competitive edge these fabrication firms once had. In fact, at the Paris Air Show, GE Aviation CEO David Joyce showed us a 3D printed high pressure turbine (HPT) blade - one of the most technically advanced and highest value-added sections of a jet engine. Until today, single crystal casting, typically done by Howmet or PCP, was required to create a blade capable of with-standing 2,000°C temperatures. Even at the Paris Air Show, many engineers and directors had a hard time believing GE was able to print an HPT blade. This changes everything.

This brings us to the second major reason adding advanced 3D printing capabilities in-house has brought many profit-expanding opportunities to GE. It has been able to use the threat of self reliance for certain parts, that were previously too advanced for the company to in-source, in its pricing discussions with component suppliers. This has allow GE to extract more price concessions from the base of suppliers as it has introduced more manufacturing competition.

Additive layer manufacturing has helped numerous other highly specialized manufacturers eliminate the traditionally high costs of sourcing small volumes of unique components. While the number of aircraft deliveries has been robust, the numbers are still very modest relative to traditional manufacturing volumes. Boeing and Airbus delivered 378 wide-body aircraft last year, requiring 852 engines. While these figures are robust from a historical standpoint, they are relatively small for large-scale manufacturing operations. For a relatively modest capital requirement, 3D printing has greatly reduced the inefficiencies inherent in highly specialized, low production components.

As reported by the Wall Street Journal, "GE will use… 3-D printing machines to make the guts of the fuel nozzle on its Leap engines. The equivalent part used in existing engines is made by an outside supplier that brazes together 21 tiny pieces."[3] One can imagine the awkward conversation at the negotiating table when GE Aviation informed its former supplier that its specialized services were no longer needed on the next generation engine.

Ceramic matrix composites (CMCs) also represent another opportunity to both light-weight an engine component as well as remove a high-value add supplier such as PCP. The manufacturing capabilities are far less demanding for CMCs than they are for cast parts such as single-crystal alloy blades. Furthermore, CMC components are typically less than half the weight of their metallic

[3] See Linebaugh (February 6, 2013), "GE Brings Engine Work Back"

replacements. Light-weighting a turbine blade also means that its disk and related components can also be lighter and smaller, completely changing the dynamics of the engine's design. Because the dramatic efficiency CMCs allow, using the composite across most parts of the engine will likely appear in the next generation of jet engines as it will allow for a completely different architecture.

Exhibit 9: GE's Vertical Integration Timeline

Date	Action	Note
May, 2007	Acquisition of Smith Aerospace	$4.8B. UK-based supplier of integrated systems for aircraft manufacturers and engine components. Synergies unquantified.
October, 2008	GE opens Mississippi plant	$94 million spent on plant to produce fan platforms and the fan case assembly for the GEnx engine.
April, 2010	GE opens S.C. plant	Undisclosed sum, manufactures high pressure turbine (HPT) blades.
October, 2012	Acquisition of Morris Technologies	Undisclosed sum, Morris Technologies is an advanced 3D printing company.
April, 2013	GE opens Alabama plant	$75 million spent on plant to manufacture HPT airfoils.
August, 2013	Acquisition of Avio closes	$4.3B spent on Italian-based producer of numerous engine parts. Substantial synergies with a pre-tax ROIC of 13.5%.
December, 2013	GE opens second Mississippi plant	$56 million spent on plant to manufacture fan platforms for the LEAP engine as well as a thrust reverser.
December, 2014	Larger scale 3D printing begins in Alabama	Alabama plant starts mass producing additive jet engine components (the same fuel nozzle referred to above).

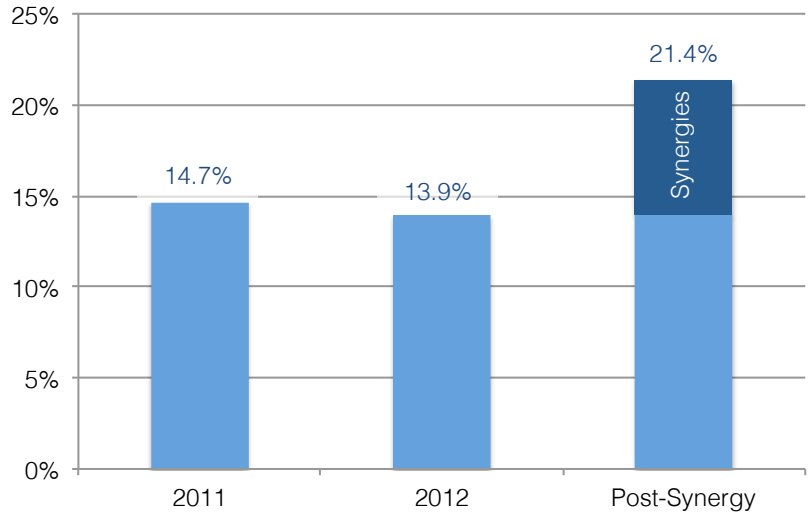
Some of the efforts to vertically integrate jet engine manufacturing have been very reasonable investments, as GE Aviation effectively in-sourced a large portion of the component manufacturing supply chain through building three plants in Alabama and Mississippi for a quarter of a billion dollars - these are minuscule compared to the large R&D and capital spending budgets GE Aviation and CFM have.

Although the two noted acquisitions were substantial in size, they produced highly attractive returns to GE. The company already represented nearly two thirds of Avio's revenue, and GE undertook an extensive study on how much Avio was paying third parties for parts and materials. After realizing that GE's scale could bring substantial cost-saving opportunities throughout the supply chain, the company moved to acquire Avio's aerospace business for 11.6x operating income. Yet, after the robust synergies the company was able to pre-identify (750 bps), the actual multiple GE ended up paying for Avio's aerospace division was 7.5x operating income, or a pre-tax 13.5% ROIC assuming no revenue growth. Whereas components previously sourced from Avio were used in jet engines built by GE that would produce a very meager (if any) operating profit, post acquisition, GE Aviation was able to produce these turbines, blades, compressors and other components at margins that rivaled its consolidated business.

Rolls has multiple suppliers which suffer from a lack of scale, yet could very likely benefit from the purchasing and procurement scale of a far larger company. ITP SA is a key supplier to multiple Trent engines, and Rolls already has a 46.9% stake in the company. Yet, ITP suffers from a significant lack of purchasing scale in the industry and duplicative engineering staff. Even if Rolls wasn't able to extract similar synergies to GE's purchase of Avio, ITP's operating profit margins are still above Rolls' equipment margins, so a purchase would be accretive as long as Rolls didn't

overpay for ITP. When we visited ITP's booth at the Paris Air show, we spoke with a director at the company about its ongoing cost-saving initiatives. The director came out directly and explained that, "purchasing is very uncoordinated with Rolls. There are probably substantial synergies that aren't being realized."

Exhibit 10: Avio's Aerospace Segment Operating Profit Margins



While the market has rebuked Rolls' outgoing management team for an ill-timed acquisition of Daimler's interest in its large engine joint venture,[4] we believe acquisitions in the aerospace industry will be met with a completely different reception by traders. Not only will it concentrate Rolls even further in the aerospace industry, which we believe investors would welcome given the hockey-stick nature of the industry's backlog, it would help transform Rolls' profitability in the key segment. Even if Rolls was unable to extract any purchasing or overhead synergies out of ITP (which would be incredibly hard to believe), the acquisition would still be accretive to the equipment segment's margins. GE was able to extract 750 bps of synergies from a company that was already generating over €2 billion in revenue. Given ITP's revenues are nearly 70% lower than Avio's aviation division, and therefore is already suffering from an even more dramatic lack of purchasing scale, Rolls is likely to have a successful experience in extracting synergies from ITP's own supply chain. Furthermore, smaller scale means better advantages will come from administrative expense savings of a unified company.

Exhibit 11: Avio-Implied Average Take-Out Price for ITP

in millions	Avio	Multiple	ITP	Implied Take-Out
Revenue	€2,068	1.58x	€650	€1,030
EBIT	€288	11.38x	€58	€660
EBIT Post-Synergy	€444	7.38x	**Average**	**€845**
Take-Out Price		€2,068	**in pounds**	**£621**

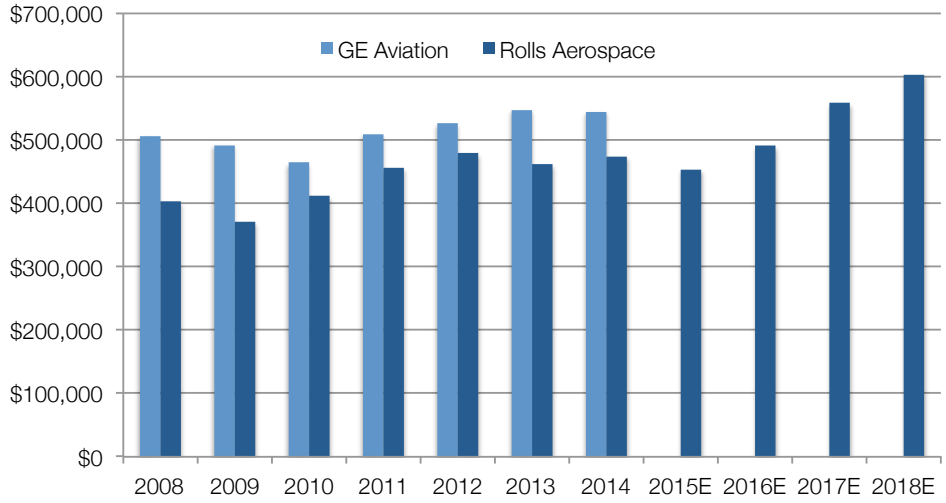
Internalizing key component manufacturing will not only yield profitability improvements on the actual components, but will also help Rolls leverage this expertise in price negotiations with other component suppliers. GE has flexed this muscle in the past few years and has achieved visible

[4] See Walker, Ian (April 6, 2014): "Rolls-Royce to Pay Daimler $3.3 Billion for Stake in Joint Venture"

benefits from the efforts. There are no doubt many more firms that supply key components to Rolls that would benefit from the overhead and purchasing scale of a larger organization. A top engineer in the jet engine industry has described a fair amount of duplication of engineers and quality control spending between two companies that enter into risk-sharing and revenue-sharing programs. While it's a way to de-risk some of the investment that needs to be made in the entire engine program, it also guarantees sub-scale profitability of the program.

While it would appear that Rolls only has a 13% disadvantage to GE from a revenue per employee perspective, as shown in exhibit 13, these metrics are misleading, as Rolls outsources a much larger portion of its engine manufacturing to parts suppliers. Roughly 75% of the cost of Rolls Royce's engines are sourced from third parties, yet GE has methodically taken this percentage down over the last decade. While the company would not provide an estimate, we believe GE sources less than 60% of the costs of its latest engines from third parties, and are awaiting specific color from the company (apparently we were the first investor to ask this). Just given the value of in-sourcing the HPT blades, the low pressure turbine (LPT, also the same component ITP manufactures for Rolls), fan blades, casings and platforms, the company has in-sourced well over 25% of the engine over the past decade.

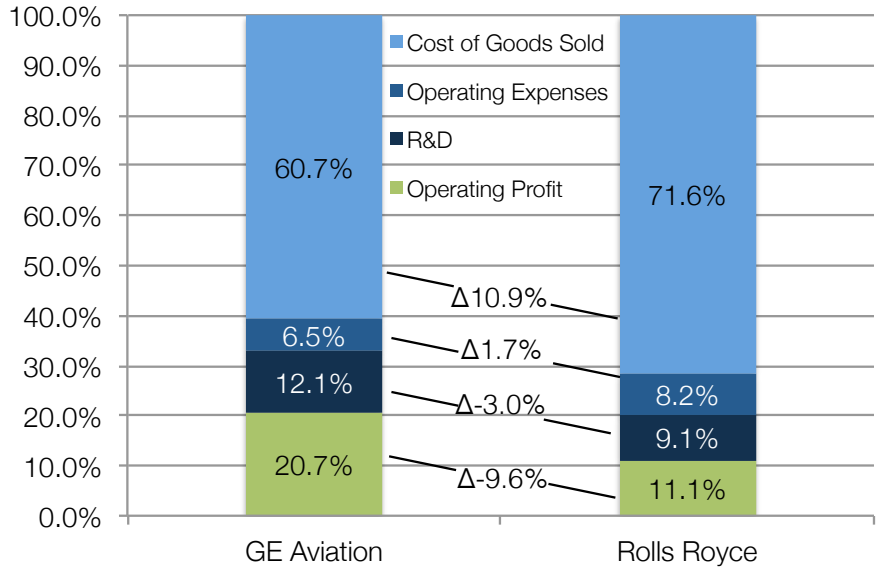
Exhibit 12: Revenue per Employee (in dollars)



Note: Projections assume Rolls maintains its 1.4% CAGR in employees in its aerospace division.

Even if we're off on this metric, Rolls is still overstaffed relative to GE by at least 13%, and perhaps as much as 20%. While we're not recommending a 20% headcount reduction, as the revenue growth anticipated from the order book will make up a fair portion of the spread in competitiveness, we believe the company should undertake a thorough analysis of its required talent needed, given it outsources 75% of the value of the engine. If the company agrees that it must in-source a greater portion of the engine's value, it must keep a keen eye on eliminating engineering duplication between departments which previously interacted at arms' length. Even still, as is obvious by the only slight difference between the two companies' employment statistics, doubling Rolls margins will not be obtainable through a restructuring. Doubling Rolls' civil aerospace margins must be achieved by improving the profitability of its equipment sales and servicing operation. We believe this is impossible without extracting synergies from the supply chain by vertically integrating, just as GE Aviation has successfully done over the past decade. Clearly much of the engine will remain outsourced, as commoditized components that are either machined or fabricated must find a low-cost manufacturing source outside of the company.

Exhibit 13: Mind the Margin Gap



Source: Selective Company Disclosures, GreenWood Research

Vertical integration is not a new strategy, and it's been used in many other industries to increase the profitability and returns on invested capital of many businesses, as well as widen the competitive barriers to entry. Our industry conversations have confirmed that the "killer apps," or highly important aspects of the jet engine manufacturing business, are each company's work in materials science. This is becoming particularly more important as both the aircraft and engine manufacturers have focused on fuel efficiency and removing weight from the engine and the aircraft. As Rolls continues to develop many different engine parts from non-traditional, composite materials, we see today as perfect timing to start insourcing much of this work, particularly as additive layer manufacturing has helped lower the costs to internal production significantly.

The company has recently said[5] it will test the largest 3D printed engine component later this year, but hasn't committed yet to a formal timeline for large-scale additive layer manufacturing. We suggest Warren East should rapidly roll out the testing of additional components manufactured through an additive process. He should then use that capability to renegotiate with Rolls' current supply base. The aerospace industry will not be particularly surprised by these activities, as a few years ago Boeing partially reversed its former strategy of outsourcing aircraft development and manufacturing through its high profile "Partnering for Success," initiatives. Because the company faced incredible delays in launching the 787 Dreamliner, and risked never earning a respectable operating profit margin on the aircraft, it went back to suppliers to either renegotiate prior agreements or to directly take-over manufacturing initiatives from these suppliers. The outsourced model has not worked well in the aerospace industry.

Industry Considerations

Developing jet engines is an extremely expensive and lengthy process. Pratt & Whitney has spent over 15 years and $10 billion developing its next generation narrow-body jet engine, the Geared Turbo Fan (GTF) Pure Power. If that's the current going rate for developing a narrow-body (single-

[5] See Morrison (February 19, 2015), "Rolls-Royce to fly Trent XWB with largest-ever 3D-printed part"

aisle) jet engine, then developing an engine for a wide-body (dual aisle) jet has to be of equal or greater value: the testing facilities are considerably more expensive to build. In fact, after developing the first commercial turbofan (jet) engine, Rolls sought to build the RB211 in the early 1970s, which would eventually power major dual aisle platforms such as the Boeing 747, 757, and 767. Due to cost overruns after having a snafu with its carbon-fiber fan blades, dramatic cost overruns landed Rolls in receivership. The engine went on to commercial success, but the company had been bankrupted in the process of developing the engine.

Pratt & Whitney has recently confirmed it was uninterested in investing in a new wide-body jet engine, despite the segment having faster projected growth than the narrow-body segment. According to projections from IATA, the wide-bodied fleet of aircraft will grow by 130% over the next 25 years, while the narrow-body fleet will grow by approximately 80%. While many analysts and companies always cite the far larger number of narrow-body jets and jet engines that get delivered each year, the total value of wide-body deliveries is roughly equal to narrow-body deliveries today. Thus, the value of the wide-body ecosystem is set to dominate the aerospace industry, not the higher volume and lower value narrow-body market.

With Rolls having exited the narrow-body engine market with its sale of the joint-venture to P&W in 2011, both segments of the market are now duopolistic, with only two competitive engine offerings, in contrast to three over the last several decades (GE/CFM, RR and P&W each playing roles in both segments of the market). It's an industry with such strong competitive barriers to entry, that Pratt & Whitney has actually raised the price of its main upcoming Pure Power GTF engine before it even goes on sale.[6] The competitive barriers in the industry have gone from being robust to nearly fortress-like for the new fleet of jet engines that will power the next generation aircraft from Boeing and Airbus, Bombardier and even offerings from the BRIC countries.

The new plane offerings carry substantially lower costs of operation, which will result in better airplane profitability or lower airfares to the consumer. These new more efficient aircraft (A320 Neo, Boeing 737 Max, A330 Neo, Boeing 787, A350, and the 777X) will be driving a significant replacement cycle at the same time the global fleet needs to expand to accommodate robust passenger growth, particularly in Asia. Nearly all of the fuel savings these new aircraft will offer are the result of the jet engines that have been developed by the Big Three manufacturers. The "killer app," in the industry is the engine, not the aircraft structure.

Exhibit 14: Large Commercial Aviation Company Valuations

	EV / Sales	EV / EBITDA	EV / EBIT	FCF Yield
AIR FP	0.95x	9.4x	14.3x	5.2%
AM FP	2.46x	21.3x	25.6x	2.8%
BA	1.06x	10.6x	13.4x	5.1%
GE Industrial	1.78x	9.7x	12.1x	4.8%
MTX GR	1.42x	11.4x	14.5x	5.0%
RR LN	**1.10x**	**6.6x**	**9.5x**	**6.5%**
SAF FP	1.81x	9.3x	13.3x	2.6%
UTX	1.42x	7.8x	9.3x	6.0%
Median	1.42x	9.75x	13.43x	5.0%
Average	1.56x	11.35x	14.66x	4.5%

[6] See Dowling, (March 12, 2015), "Pratt & Whitney Raises Price for PurePower Engine."

As newer aircraft manufacturers work on products to compete with Boeing and Airbus for the voracious demand for narrow-body aircraft, they've resorted to using either CFM's LEAP engine, or P&W's GTF offering launching this year. There are rumors that aircraft manufacturers from China and Russia are in the early stages of developing a wide-bodied plane to compete against the western duopoly, but will be using western-built engines from either GE or Rolls Royce.[7] If there are any competitive risks in the industry, they would appear on the aircraft OEM side, not in the jet engine segment. Yet, it's funny that Rolls Royce carries lower valuation multiples than both Boeing and Airbus, despite having a better growth trajectory than the fastest-growing segment of the market.

Given the age of the commercial fleet is at *all time highs* (15 years old)*,* replacement demand is quite high, airline profitability has been high, and global passenger growth has been robust, *the current outlook for near, medium and long-term commercial aircraft demand is very bullish.* Airbus and Boeing are seeking to raise monthly production rates of the A320 and the 737, a move that both of them intend to be permanent. Because the order book has grown so significantly, and waiting times have stretched into the early 2020s for new aircraft, the outlook was robust enough to take monthly production higher - a step neither of them take lightly. As for wide-body aircraft, demand is similarly strong, as the current order book for the 787 is 5.68 years of production, and when the A350 finally ramps to its monthly production rate of 10 per month by late 2018 or early 2019, it will still have another 4.94 years of production to deliver just on the current order book. The A330neo looks particularly promising, as the new aircraft, which hasn't even finalized the design, is already sold out through this decade. Clearly customers accepting new aircraft will enjoy the 14% fuel efficiency gains on the already industry-leading fuel efficiency. As a result, Airbus has just a few 2016-2017 production slots yet to fill on the legacy A330.

The best bull case for the commercial aviation industry comes from the OEMs themselves. Both Boeing and Airbus put out a long-term market forecast, both of which contain very interesting data on supply and demand drivers of the industry. Both show equally bullish hockey-stick projections that look similar to the Revenue Passenger Miles chart shown in exhibit 15. For brevity's sake, we'll leave the bull scenario data outlook to the OEMs.

Risk Considerations

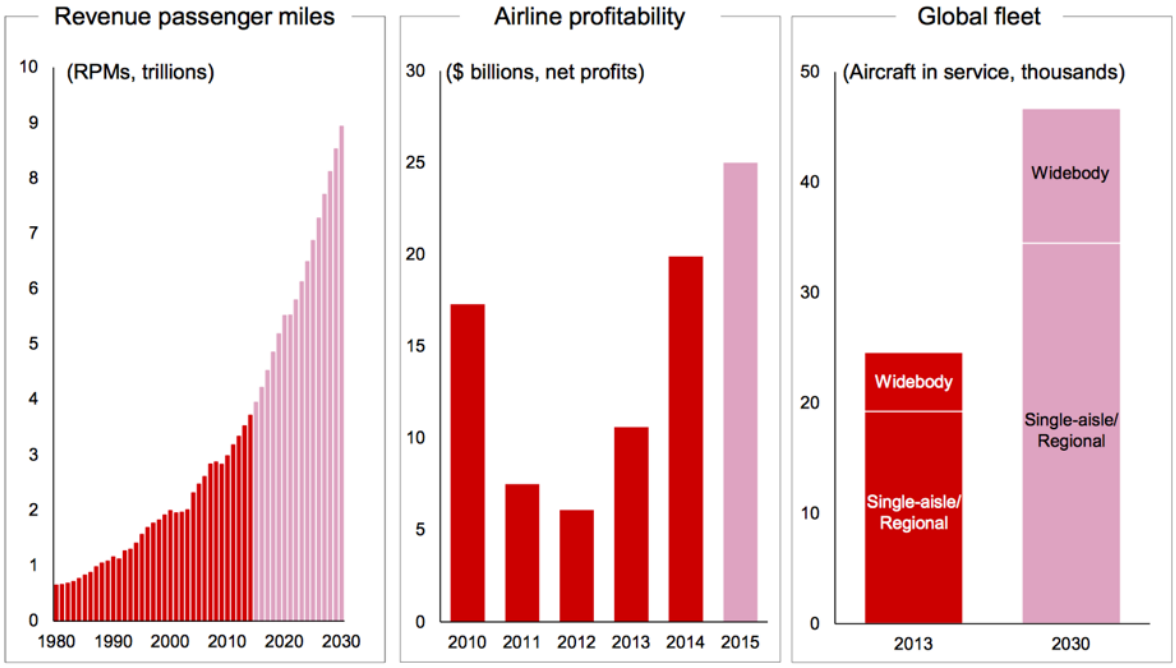
Aircraft orders are driven by airliners' cashflow, which has been notably strong in recent years. Yet, airline profitability is contingent upon passenger growth keeping up with its recent quick pace. Traffic is of course dependent on global growth as well as the rise of the middle class in Asia, as much of the traffic growth above and beyond economic expansion has been driven by an emerging Asian middle class taking their first flights ever.

Yet, rather than any economic slowdown impact the production rates of most aircraft, we don't believe production of aircraft will be decreased in a meaningful way. Given the unprecedentedly long backlog both Boeing and Airbus have, a pause in growth in air travel, such as the stalling the market had after the terrorist attacks on September 11, 2001, would more likely allow the OEMs to shorten the typical waiting time airlines will be experiencing in securing new capacity. For nearly all models, these order books stretch well into the 2020s. Airbus' order book represents ten years of current production, which has doubled from the more typical 5 years earlier in the decade. Yet, even if airplane production was reduced 25% from its currently anticipated schedule, as was the

[7] See Evans, "ANALYSIS: Twin-aisle aircraft strategy in the 2020s." flightglobal.com

case after September 11, Rolls Royce's civil aerospace revenue will still be growing at a 6.1% CAGR over the next six years vs. the currently anticipated 8.1% under current plans.

Exhibit 15: Airline Operating Cash-Flow of Airline Industry & Passenger Traffic



Source: United Technologies 2015 Investor Day

Even if some of the more growth-oriented airlines were to delay taking deliveries of some aircraft they have in the order book, the existing global fleet of aircraft is very old. The average plane is over 15 years old today[8], and the newer models that are replacing 25-35 year old planes are significantly more fuel efficient and help the airlines lower operating costs. As more Boeing 787 Dreamliners get delivered, and the Airbus A350 scales up the production curve during 2015, airlines using these very efficient wide-body planes are at a significant cost advantage relative to their peers flying older fleets. Given the tenacious proclivity of most airlines to cut price in order to drive market share and volume growth, keeping an old fleet of planes around will lead to a permanent loss of competitiveness in an aggressively competitive industry. One of the primary preconditions that led to American Airlines' most recent bankruptcy was an older fleet of planes which left it with an uncompetitive cost base.[9] By shedding leases on old aircraft and modernizing its fleet, American was able to restore competitiveness and emerge from Chapter 22 restructuring. *Replacing old aircraft is not a luxury, it's a necessity given the structure of the industry.*

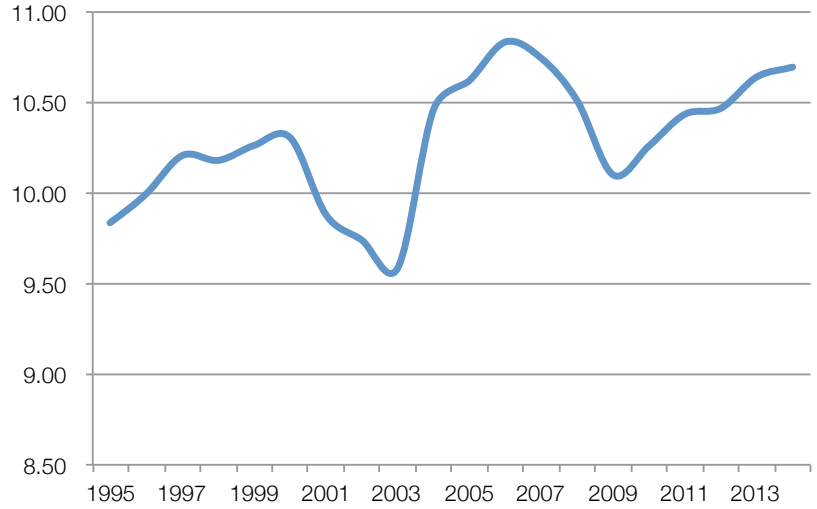
Thus, the civil aviation business has durability in any economic downturn. The one wild card factor would be a terrorist attack of a similar magnitude of September 11, 2001 that affects passenger traffic in an unprecedented way. While it's debatable whether or not another attack would affect traffic in the same pattern as it did 14 years ago, having a military engine business to offset some of the expected declines in commercial aircraft production is key to softening the impact of this

[8] See Bromberg (April 9, 2014), "Challenging Assumptions About MRO Growth."

[9] See Milford, Schlangenstein, & McLaughlin (November 30, 2011), "American Airlines Parent AMR Files Bankruptcy; Horton Is CEO."

important risk. And although aircraft deliveries have been robust over the past several years, capacity utilization or load factors remain near all-time highs.

Exhibit 16: Average Daily Block Hour Utilization of Total Operating Fleet



Source: MIT

The military engine business is relatively untethered to the global economic cycle, with risks more associated with global government budget deficit reduction. Nearly every major defense firm is water-marking 2014-2015 as the bottom in US defense spending, as sequestration has fully cycled through the budget, and the current outlook is for modest budgetary growth at the Pentagon. And while 2014 will likely prove to be the bottom of Rolls' military engine business, as the 2018 wind down of the Eurofighter program will likely be more than offset by the ramp in the F-35 JSF, Rolls Royce's services to the fleet of military engines was able to offset much of the decline in equipment shipments, and the company expanded margins in the military aerospace segment. Because services represent over 54% of the military and commercial aerospace revenue, the effect of any downward revision in previously-anticipated deliveries is more muted. Furthermore, given the fleet of aircraft has never been older, further delays in replacing aircraft will increase the maintenance, repair and overhaul businesses that jet engine manufacturers dominate. Rolls has a higher percentage of its installed base still tethered to long-term service agreements ("Power by the Hour") than its competitors.

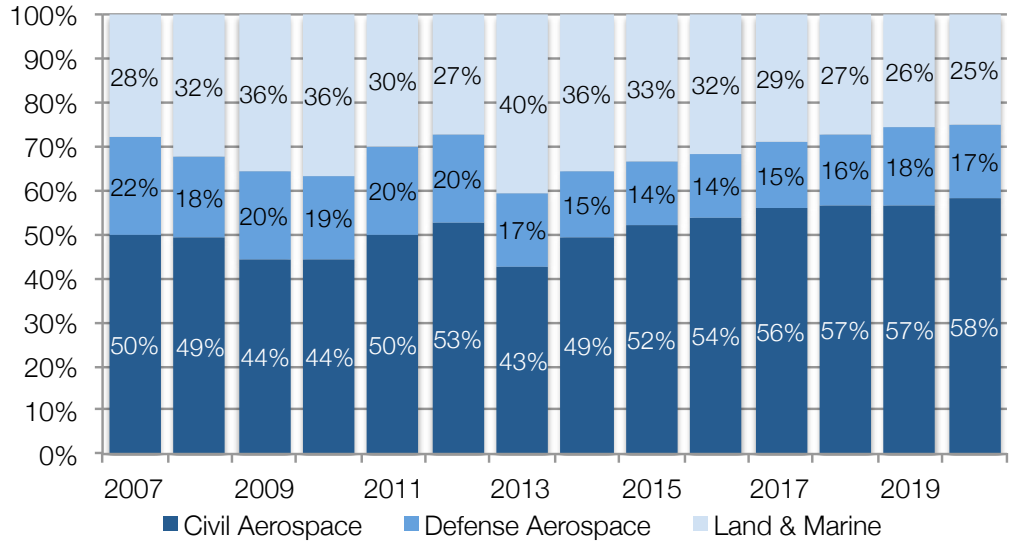
Much of the downside risk in Rolls Royce's operations over the last 12-18 months has come from its land and sea divisions, which produce very large engines for the largest cargo ships in the world, as well as provide a fair amount of design and non-engine parts for the construction of these vessels. Some of the demand in the marine business came from oil & gas customers, which have been markedly weak in the last few quarters. Rolls recently announced further job cuts in its marine division[10] to further mitigate some of these downside risks. A couple weeks prior, it had reiterated that while revenue in the division would be lighter than expected, it still expected to meet its guidance for the division's operating profits in 2015. Wärtsilä, a major competitor in the space (which Rolls, at one point, was interested in acquiring early last year[11]), has been relatively sanguine about the industry downturn being deep or severe. Even if the industry deteriorates further, the

[10] See the company's press release dated May 18, 2015.

[11] See Odell & Sharman, (January 9, 2014), "Rolls-Royce ends talks with Wärtsilä."

other ⅔ of Rolls' business will more than compensate for any incremental weakness from the already deteriorated 2015 guidance levels. Because the focus of this note is Rolls Royce's aviation business, we've held operating profit contributions from the land and sea business constant at the weak 2015 levels for the next decade. We believe this is very conservative, but have done it to show this division matters far less than actually fixing the civil aerospace business. Without a recovery of any significance in the Land & Sea division, the growth in Rolls Royce's civil aviation business will shrink the division's revenue share from over a third today to less than a quarter by the end of the decade. The largest driver of value for shares in Rolls Royce will be the company properly executing on the significant margin opportunity in the civil aerospace division.

Exhibit 17: Revenue Mix of Rolls Royce's Divisions



Close up on Warren East

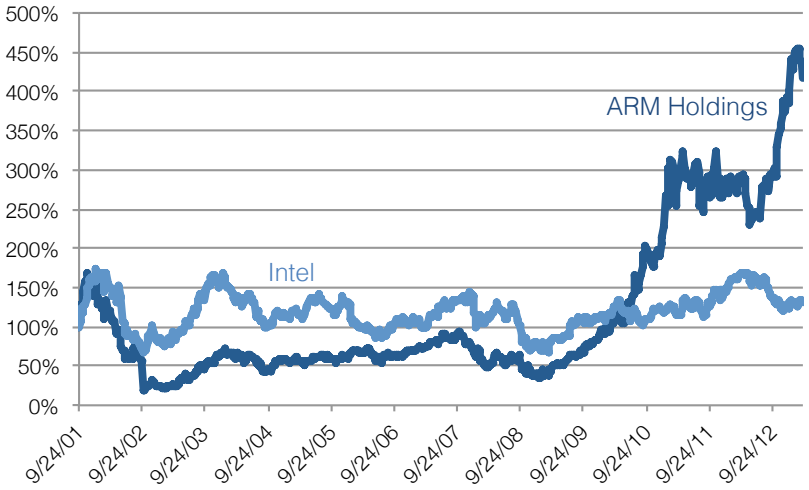
The company hosted a conference call with its concurrent announcement that Warren East would succeed dramatic under-performer John Rishton (who insists he hasn't been kicked out). On the call, several analysts questioned Warren's skill set and how relevant it was for Rolls Royce. There are actually a fair amount of similarities between ARM Holdings' history and our model for success at Rolls Royce. Yes, ARM Holdings was a capital-light provider of software and systems nearly all non-Intel chip designers use to design microchip processors. It struck very important partnerships with Samsung and Apple at the beginning of the mobile revolution and made a mockery of Intel's "moat" in microchip design. Even Intel cried uncle in 2013[12] and announced it would build ARM-based chips.

It became a duopolistic (with multiple other smaller competitors trying their best to gain scale) industry structure, incredibly similar to the current market dynamic GE and Rolls face today in the wide-body jet engine market. For companies wishing to build their own expertise in chip design (Apple and Samsung the largest), ARM was the only option. ARM basically had an exclusive on these chips, similar to what Rolls has done with Airbus's exclusive positions it has granted Rolls. While the aircraft deliveries are expected to grow, this pace is expected to be relatively modest relative to mobile chip growth, which has been staggering over Warren's time. Clearly, given the robust performance of ARM shares, he has attracted many loyal followers. We've spoken with

[12] CNET: Intel on track to build two chips with ARM inside. 11/3/13

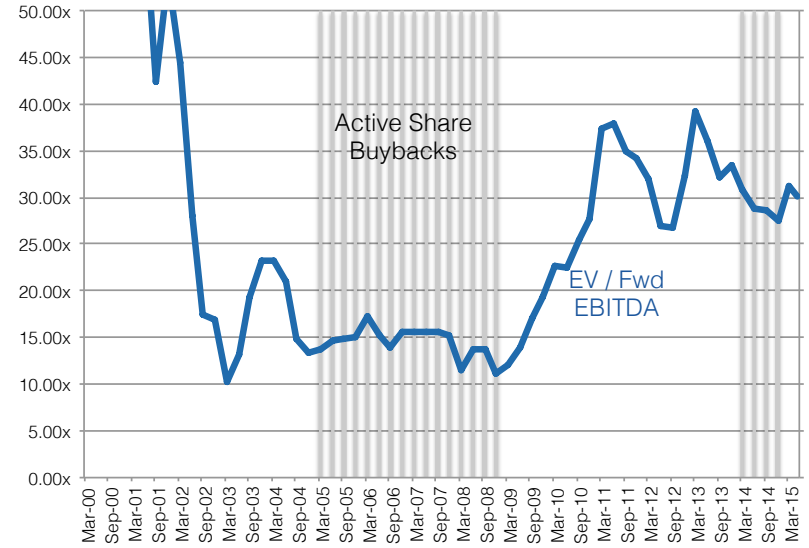
former shareholders of ARM Holdings, and they describe his leadership style to be very technically-focused, playing to his strengths as an engineer. He was very keen to develop an entire ecosystem of happy customers and did so through ensuring ARM had all core capabilities in-house.

Exhibit 18: Warren's Performance as CEO of ARM vs. Main Competition



Also, importantly, when the shares of ARM inaccurately reflected the positive forward dynamics the business faced, East repurchased shares. After shares rose to far more optimistic valuations, ARM began steadily increasing its dividend payout to shareholders. Over the last decade, over half the capital the company has deployed has been returned to shareholders, while just under half has been reinvested into the business. Although Rolls will not run out of investment opportunities in the near future, we would kindly suggest to Warren that the company continue to buyback shares, as the valuation doesn't adequately reflect the transformative position the company finds itself going into in the wide-body jet engine market. Given Rolls is the middle of completing a significant product launch cadence, between the Trent 1000, Trent XWB and the Trent 7000 (which is built on a very similar architecture as the Trent 1000), capital spending in its civil aerospace division will be coming down in the medium term, and accordingly, free-cash-flow will be ramping.

Exhibit 19: Share Repurchase History of ARM Holdings



Data Source: CapitalIQ

Although our argument for vertical integration of the components chain will require some investment, we believe Rolls can accomplish a meaningful level of in-sourcing with relatively modest investments, as GE Aviation was able to do. Though its acquisition of Avio was a significant capital commitment, its acquisition of 3D manufacturing expertise and the construction of components factories were far more modest. Furthermore, smaller acquisitions of components makers will likely carry higher synergistic benefits to Rolls. This was East's bread and butter at ARM Holdings, making numerous small acquisitions that allowed the company to increase its in-house capabilities. East should be very receptive to overtures to in-source key capabilities back into the Rolls aerospace division. In short, we still believe the company will continue to throw off healthy levels of cash-flow, and robust buyback activity is all but mandatory for the CEO who has a roadmap to more than doubling operating margins of his key division.

Exhibit 20: ARM's acquisition history under East

Target	Price	Date	Key Capability
Pixim	$16.5	10/29/01	Imaging chips for digital cameras
Adelante Technologies	ND	7/22/03	Data acceleration technologies
Axys Design Automation	$12.5	8/16/04	Simulation solutions for processors & systems
Artisan Components	$892.9	12/24/04	Component supplier for complex system-on-a-chip integrated circuits
Keil Software & Eletronik	$19.4	10/27/05	Chip development tools
Silicon On Insulator Systems and Integrated Circuits	$10.5	10/30/06	Develops hard IP for silicon on insulator CMOS technology
Logipard AB	$9.4	12/16/08	Power-efficient video encode and decode acceleration technologies
Smooth-Stone, Inc.	$44.0	8/16/10	Equity investment. Creator of power efficient chips
Thundersoft Software Tech	$15.4	6/9/11	Mobile operating system optimzation solutions.
Obsidian Software	$15.1	6/15/11	Verification and validation of processor design.
Prolific	$16.2	11/1/11	Design optimization software tools for circuits
Calxeda	$55.0	10/5/12	Equity investment. Ultra-low power chip manufacturer

A Suggestivist Campaign to Help Warren East develop Rolls' New Plan

With East taking the helm of Rolls on July 2, 2015, we believe it's the perfect time for interested shareholders to share their view of steps the company needs to take to restore its own competitiveness and shareholder trust in the company. These have both been stated objectives of the company over the last year, and we believe the company would be receptive to a constructive dialogue about what is needed.

Contrary to popular theory on activism, we don't believe splitting the Land & Sea division would be very constructive at this point in the cycle. Rolls needs to acquire very little technological capability in the Land & Sea divisions, and public peers are not trading at large discounts to the aviation industry. So there's very little multiple arbitrage that can be had in a split of the company. Besides, GE earns a much more respectable valuation while deriving a far larger share of its revenue from similar businesses, as well as its healthcare division which is facing secular headwinds.

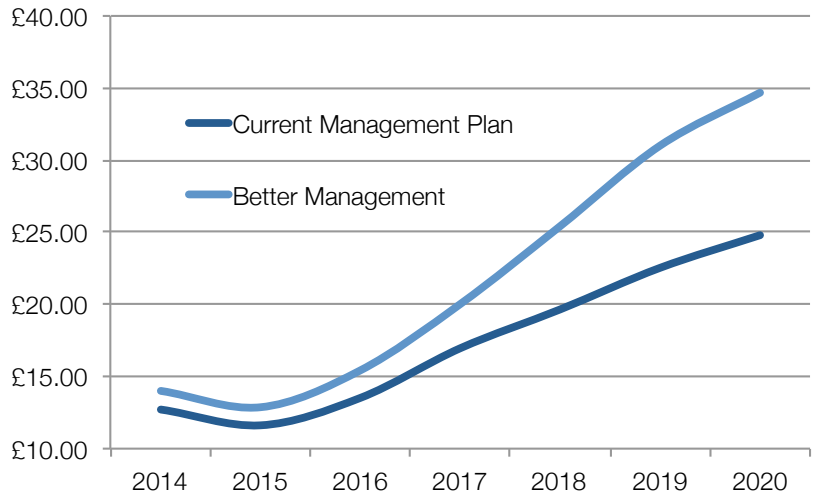
Investor faith in Rolls will only be restored when the company improves its return on invested capital, and profit margins, which are inferior for a duopolistic business. Rolls is somewhat competitive on R&D spending, and is not at a large disadvantage to GE on its operating costs. All of the loss of Rolls Royce's competitiveness has come from the company's out-sourcing of 75% of the value of the engine. This didn't work for Boeing, and it's not working for Rolls Royce. GE has shown the company that with relatively little capital spent (excluding Avio), Rolls can in-source important components of the engine, and better retain its key intellectual property in materials science. The company has already started testing components produced by 3D printers. It is time to start rolling this out across the value chain.

Furthermore, Rolls has key partners already generating higher operating margins than Rolls at far lower economies of scale. Given Rolls is one of only two purchasers of components for wide-body engines, and it has similar scale to GE Aviation in this key segment, tuck-in acquisitions the company can make will allow for significant synergy opportunities in purchasing. Even without these, appropriately-priced acquisitions will be accretive to both margins and Rolls' valuation as it earns very little on its current equipment revenue.

A third important step Rolls needs to take in its aerospace division is the elimination sole-source suppliers. Rolls needs to introduce more competition in the supply chain, and if competition doesn't exist for certain components, it needs to start testing 3D-printing of these components. Rolls has traditionally had a poor on-time delivery performance, but has improved this performance markedly in recent years. We suggest they build on this improvement by increasing the diversity of the supply chain and increasing its self-reliance.

Lastly, after an assessment of the acquisition landscape has been completed, and the company has allocated capital towards expanding its own manufacturing capabilities, we would advocate for a substantial repurchase of stock by the company. Rolls has a very transparent book of growth for the next half-decade, which will generate a significant amount of cash with a relatively high degree of certainty. Rather than wait until the stock reflects this positive trajectory with a richer valuation, we believe Rolls should implement an accelerated stock buyback program of repurchase activity while the shares reflect such poor sentiment.

Exhibit 21: Dynamic Fair Value of RR's Shares



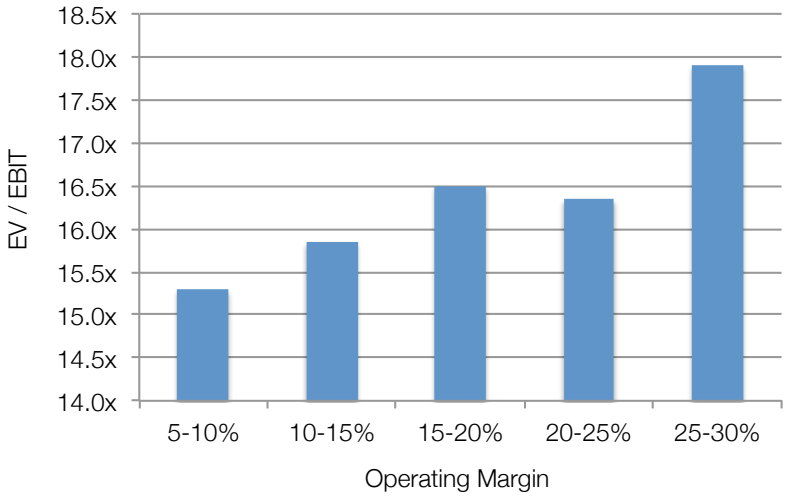
While the British government owns a golden share, this privilege only allows the government to block an acquisition of Rolls Royce. While some funds are more attractive to quick take-outs, we

believe earning a 30-40% take-out premium on today's share price is leaving a lot of upside on the table. Even if the company only achieves its own meager operating profit target of 15% in civil aerospace, and the company's Land & Sea divisions don't recover, we still think Rolls will be worth double its current price within two years, and nearly triple today's stock price in three to four years. Yet, as we show in exhibit 20, the value of better managing the supply chain and lifting margins higher is worth nearly the entire market capitalization today. Our "better management" scenario is one in which the company lifts its core aerospace profitability to competitive levels (~20%, vs. GE in the mid 20%-range at that point), a more aggressive buyback is implemented (with a similar mix to East's record at ARM Holdings), and the stock has mild multiple appreciation given the higher margins (from the longer-term average of 13.6x EBIT to 15.0x EBIT, in line with peers focused on the commercial segment of the aerospace industry).

We note that even the "better management" scenario could turn out to be conservative, as it only assumes average cost savings from the supply chain of roughly 13% over the next four years, despite the company targeting 15% cost savings amongst nearly all of its suppliers currently. We talked to more than one agitated parts supplier at Le Bourget that was upset about the pricing discussions it has had with Rolls recently, but these suppliers still acknowledged little alternative than to either give up the business or work with Rolls. Still, we believe East has an opportunity to "partner" with the supply chain and engage in such discussions in a much more constructive way than simply ramming 15% price reductions down the throats of its supply chain.

We believe that if East is able to meaningfully lift Rolls Royce's operating profit margins to levels that transform the company into a best-in-class manufacturer, investors would be willing to pay a higher price for the same level of profitability than if the company keeps its operating profit margins stable. There are strong statistical correlations that suggest higher-margin companies earn higher valuation multiples, as shown in exhibit 22. Not only would this benefit shareholders, but it would also benefit the company by lowering its cost of capital, and allowing it to more effectively compete against GE for acquisitions of important suppliers to the industry. Maintaining a low cost of capital directly allows the company to maintain industry-leading technology in its engines. Recently GE has been pulling multiple value-creating levers with the aim of further reducing its own cost of capital, thus the case can be made that Rolls must pursue strategic actions in order to restore investor faith in its business with an even greater sense of urgency.

Exhibit 22: Median Valuation Multiple by Margin Class



Source: Capital IQ, market capitalizations >$1B, non-financial firms; n = 1,752

We believe much of Rolls' shareholder base has been aggravated by the underwhelming execution the company has achieved over the past couple of years - ones which should have been banner years for the company. The ill-timed acquisition of Daimler's 50% interest in Tognum was a particular detractor of ROIC performance by the company. The Sequoia Fund, a 1% shareholder, publicly expressed dismay at the former CEO's lack of concern about capital allocation in its year-end 2014 letter. We believe Sequoia is one of many that would like to see Rolls better take advantage of the solid industrial position it finds itself in.

Conclusion

We sincerely hope that GE is able to continue expanding its profit margins, and feel confident that it will be able to do so, as it progresses down the learning curve on the GEnx and the LEAP engine production. It would make the industry even more compelling and allow GE to continue to apply significant capital resources towards innovation. Such innovation is key, as nearly all of the efficiency gains that have been extracted from the new aircraft for sale have come on the backs of GE, Pratt & Whitney, and Rolls Royce. Assembling an airplane is a fine business as it stands today, with only two major competitors. Yet with competition coming from Canada, Brazil, China and even Russia, the competitive barriers to assembling aircraft are becoming thinner. The better way to invest in the robust growth rate of the commercial aerospace industry is through the engine manufacturers, who have continued to widen the competitive barriers to entry. There are only two manufacturers of narrow-bodied jet engines, and there are only two wide-body engine manufacturers - both down from three a decade ago (Engine Alliance, a joint-venture between GE and Pratt & Whitney has less than a 50% market share on trickling production rate of the A380, so we've essentially excluded it). These manufacturers are responsible for nearly all of the reduction in the costs to air travel, and will continue to be so, as Rolls has a product roadmap that leads to 25% fuel efficiency savings by the early next decade. If it were to accelerate the development work on this geared turbofan, and were to gain an edge on the wide-body engine efficiencies, it very well could monopolize the industry.

Given the fleet of wide-bodied planes is the fastest growing segment of the industry, and Rolls expecting significant market share gains, Rolls Royce's commercial aerospace division will be the fastest growing part of this massive global industry. Despite this growth trajectory, its shares are the cheapest among the major players in the commercial aerospace industry. Due to poor historical execution and capital allocation, we believe the market was correct to ascribe a discount to shares of Rolls. Yet, as the company's new CEO embarks on a new strategy to improve the company's performance, the market should reward any progress Warren East makes on returning Rolls to a more competitive profitability position - one that matches its enviable position in the wide-body engine industry. Given a well-executed strategy of vertically integrating the supply chain has the potential to more than double the firm's operating profit margins, the value of a successful re-focusing of the company cannot be understated. Without any heroic assumptions, the value of a better management team at Rolls Royce is larger than the current market capitalization today. The current share repurchase plan should be accelerated as our supply chain optimization efforts are addressed. Thankfully, East will have a daily reminder on his commute to "Mind the Gap."

Thank you for your time.
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Summary Financials on the Following Page

Exhibit 23: Summary Historical & Projected Financials with Better Management

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Civil Aerospace Sales	4,919	5,572	6,437	6,655	6,837	7,272	7,945	9,001	9,746	10,345	10,929
Mix	44%	50%	53%	43%	49%	52%	54%	56%	57%	57%	58%
Defense Aero. Sales	2,123	2,235	2,417	2,591	2,069	2,000	2,100	2,415	2,777	3,194	3,194
Mix	19%	20%	20%	17%	15%	14%	14%	15%	16%	18%	17%
Land & Sea Revenue	4,043	3,317	3,307	6,267	4,958	4,670	4,670	4,670	4,670	4,670	4,670
Total Revenue	11,085	11,124	12,161	15,513	13,864	13,942	14,715	16,086	17,193	18,209	18,793
Installed Civil Thrust	372	390	348	365	387	411	441	479	521	566	611
Civil Aerospace EBIT	392	499	743	844	942	850	1,088	1,412	1,773	2,089	2,261
Margin	8.0%	9.0%	11.5%	12.7%	13.8%	11.7%	13.7%	15.7%	18.2%	20.2%	20.7%
Defense Aero. EBIT	309	376	395	438	366	385	404	465	535	615	615
Margin	14.6%	16.8%	16.3%	16.9%	17.7%	19.3%	19.3%	19.3%	19.3%	19.3%	19.3%
Land & Sea & Elims	433	314	240	485	373	319	325	336	336	336	336
Total EBIT	1,134	1,189	1,378	1,767	1,681	1,554	1,817	2,213	2,644	3,040	3,212
Margin	10.2%	10.7%	11.3%	11.4%	12.1%	11.1%	12.3%	13.8%	15.4%	16.7%	17.1%
D&A	237	239	290	524	600	616	631	635	638	646	656
Capex & Investment	-637	-738	-654	-1,165	-1,125	-992	-818	-643	-688	-728	-752
Net Acquisitions	-148	-12	-21	481	-910	-500	-500	0	0	0	0
Net Debt	-1,474	-111	-1,201	-1,875	-654	417	595	462	227	-103	-483
Equity	3,979	4,519	5,996	6,303	6,741	7,971	8,157	9,037	9,532	10,152	10,884
ROIC	45%	27%	29%	40%	23%	18%	19%	22%	25%	28%	29%
Shares Outstanding	1,871	1,872	1,872	1,880	1,839	1,731	1,689	1,605	1,527	1,454	1,386

Past performance is no guarantee of future results.