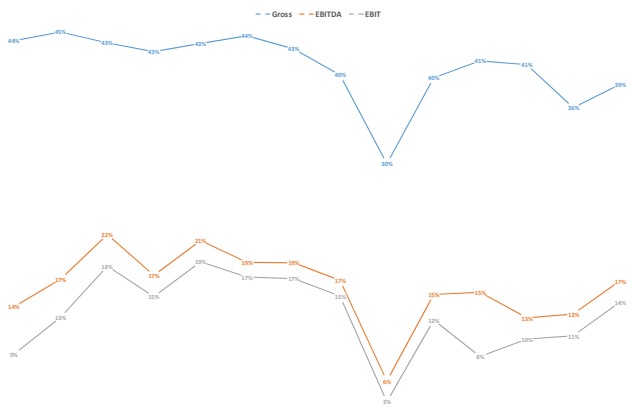
SINGULAR DILIGENCE

Breeze-Eastern

(NYSE: BZC)

Breeze-Eastern (NYSE: BZC)

Stock Price: $11.38



	EV/Sales	EV/Gross Profit	EV/EBITDA	EV/EBIT	EV/Owner Earnings
Columbus McKinnon	1.01	3.24	8.62	10.41	9.61
Textron	1.12	6.35	10.37	14.93	13.46
Air Industries	1.59	7.25	19.42	58.91	30.96
Bristow Group	1.72	5.96	10.18	15.40	14.42
Esterline Technologies	2.16	6.16	12.33	18.19	14.44
Minimum	1.01	3.24	8.62	10.41	9.61
Maximum	2.16	7.25	19.42	58.91	30.96
Median	1.59	6.16	10.37	15.40	14.42
Mean	1.52	5.79	12.18	23.57	16.58
Standard Deviation	0.47	1.51	4.25	19.95	8.28
Variation	31%	26%	35%	85%	50%
Breeze-Eastern	1.06	2.72	6.30	7.34	7.29

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Minimum	Maximum	Median	Mean	Standard Deviation	Variation
Sales	48	55	65	63	64	73	76	75	69	78	85	80	86	90	48	90	73	70	13	19%
Gross Profit	21	25	28	27	28	32	33	30	21	31	35	33	31	35	21	35	31	29	5	16%
EBITDA	7	9	14	11	14	14	14	13	4	12	13	10	11	15	4	15	12	11	3	28%
EBIT	4	7	12	9	12	13	13	11	2	10	7	8	9	13	2	13	10	9	3	36%
Receivables			8	9	13	16	17	20	16	15	19	18	20	23	8	23	17	16	4	27%
Inventory			20	18	17	19	19	19	19	16	15	16	18	19	15	20	18	18	2	9%
PP&E			2	3	5	5	4	4	7	11	10	10	11	11	2	11	6	7	3	49%
Working Liabilities			12	9	12	14	13	13	13	13	14	14	15	15	9	15	13	13	2	12%
Net Tangible Assets			19	21	23	26	28	29	29	29	30	30	35	38	19	38	29	28	5	19%
MARGINS																				
Gross	44%	45%	43%	43%	43%	44%	43%	40%	30%	40%	41%	41%	36%	39%	30%	45%	42%	41%	4%	0.10
EBITDA	14%	17%	22%	17%	21%	19%	19%	17%	6%	15%	15%	13%	13%	17%	6%	22%	17%	16%	4%	0.26
EBIT	9%	13%	18%	15%	19%	17%	17%	15%	3%	12%	8%	10%	11%	14%	3%	19%	14%	13%	4%	0.34
TURNS																				
Sales/Receivables			8.38	6.80	4.80	4.61	4.41	3.77	4.27	5.11	4.48	4.52	4.28	3.86	3.77	8.38	4.50	4.94	1.33	27%
Sales/Inventories			3.22	3.46	3.80	3.80	3.92	3.98	3.73	4.87	5.78	4.93	4.68	4.68	3.22	5.78	3.95	4.24	0.74	18%
Sales/PPE			27.05	18.19	13.85	15.30	17.64	19.61	10.28	7.41	8.12	7.83	7.90	8.39	7.41	27.05	12.06	13.46	6.25	46%
Sales/NTA			3.47	2.94	2.83	2.82	2.70	2.57	2.40	2.72	2.86	2.64	2.49	2.38	2.38	3.47	2.71	2.73	0.29	11%
RETURNS																				
Gross Profit/NTA			151%	125%	123%	125%	115%	103%	72%	108%	119%	108%	90%	92%	72%	151%	112%	111%	20%	0.18
EBITDA/NTA			76%	51%	60%	53%	51%	43%	13%	42%	44%	33%	32%	40%	13%	76%	44%	45%	16%	0.35
EBIT/NTA			64%	44%	53%	48%	46%	39%	8%	34%	24%	27%	26%	34%	8%	64%	36%	37%	15%	0.41
GROWTH																				
Sales	0%	15%	17%	-3%	2%	14%	4%	-1%	-8%	13%	9%	-6%	7%	4%	-8%	17%	4%	5%	8%	1.65
Gross Profit		18%	14%	-5%	5%	16%	0%	-7%	-31%	50%	14%	-7%	-5%	12%	-31%	50%	5%	6%	19%	3.40
EBITDA		41%	52%	-23%	26%	1%	3%	-11%	-70%	213%	10%	-24%	11%	34%	-70%	213%	10%	20%	66%	3.26
EBIT			71%	-21%	29%	3%	3%	-12%	-80%	334%	-27%	17%	11%	42%	-80%	334%	7%	31%	103%	3.34
Receivables			30%	12%	74%	-13%	34%	3%	-40%	53%	5%	-18%	52%	-8%	-40%	74%	8%	15%	34%	2.22
Inventories			4%	-22%	13%	14%	-11%	8%	-12%	-15%	-1%	22%	6%	3%	-22%	22%	3%	1%	13%	18.50
PP&E			3%	85%	7%	-1%	-20%	1%	148%	20%	-19%	17%	-3%	0%	-20%	148%	2%	20%	49%	2.43
Working Liabilities			-29%	-3%	63%	-16%	0%	10%	-20%	34%	-9%	1%	12%	-1%	-29%	63%	0%	4%	25%	7.02
Net Tangible Assets			44%	-5%	18%	11%	6%	2%	-6%	7%	0%	4%	24%	-3%	-6%	44%	5%	8%	14%	1.71

SINGULAR DILIGENCE

Geoff Gannon, Writer | Quan Hoang, Analyst |
Tobias Carlisle, Publisher

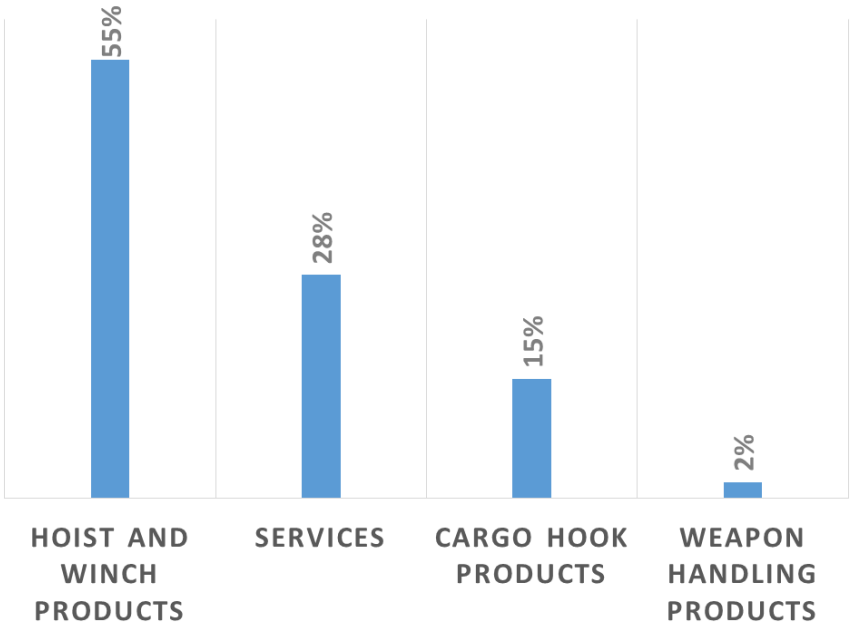
MAY 2015

Breeze-Eastern (NYSE: BZC) is the World Leader in Helicopter Rescue Hoists

OVERVIEW

Breeze-Eastern makes rescue hoists, cargo winches, and cargo hooks for helicopters. A rescue hoist is a cable winching device mounted to a helicopter. It lowers people from the helicopter and then raises them back up to the helicopter. Many rescue hoists are capable of raising 600 pounds of weight. So, it is possible to lower a rescuer down from the helicopter to the ground or sea and then have that rescuer attach the victim and raise them both back up to the helicopter. A Breeze-Eastern rescue hoist can cost $250,000.

The company has one competitor: United Technologies. United Technologies got its helicopter rescue hoist business as part of its acquisition of Goodrich. Goodrich bought Breeze-Eastern's competitor as part of its acquisition of Lucas Aerospace. The rescue hoist business was a small part – less than 10% – of each of those deals. As a result, there is little information about this competitor. It is somewhat smaller than Breeze-Eastern. Breeze-Eastern has a greater than 50% global market share in helicopter rescue hoists. The industry is a true duopoly. Most customers have only two choices of rescue hoist providers: Breeze-Eastern or UTC. Technically, there is one other company in the world that makes helicopter rescue hoists. It is a Russian company – partially owned by the government of Russia – that was created by the merger of two Soviet era helicopter manufacturers. This third



Breeze-Eastern gets 98% of sales aircraft based lifting (winch, hoist, and hook) products and services

company is unimportant globally. Customers outside of Russia do not mention it as a possible provider of rescue hoists. In discussions with potential customers – only two names are ever mentioned: Breeze-Eastern and UTC. So, we will limit our discussion to those two companies.

Breeze-Eastern also makes cargo hooks, cargo winches, and weapons handling systems. The weapons handling systems are munitions hoists and land based rocket launcher systems. They make up less than 2% of sales and are not worth discussing. The rescue hoists, cargo hooks, and cargo winches are all very similar products. They generally involve the same sorts of customers – governments in general and U.S. federal, state, and local governments in particular – and the same sorts of original equipment manufacturers.

An original equipment manufacturer is a helicopter company. In the world of medium and heavy helicopters – which are the helicopters most appropriate for use in search and rescue – there are only 6 original equipment manufacturers:

AgustaWestalnd, Airbus, Bell, Boeing, Russian Helicopters, and Sikorsky. Many of these companies are formed from mergers. Their predecessors are old. Some date back to just after World War Two. In fact, the world's first large-scale helicopter program was the United States and United Kingdom's use of the Sikorsy R-4 starting in 1942. So, Sikorsky started as one of the biggest helicopter makers for Western governments about 70 years ago. It was still probably the biggest last year. We can see a similar story with Russian Helicopters. Russian Helicopters makes a similarly large number of military helicopters as Sikorsky. Russian Helicopters supplies about 85% of the Russian demand for helicopters. Parts of Russian Helicopters date back about 60 years. So, like Sikorsky, Russian Helicopters has a strong market position serving the same governments it did over half a century ago when mass production of helicopters began. This is typical of the other helicopter manufacturers as well. They grew in tandem with the government demand for helicopters in the geographies that were open to them historically.

The concept of a helicopter "model" is an important part of this industry. We will take a very familiar model – Sikorsky's Blackhawk UH-60 – as an example. This helicopter can trace its roots to the original S-70 design. So, we will discuss that whole family here. The U.S. military wanted to replace the Bell UH-1 Iroquois. The Iroquois – originally called HU-1 – is probably better known to you as a "Huey". It was used extensively in the Vietnam War. Several thousand Hueys were built over a couple decades. Then the U.S. government decided to hold a contest to replace the Huey. The U.S. government used its experiences in the Vietnam War with the Huey to devise a set of requirements the replacement design should meet. Helicopter manufacturers came up with designs to meet these requirements. And the U.S. government chose Sikorsky's design. To give an idea of the timeline, the U.S. government started forming requirements for this design sometime in the 1960s. A request for proposals went out in 1972. Sikorsky flew its prototypes for the first time in 1974. The company didn't actually deliver any prototypes to the government until 1976. The Sikorsky prototypes were then tested against Boeing prototypes in that year. The U.S. picked the Sikorsky version. The first delivery was taken in 1978. And the Blackhawk entered service in 1979. Over the last 35 years, more than 4,000 helicopters have been built. They cost over $21 million a piece. That means that tens of billions of (real) dollars have been spent on these helicopters. Countries that are friendly with the United States and have need for helicopters for search and rescue, troop transport to remote areas, counterinsurgency, and special forces deployment have also received helicopters in this series. The list is long: Australia, Austria, Bahrain, Brazil, Brunei, Chile, China (PRC), Columbia, Egypt, Israel, Japan, Jordan, Malaysia, Mexico, Morocco, Philippines, Saudi Arabia, South Korea, Sweden, Taiwan, Thailand, Turkey, and the United Arab Emirates. This discussion has included all variants of the original S-70 design that was submitted to the U.S. government as the "Huey" replacement. Some of these variants are for civilian use. Others are meant for export to other countries. Some are heavily modified. A few are secret. For example, a quieter version of this helicopter was used in the U.S. special forces raid that killed Osama Bin Laden.

Now, let's imagine you are a rescue hoist manufacturer for the Blackhawk. In late 1960s, you might hear the U.S. military wants to replace the Bell helicopter it now uses. Once the request for proposals comes out in 1972, you have to be working with Sikorsky – spending your own money, not Sikorsky's as we'll explain later – to design a rescue hoist to work well with this brand new helicopter. A couple years later, that hoist will be tested. At this point, you don't know if this helicopter will ever see production. The government might choose that competing Boeing model instead. So, all you have is a sunk cost in development of this design. And it won't be until the first helicopters are delivered around 1978 that you start booking revenue. Sadly, the first revenue you book won't be very profitable. Because you have about a 30% gross margin on sales to original equipment manufacturers like Sikorsky. The after-market revenue – where you make most of your money – won't start rolling in until 1980 or later. So, in this case, you began design work probably 8 years before you start making a meaningful gross profit off the project. But, once the model is a huge hit – like the Blackhawk was – you can continue to grow your installed base of hoists and make after-market revenue with a 60% gross margin for the next 30 or 40 years.

This is how Breeze-Eastern and UTC operate in rescue hoists. Breeze-Eastern designed its first rescue hoist for Sikorsky in the early 1950s. Breeze developed a rescue hoist specifically for Sikorsky's H-19 Chickasaw. That model was first flown in 1949 and entered service in 1950. It was used by the U.S. Army, Air Force, Navy, Coast Guard, and Marines. A licensed version was produced for the United Kingdom military. Over 1,000 of these helicopters were built. It was the first true transport helicopter. The U.S. used the Chickasaw as its primary medical evacuation and rescue helicopter during the Korean War. About 65 years later, Sikorsky is still one of the biggest suppliers of helicopters to the U.S. government and Breeze-Eastern is one of the biggest suppliers of rescue hoists designed to work with Sikorsky helicopters. Sikorsky has continued to design helicopters for the U.S. government for all those years. And Breeze-Eastern has continued to design rescue hoists for Sikorsky's helicopters.

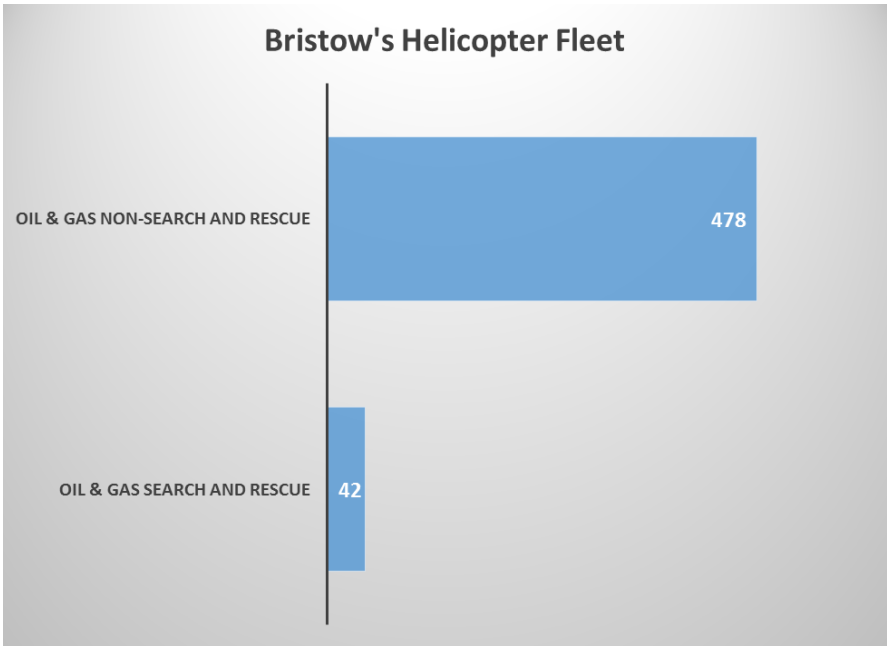
Breeze-Eastern's business is extremely simple. All manufacturing is done at one New Jersey location. The company really has only 7 product models. It sells 4 rescue hoist models, 2 cargo hook models, and 1 cargo winch model. These models make up the installed base on which Breeze-Eastern then makes repair, replacement, and service revenue. The gross margin on the hoists themselves are

about 30% when sold to an original equipment manufacturer like Sikorsky. The gross margin on the spare parts is around 60%. Breeze-Eastern is the sole source for about 90% of its spare parts. Breeze-Eastern and UTC parts are not interchangeable. Customers are locked into a razor and blade model where they have no choice of spare part supplier once they pick a particular rescue hoist. These spare part customers often operate small fleets of search and rescue helicopters. In discussions with customers, it is obvious that they prefer to use one and only one rescue hoist provider. So, a customer chooses either Breeze-Eastern or UTC and then outfits every helicopter in its search and rescue fleet with a hoist from that supplier. The only reason customers ever seem to switch from Breeze-Eastern to UTC or vice versa is when they get annoyed that a critical spare part is taking too long to arrive. Breeze-Eastern is trying to improve the speed at which it delivers replacement parts. This is by far the biggest complaint among customers of both Breeze-Eastern and UTC. Several customers reported some spare parts can take much longer than 90 days to arrive. And while the rescue hoists rarely break – when they do break, that search and rescue helicopter has to be grounded until the replacement part arrives. Customers do not keep spare parts on hand. And finished inventory levels at Breeze-Eastern and UTC are low.

DURABILITY

Oil Price Declines and the U.S. Withdrawals from Iraq and Afghanistan Will Decrease Demand for Helicopters – But Not Search and Rescue

Sikorsky is one of Breeze-Eastern's biggest customers. And Sikorsky's sales have been unusually high lately. They will certainly fall. So, you might assume that Breeze-Eastern's sales will also fall. That's not true. To explain why we need to take a look at just how niche the rescue hoist business is.



Helicopter services company Bristow equips only 8% of its fleet for search and rescue

Rescue hoists are used by governments. The end users for more than 81% of Breeze-Eastern's products are government agencies of some sort. Government agencies in the U.S. account for the majority (53%) of Breeze-Eastern's sales. Typical examples include the California Fire Department, the Maryland State Police, and the U.S. Coast Guard. You can already imagine what the coast guard does with rescue hoists. Let's focus on the California Fire Department and Maryland State Police for a moment. There are countless state agencies throughout the U.S. with similar needs. We just picked one state's fire department and another state's police department so we can give you some specifics.

Every helicopter in the California State Fire Department is equipped with a hoist. These hoists are used to rescue firefighters during wildfires. Firefighters can require rescue for two reasons. One, they can get hurt. Helicopters can't land in the places where wildfires happen – so an injured firefighter might be rescued the same way an injured hiker would be. Also, the fire could move in such a way that it now blocks the firefighter's escape route on the ground. The firefighter would then need to be extracted by helicopter. In both cases, a rescue hoist is needed. The crews that operate these helicopters need to train in search and rescue. So, training exercises have to be conducted whether or not there is an actual disaster.

Now let's look at the Maryland State Police. The Maryland State Police have a fleet of 20 helicopters. They have 11 Eurocopter AS365s and 9 AgustaWestland AW139s. They use these helicopters both for law enforcement and emergency medical transport. They haul boaters out of the ocean on Maryland's eastern shore. And they rescue injured hikers from some of Maryland's western counties. The Maryland State Police do about one rescue a month.

In the 2000s, growth in the global helicopter fleet was driven by the U.S. invasions of Iraq and Afghanistan and the growth in offshore drilling. The military aspect of that growth is now completely gone. At its peak, the U.S. had close to 350,000 troops in Iraq and Afghanistan. Today, the combined total is closer to 10,000. This is not a large number when compared to U.S. troops stationed in other – peaceful – parts of the world. So, Iraq and Afghanistan will no longer be important to the

demand for helicopters. During the two wars – we will use the period from 2003 to 2011 here – Sikorsky's sales grew from $2.2 billion to $7.4 billion. That a growth rate of 16% a year. Sales have since declined. For the entire period from 2003 to 2014, Sikorsky's sales still grew more than 8% a year. Breeze-Eastern's sales grew less than 3% a year during the same time period. So Breeze-Eastern's sales do not depend on wars.

Breeze-Eastern and UTC make rescue hoists for use with medium and heavy helicopters. There are really only 6 makers of such helicopters in the world. And only 5 of them – Russian Helicopters is mainly just in former Soviet states – are part of this discussion. These 5 companies are the only real threats of new entry into the business. And there are good reasons for them not to enter. Less than 10% of a helicopter manufacturer's units sold will tend to be outfitted with a rescue hoist. In other words, for 90% of the purchases of a helicopter – the customer is not interested in a rescue hoist. Even in those cases where the customer does want a rescue hoist, the rescue hoist will cost less than 5% of the total cost of the helicopter. The gross profit on the original equipment can be as low as 30%. So, assume a Bell 412 costs a customer $9 million. Assume Breeze-Eastern would charge Bell $250,000 to put a rescue hoist on that Bell 412. Breeze-Eastern would only make $75,000 in gross profit on that hoist. Even if Bell made every rescue hoist that would ever be used with a Bell helicopter – it would have nowhere near the same market share as Breeze-Eastern does. Therefore, Bell's cost of goods sold would have to be higher than Breeze Eastern's due to diseconomies of scale. Now consider that Breeze has only 4 rescue hoist models and it supplies most of the worldwide market for rescue hoists. Furthermore, consider that Breeze-Eastern manufactures all of its hoists in one location. And finally, keep in mind that most of Breeze's profits are made on after-market sales. As explained in the Maryland State Police example a customer might have a search and rescue fleet made up of half Airbus (Eurocopter) and half AgustaWestland helicopters. It is definitely more common to buy from two different helicopter manufacturers than it is to use two different rescue hoist suppliers. So, there are diseconomies of scale to any entrant into the rescue hoist business in terms of: 1) Lower corporate market share 2) Fewer units made per factory 3) Fewer units sold per model 4) Fewer units sold per customer. Some of these problems might be surmountable. But, they are unlikely to be very profitable. And the biggest hurdle for the helicopter manufacturers entering this business is that the only way to get sufficient scale would be to supply their competitors. If they were making a commodity type product, this wouldn't be much of a problem. But truly new rescue hoists – those 4 models that Breeze-Eastern has now – are originally designed as part of a new helicopter project for one of the 5 big helicopter companies. If Bell wanted to enter the helicopter rescue hoist business would Sikorsky want to involve Bell in the design of their helicopter – or would they simply choose Breeze-Eastern to avoid involving a competitor? The ultimate proof of the durability of this rescue hoist niche is probably UTC's acquisition of Goodrich. UTC owns the world's second largest rescue hoist maker. UTC also owns Sikorsky. Sikorsky has two choices of rescue hoists to work with its helicopters: Breeze-Eastern or UTC Aerospace. One of those companies is a subsidiary of the same publicly traded company as Sikorsky. UTC owns both Breeze's biggest competitor and Breeze's biggest original equipment manufacturer partner. And yet, United Technologies never told Sikorsky to stop working with Breeze and better integrate its rescue hoist unit with the helicopter unit. There is a good reason for this. Sikorsky has revenue of over $6 billion a year. UTC's rescue hoist business sells a lot less than $100 million a year. Sikorsky is a big customer of Breeze. So we have data on Sikorsky's purchases from Breeze. That data shows that despite being a huge customer for Breeze – purchases made from Breeze account for less than 0.1% of Sikorsky's total sales. In all these cases, we are talking about far less than 1% of the original equipment manufacturer's total costs going to rescue hoists.

That makes this a very closed off niche. Entry is difficult because it is a razor and blade business. Customers are sticky. The unit volume in the market grows slowly. The two duopolists have a 50 year or more head start. There are upfront sunk costs in designing a base model to work with a specific helicopter. Doing this means cooperating with one or more of the big helicopter manufacturers. Why would competing manufacturers want to work closely together? And why would they pursue such a complex undertaking with high upfront costs and returns that only materialize years down the road if the best they could hope for is to reduce their costs by a fraction of one percent per unit sold? The fact that even while Sikorsky and UTC's rescue hoist business shared a corporate parent they did not integrate the helicopter and rescue hoist units shows the durability of this duopoly. There will always be a need for search and rescue. Helicopters will fill that need. Those helicopters will need rescue hoists. And those rescue hoists will be bought from either UTC or Breeze-Eastern. Once those hoists are installed, customers will be locked into buying high gross margin replacement parts from the same supplier. Those replacement parts will give Breeze-Eastern durable earning power.

MOAT

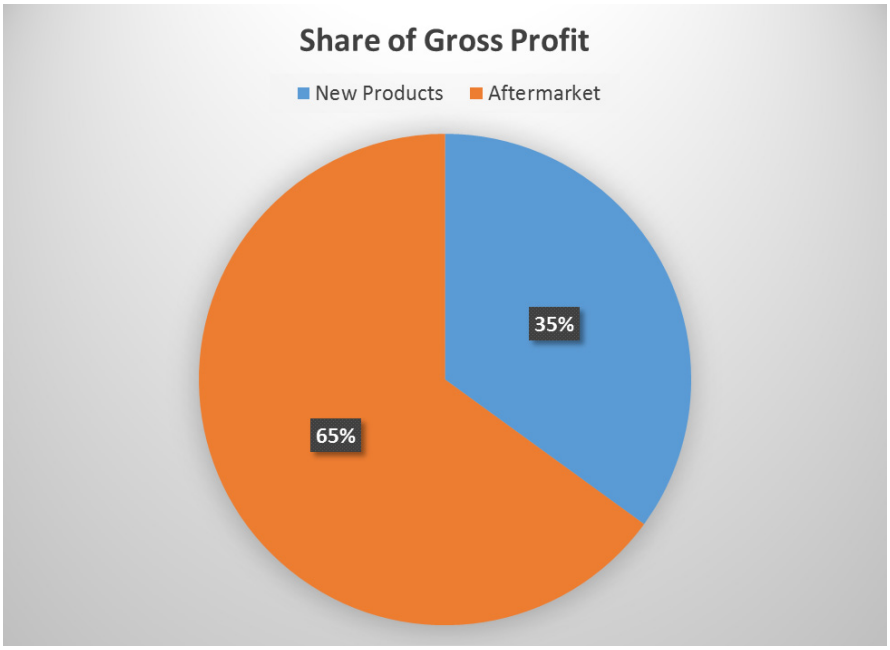
Breeze-Eastern is the Sole Supplier of Replacement Parts for its Rescue Hoists

Breeze-Eastern has over 50% market share in helicopter rescue hoists. Outside of the former Soviet Union, it is part of a true duopoly with UTC Aerospace. Most customers believe they have only two choices for rescue hoists. They can either go with UTC or Breeze. It is important not to overstate the technical difficulties of this business. Breeze is a duopoly. And there are good reasons to believe it will stay a duopoly.

But there are not serious technical obstacles to overcome to enter the rescue hoist business. In fact, it is possible to modify a helicopter designed to work with a Breeze rescue hoist so it can instead be equipped with a UTC rescue hoist.

There are many more helicopter models than rescue hoist models. There is no need to design a completely new rescue hoist model for each helicopter model. A former Breeze-Eastern engineer told us: "In general I would say rescue hoists though somewhat customizable for each airframe in general the overall design was consistent. As with any aerospace product there is some uniqueness per aircraft whether it is electrical or mechanical interface or some unique performance requirement. But Breeze has a great baseline hoist that was easily modified as needed for the application."

Breeze's experience in cargo winches is probably similar to what a new entrant in rescue hoists would face. Breeze had a high initial investment. After this initial investment was made, Breeze hoped to invest much less in engineering each subsequent cargo winch project it worked on because it would have a base to work from. Here is a quote from a 2011 earnings call: "… we are using the engineering work that we've done for those in our bidding on other programs – so trying to use derivatives off of that with much less engineering – incremental engineering investment or effort than we had to make to do the from scratch development on a couple of those cargo winches."



Breeze gets 2 out of every 3 dollars of its gross profit from after-market sales and services

Although Breeze is part of a duopoly without a lot of change, it would be wrong to equate the technical challenges Breeze and its competitors face with something like what Babcock does in nuclear power components for the U.S. Navy. Rescue hoists are fairly simple. They only average a cost of about $250,000. There are not huge risks of cost overruns or delays in construction due to technical challenges. A rescue hoist is a niche product. But it is still a product. It is not a custom project. Historically, Breeze or UTC invested in all the upfront spending on designing a hoist to work with a certain helicopter. This is a big reason why the original equipment manufacturers do not mind a duopoly. They can choose from one of two companies who can offer a good solution. And those two companies will spend the necessary time and money on designing the hoist. The rescue hoist manufacturer then benefits from that new helicopter model specifying the hoist it is meant to work with. But, eventually, a popular helicopter model will be capable of working with a hoist from either company. This is because – eventually – the competitor who did not work on the helicopter when it was originally introduced does the necessary engineering work so it has a hoist that can work with that helicopter. The Sikorsky Blackhawk, Bell 412, Eurocopter AS350, AgustaWestland 109, and many other helicopters now work with rescue hoists from either Breeze-Eastern or UTC. So, a customer can buy a fleet of Blackhawks and then have its choice of which hoist to use: Breeze-Eastern's or UTC's. It's not clear how important this choice is to the competitive position of the two companies. That may seem like a strange statement. But there are two facts to consider. One, when a new helicopter model comes out it generally has only one hoist meant for it. So, if you are an agency getting deliveries of some helicopter within the first few years of its introduction – you may not have a real choice. Also, customers – unlike the original equipment manufacturers – are focused on search and rescue. So, a customer might have 10 helicopters and even when buying a new model, they may still have 5 helicopters of a different model. In the Maryland State Police example we gave, they have a fleet of 20 helicopters split between 11 of one model and 9 of the other. A customer

would not like to use one supplier for repair and replacement work on half the fleet and another supplier for repair and replacement parts on the other half of the fleet. Remember 90% of replacement parts are proprietary and the two companies' parts do not work together. This preference may sound excessive. Airlines, militaries, government agencies, etc. frequently operate more than one model of airplane or helicopter in their fleet. Why not use two different kinds of rescue hoists? But there is an extensive distribution structure for even proprietary parts from most airplane and helicopter manufacturers. Remember, there is easily 10 or 20 times more helicopters out there than there are helicopter hoists. And there are far, far fewer helicopters in the world than airplanes. Logistically, it is much easier to service airplanes than helicopters. And it is much easier to service helicopters than to service helicopter rescue hoists. The inventory levels related to rescue hoists are very, very low. We know this because we can see Breeze-Eastern's inventory levels and we know how long they take to get replacement parts to customers. We also know UTC is no better.

This is an area Breeze is working on. But, it is worth discussing the logistical problem caused by how small the rescue hoist niche really is. One customer told us: "My issue is that we equip all 12 of our helicopters with hoists and the operations are things we train extensively on. If a hoist is taken out of service we get very uncomfortable because one of our prime reasons for having them is to rescue our own firefighters from getting burned over by a forest fire or for getting an injured person in a remote area out for medical attention. I'm not sure either company gets that and it may be that the armed services have enough spares so that it never happens. The hoist is used because in almost all instances where it is used it is not possible to land the helicopter. So we don't like having a helicopter available but no hoist. They don't break often but they do break."

Another customer who complained about the lack of customer attention explained this problem is caused by the size of the addressable market: "UTC is the only manufacturer that makes the type of hoist we use and we selected (that hoist) for some very specific reasons. I suspect that things would be different if there were 5 manufacturers who made a hoist like this and they were interchangeable, with little or no work, but the market is too small for that to happen, so here we are."

Customers know they can modify their fleet to use Breeze or UTC hoists. And several customers told us they have heard of people doing this. The reason for switching was always poor customer service. But the problem is that "there are significant changes in the fixed provisions" Fixed provisions are non-optional (required) parts. This point of fixed parts was stressed to us again and again by customers and engineers. For example, another customer told us: "…the external hoists from both manufacturers do not have any interchangeable parts. Wiring diagrams are also specific to each manufacturer. Each hoist type comes with a helicopter model specific flight manual supplement so these are also different between hoist manufacturers and helicopter models."

So, it is not technically very difficult for Breeze-Eastern or UTC or anyone else with a good base hoist system to engineer solutions that work with different helicopter models. It is also not impossible for a helicopter operator to switch from one hoist to another. But there is an installed base of search and rescue helicopters out there. And each hoist manufacturer's replacement parts only work with their own hoists. This discourages switching between hoist suppliers. If an operator believes the two companies offer roughly similar solutions the obvious decision is to stick with the solution they already have in place. This is why delivery times can be slow and gross margins can be high on replacement parts. Historically, it has probably been the case that Breeze and UTC work harder to please an original equipment manufacturer than they do to please the helicopter operators. As we've mentioned before, Breeze's CEO has said they plan to improve customer service and speed up delivery times. But, historically, once an operator is using a certain hoist they generally have to deal with slow delivery times and high prices on the parts they need.

QUALITY

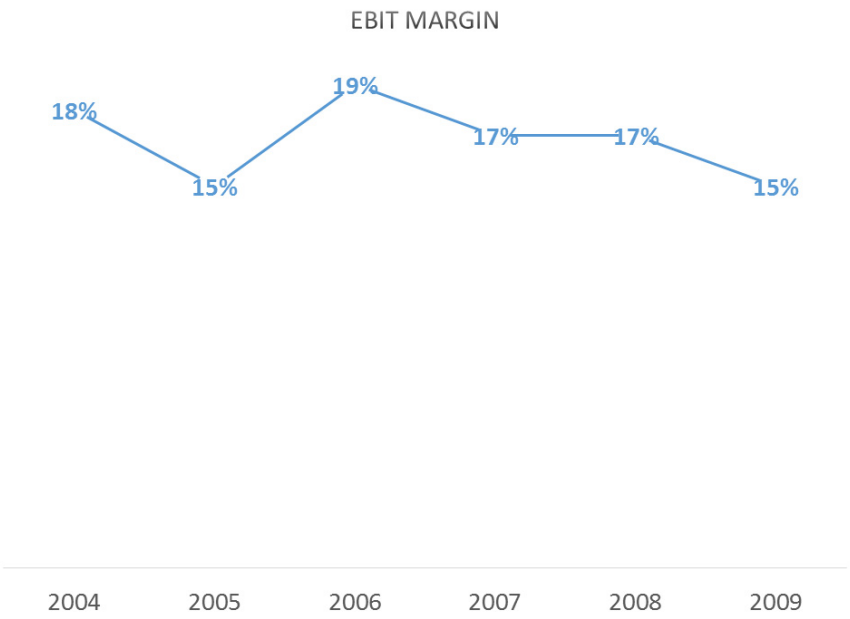
Breeze Eastern Can Make a 20% Return on Equity Without Using Debt

Breeze-Eastern can make a good return on capital in normal times. From 2004 through 2009, the company's EBIT margin ranged from 15% to 19%. Historically, sales have been about 2.5 times net tangible assets. Even if the company's EBIT margin was normally as low as 15% and the company's sales turnover was as low as 2 times net tangible assets – the result would still be a 30% pre-tax return on capital. That is equivalent to a 19.5% unleveraged return on equity when taxed at the U.S. corporate rate of 35%. Breeze-Eastern gets some of its sales in lower tax countries. And it is controlled by 3 investment firms. Two of these firms are value investment funds. They are unlikely to let the company build up unneeded cash. Instead, Breeze is likely to pay out dividends when it has too much cash. As a result, the company is unlikely to achieve a return on equity below 65% of its pre-tax return on capital. So, it is a safe estimate to use a 20% after-tax return on equity as the likely floor for Breeze's profitability.

Recently, Breeze reduced spare parts delivery times. The company used to deliver parts in about 90 days. It has cut that down to 30 days for many parts. The most

commonly ordered parts can now be delivered in as little as two weeks. This required additional investment in staff and – of course – inventory. Overhaul and repair times have also been shortened. For these reasons, it is not safe to assume Breeze's sales turnover will be as high in the future as it was in the past. Instead, Breeze will now generate fewer sales per dollar of inventory. If Breeze continues to invest in more inventories, the company's sales levels could fall from the current 2.5 times net tangible assets to more like 2 times net tangible assets. We assumed the more conservative of those two numbers above in the 20% return on equity calculation.

Breeze's EBIT margin should be capable of averaging 15% to 20%. It has not been good in recent years. But, there are obvious explanations for why the EBIT margin has been so low. Breeze's gross margin across the entire company has historically been in the lows 40% range. This is a combination of two separate types of sales. Spare parts have about a 60% gross margin. Sales of the rescue hoist equipment itself have about a 30% gross margin. Gross margin is now lower than it has been historically. In 2014, Breeze's gross margin was 36%. This was caused by a sales mix with more new equipment than spare parts than is normal. New products have especially low gross margins. This is because costs are probably highest for the first units of a particular model Breeze builds. Over time, costs can be controlled without any need to have lower prices. In other words, Breeze makes an upfront investment of sorts in a new project in several ways. One, it spends on engineering costs before the product can be commercialized. Two, it sells low margin equipment first and only high margin spare parts later. And three, it is at the greatest risk of having high costs with the first units it produces of a given model. This is typical of work done for the military. Once a product is being serially produced in fairly stable volumes a few years after its initial introduction, costs



During the fairly normal years of 2004-2009, Breeze averaged a 17% EBIT margin

to the manufacturer are often lower and margins are usually quite a bit higher. Companies that do defense work have the greatest risk of poor profitability when they are pursuing and then have won new contracts. Although such wins can increase sales, they often reduce gross margin when the work is being done on models that are new to the marketplace.

Breeze-Eastern's margins – both gross and operating – have been under pressure for almost 10 years now. The company invested in new programs in 2006. This was under different management. The shareholders who now control the company fired the CEO who pursued these programs. They most likely fired him because he was spending a lot up front – investing in the long-term future growth of the company, instead of getting results today – and using debt to do it. During the 2000s, Breeze had a very bad debt situation. This was due to its former parent company making acquisitions unrelated to Breeze's core business. The Breeze unit was always profitable. And once the corporate debt was taken care of, shareholders expected the value of the rescue hoist business to be obvious. Spending on the pursuit of new business may have delayed the stock market's recognition of the value of the new – slimmed down and focused – Breeze Eastern.

Since 2006, Breeze invested in programs like the Airbus A400M, the Alenia C-27J, the Sikorsky CH-53K, and the Boeing B22. The company pays all development costs for its equipment that will be used on these projects. From 2007 to 2011, Breeze spent more than $20 million on the Airbus A400M program. This is the troop transport plane that recently crashed – killing several Airbus employees – during a test flight in Spain. The future of the Airbus A400M is uncertain. It could potentially be a huge program with many planes sold over many decades if it has the kind of wide acceptance that Lockheed's C-130 Hercules has had over the last 50 plus years. Even before the fatal crash on the test flight in Spain, the Airbus A400M had problems. It had cost overruns. And it was delayed. Some degree of cost overruns and delays are typical on almost all projects of this scale. If you read the newspaper articles from the year or years just before the introduction of what would go on to be a very successful commercial passenger plane or defense program – they are almost always negative. And one deadly crash does not mean a plane will never go on to gain wide acceptance among the world's militaries. But the Airbus A400M

was delayed even before the crash. This program – like all of the programs Breeze works on – is ultimately speculative. We can't tell you if there will ever be a big base of Airbus A400Ms for Breeze to work on. The first plane was delivered in 2013 to the French government. Between 2007 and 2011, Breeze-Eastern's EBIT margin was depressed by 5 full percentage points as a result of development spending on projects like the Airbus A400M. The company has also had very low gross margins on the cargo winch – which is a completely new product for Breeze – it sells for the Airbus A400M. So, the combination of gross cost and operating cost impacts from programs like this are big. They are also temporary. Breeze's shareholders have different ideas than the CEO who first pursued some of these programs. In the future, Breeze is likely to spend less on development. It is likely to see higher gross margins on equipment like the cargo winch as it has experience making more of them. And it will certainly have much higher gross profit once there is a meaningful aftermarket in parts and repairs for these programs. As a result, Breeze's gross margin and operating margin will be higher in the future than they were in the last 10 years. Normal engineering expense is probably $6 million to $8 million a year. In normal times, about half of this amount (4% of revenue) is spent on new products and the other half on existing products. One possible problem for Breeze's future is insufficient reinvestment in engineering on new projects. Breeze's shareholders seem more short-term oriented and concerned with financial results than with long-term growth. They are not – by investment fund standards – short-term investors at all.

Breeze may be run more conservatively in the future than in the past. Any ill effects of a lack of aggression in pursuing new business and spending enough on engineering will not show up in Breeze's results for years. Decisions Breeze's management made almost 10 years ago are still now having an effect on the business. It is difficult to assess the return on investment from some of these programs. Given the time value of money, they don't seem to have been especially high ROI decision. And there is no reason to believe Breeze's future approach to development will have a lower return on investment. But it might reduce the company's long-term growth rate or market share. It would be a very long time before any of this trickled through the income statement because of how front loaded investment is and how back loaded high gross margin sales are in this industry.

CAPITAL ALLOCATION

Breeze-Eastern's Capital Allocation Will be Decided by its Big Shareholders

We have no history of past capital allocation decisions to judge Breeze Eastern on. The company's current shareholders have only controlled it for the last 10 years or less. And for some of those years the CEO's ideas about capital allocation were not shared by those shareholders. Let's talk about who the major shareholders are. Then we can speculate on what these shareholders might do in terms of capital allocation.

Breeze's largest shareholder is Tinicum Capital. Tinicum is a reorganization focused investor. It owns 35% of Breeze's shares. The company bought 2.5 million shares of Breeze Eastern at $7.50 a share in a 2006 private placement. Tinicum bought more shares in 2011.

Breeze's second biggest shareholder is the Wynnefield Partners Small Cap Value fund. Wynnefield bought 2.1 million shares of Breeze in 2006. It now owns 22% of the company.

VN Capital is the third largest shareholder. VN started buying stock in Breeze in 2011. It kept on buying after that. It now owns about 12% of Breeze.

So, to recap: 69% of Breeze-Eastern shares are in the hands of 3 investors. They are: Tinicum (35%), Wynnefield (22%), and VN (12%). The two biggest shareholders first invested as early as 9 years ago. The third largest shareholder bought its first shares about 4 years ago. By investment fund standards, these are pretty long-term investments. It is possible that they were not intended to be quite this long though. Breeze is a thinly traded stock. These are big positions. The exit strategy for these funds might be a sale of the entire company.

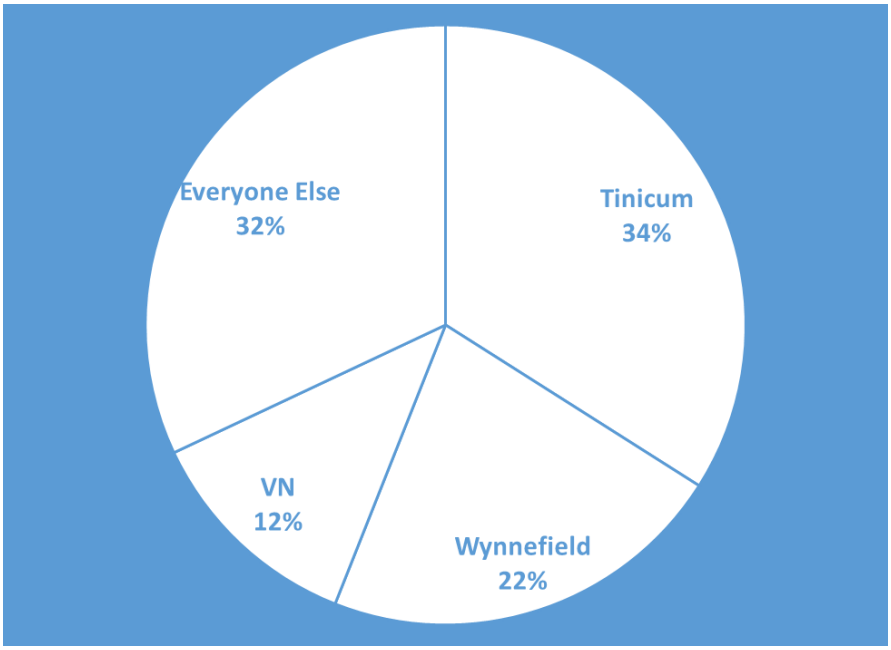
VN and Wynnefield consider themselves value investors. VN's returns since 2002 are excellent (about 14% a year). VN is a concentrated investor. A typical portfolio would be 8 to 12 stocks that are small and overlooked. The average holding period lasts many years. Wynnefield also prefers undervalued stocks that are underfollowed by the investment community. Breeze Eastern is small and obscure. So, you can see why these value fund were attracted to Breeze.

Tinicum's investment makes more sense in context. Breeze was a distressed investment when Tinicum took its position. Tinicum does private transactions and restructurings. It takes minority positions in both public and private companies. And it focuses on industries that are undergoing change or are out of favor. This last part does not fit Breeze-Eastern. The rescue hoist industry was not undergoing change when Tinicum took the position. Nor was the industry out of favor – just overlooked as always. The reason for Tinicum's investment were purely financial. Breeze – which was then called TransTechnology – was a financially distressed corporation. The rescue hoist business unit (which is all today's Breeze consists of) was fine then just as it is fine now.

Let's talk about TransTechnology then. I avoided discussing this public predecessor to Breeze in the overview that started this issue, because it is not relevant to the company as it exists today. It's just a historical accident that this stock happens to be the same corporation that was TransTechnology around the turn of the Millennium. The management of that company is not the management of today's Breeze. The only real link between TransTechnology and Breeze is the presence of Tinicum (and in a lesser sense Wynnefield) as shareholders who were probably attracted specifically by the restructuring of TransTechnology into today's Breeze-Eastern.

Breeze was a successful unit of TransTechnology in the 1990s. TransTechnology then took cash from its Breeze unit and borrowed quite a lot of debt – the company owed $271 million in 2001 – to acquire other businesses. It was basically a decade long acquisition binge. It ended in 2001 when TransTechnology decided to reorganize. By 2003, TransTechnology had disposed of everything but Breeze. It had $46 million in debt at that point. The interest rate was around 20%. This was a severely distressed public company. In 2006, Tinicum and Wynnefield invested in TransTechnology. The name was changed to Breeze that same year.

Right away, shareholders and management did not get along. This is an understatement. You can find a 2008 earnings call transcript online if you search for it where Bobby Melnick (a major shareholder) and Bob White (the then CEO) had a much blunter discussion than is normal on an earnings call. Wynnefield wanted Breeze to focus on reducing debt instead of investing in the development of new projects. As a result, the CEO in place before 2006 – Bob White – was fired in 2009. Another CEO was brought in. He lasted from 2009 to 2012. Shareholders wanted him to clear up the engineering backlog, tighten cost controls, and then make sure the



Almost 70% of Breeze-Eastern is owned by just 3 investment funds

company didn't take the kind of financial risks Breeze had on new projects under Bob White. He seems to have done this. Or at least run the company in a way more consistent with what major shareholders wanted than had been done from 2006 to 2009. But, then this new CEO was fired too. I'm not at all clear on what happened here. Because the CEO who served from 2009 to 2012 – Mike Harland – kept his shares in the company. And he asked questions in the earnings calls. Brad Pedersen was made CEO in 2012. He has served from May 2012 to the present day. Still, we are only talking 3 years here. So, Breeze has had 3 CEOs in less than 9 years. And no CEO has served for more than about 3 years under the major shareholders who took control of Breeze around 2006.

It is worth noting that these 3 shareholders who own 69% of Breeze are not one unified group. It seems that in the early days after the 2006 restructuring, Tinicum and the other big investors were not in as much of a consensus about what direction the company needed to go in – or at least, how quickly it needed to go there – as they became after about 2009. You can read the 2007 and 2008 earnings call transcripts and see how openly hostile some shareholders were to the sitting CEO. Bob White was fired in 2009. And the strategy from 2009 through 2015 fits the approach Wynnefield advocated from early on rather than the approach Bob White was taking. So, even though there was no change in control in 2009 – that is a meaningful pivot point in the history of the company. However, because of the lag in how long projects take, the sharpness of this break in the company's history may not be so obvious.

The stock market has not reacted positively to Breeze's change in direction. Or at least it has ignored the shift. Breeze has paid down debt. But it has not seen its market cap move up to offset this contraction in enterprise value. As a result, Breeze Eastern has tended to get progressively cheaper in terms of enterprise value to EBIT and other measures. This is especially noticeable when you consider the expansion in the multiples of other stocks from the middle of 2009 to today. Breeze is not more expensive than it was during the 2007-2009 financial crisis. And yet Breeze's closest peers have become much more expensive during that time. As a result, Breeze is now a financially sound and cheap stock. It has a very different risk profile than it did when the major investors bought their shares.

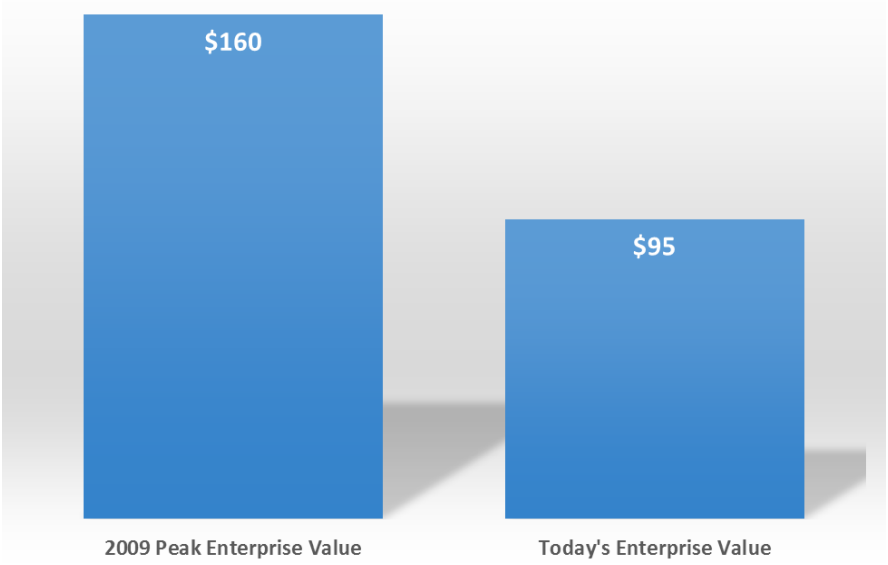
Breeze has not made any acquisitions since the 2001 restructuring of

TransTechnology. There are no good targets for Breeze. And there never will be. If a very expansionist management one day takes over, they may find something to buy. But there is no company that naturally fits with Breeze's niche. Breeze can't buy back stock because it is too illiquid. Major shareholders would only become more locked into the stock. The most likely use of cash is special dividends, regular dividends, or a sale of the entire company. This is the only way to cash out shareholders like Tinicum, Wynnefield, and VN who control almost 70% of the company and will therefore be the ultimate arbiters of all capital allocation decisions. So, we have no past record to go on with Breeze Eastern in terms of capital allocation. But, I expect excess cash will be paid out in dividends. Or, the company will be sold. Those are the only two options.

VALUE

Breeze Eastern is Cheaper Now than It Was During the Financial Crisis

Breeze-Eastern has an enterprise value of $95 million. So, the entire company is selling for less than $100 million in the stock market. Here is the breakdown. Breeze has 9.85 million shares outstanding. The share price – as I write this, it'll be a little different when you read it – is $11.50. The company has $23 million in cash. So, that would be $113 million minus $23 million. However, while it's true that Breeze has no debt – it does have some environmental liabilities associated with TransTechnology sites. These liabilities are $9.2 million. Breeze will have to pay them. But Breeze will also get some money for the sale of some of the sites. We have netted out assets held for sale against these environmental liabilities. The result is a net liability associated with owned sites of $4 million. Breeze owns a site in Saltzburg, Pennsylvania and another site in Irvington, New Jersey. Each is carried on the books at zero dollars. The company might one day sell these



In 2009, Breeze Eastern's enterprise value peaked at $160 million

properties and be paid something for them. We have not factored that into our calculation.

Breeze had net operating loss carryforwards – again related to TransTechnology not today's slimmed down Breeze – but these will have been fully eaten up by the time you read this. As a result, Breeze will pay higher cash taxes in the future than it did in recent years. We have assumed a 35% tax rate throughout this issue. Breeze's theoretical max tax rate is quite a bit higher than that. The company is run from New Jersey. New Jersey is a high tax state in a high tax country. If you combine the top tax rates of the State of New Jersey and the United States of America – and account for the deduction of one from the other – you get a theoretical max tax of just under 42%. Some companies really pay that. We covered Village Supermarket in this newsletter. That is a New Jersey headquartered company that makes virtually all of its revenue from sales in supermarkets in New Jersey. They really pay 42% of their earnings to the government. Breeze won't have to do that. The company gets 57% of revenue from the U.S. This can be taxed around 40% or so. But, the company gets 43% of its revenue outside the U.S. Taxes will not exceed 30% on those sales. And Breeze is not like certain tech and drug companies that have to use accounting tricks between subsidiaries to shift earnings from the U.S. to other countries. For more than 40% of sales, Breeze's customers are legitimately government agencies and original equipment manufacturers who do business in other countries and deal with sales offices in other countries. These are exports. So, roughly speaking we have a tax rate mix of a 40% rate on 60% of sales and a 30% rate on 40% of sales. That would net out to 36%. We traditionally use 35% when we have no special insights into what taxes will be. I think 35% is a nice round number to use here as well.

Breeze's normal EBIT should be $13 million a year. So, $13 million a year times 0.65 (for a 35% tax rate) leaves $8.45 million. Divide that $8.45 million in after-tax income by 9.85 million shares and you get normal after-tax EPS of 85 cents. An average stock trades for 15 times earnings in an average economic environment. If we put a 15 times multiple on Breeze, we get an appraisal price of $12.75 a share. Any purchase made at $12.75 a share or less would be really good for a couple reasons. One, the company has net cash of $19 million. That's $1.93 a share in

cash. So, we are really talking about an appraisal price of $14.68 a share. In today's high stock price environment, this should definitely be a $15 stock.

And the numbers I gave you are a little on the conservative side. Breeze actually made $13 million in EBIT in 2007 and 2008. Sales have grown since then. The capital goods spending environment has improved. And Breeze's gross margins and engineering expenses are both trending in a positive way now that the company has shifted strategy. So, the numbers I gave you were what Breeze actually did in operating income in 2007 and 2008 while the CEO was Bob White and Breeze was pursuing new projects. The company's strategy today is different. Gross margin rose from 36% last year to 39% in the first 9 months of 2015. Historically, gross margin has been in the low 40% range. Breeze has changed its inventory approach. But that should have little impact on gross costs and sale prices. In fact, more responsive companies often have higher gross margins – not lower. We expect inventory turns to permanently decline so delivery times can speed up. But we don't expect gross margins to come in under the low 40% range they used to average. Meanwhile, engineering expense has been declining under the present CEO. Breeze spent $9.4 million on engineering in 2013. That declined to $8.2 million in 2014. And then to $6.6 million in 2015. Shareholders who don't pay attention to whether engineering expense is unusually high or low can be surprised by the P/E ratio later. The difference in engineering expense from 2013 to 2015 alone adds 18 cents to EPS. That can be like a surprise 20% earnings jump if you aren't waiting for it to happen. But, it shouldn't be a surprise. Because, as we explained earlier it is normal for Breeze to spend about $3 million to $4 million of engineering expense on existing products and another $3 million to $4 million on new products. Right now, Breeze is spending about 7% of sales on engineering. That is normal. A 6% to 8% of sales range is a pretty normal engineering expense range for Breeze. So, results from a few years ago were the abnormal ones. Today's results are more indicative of the future.

It's possible Breeze can achieve a $15 million to $20 million EBIT. I would not use that estimate to buy the stock. I would use the $13 million EBIT estimate. That's a safe estimate. If you can buy Breeze at $12 to $15 a share – that is good and safe. It is an investment – not a speculation. Breeze's management had expected new products like the Airbus A400, Alenia C27J, and Sikorsky CH53K to add over $20 million to annual revenue at some point. The A400M was a really big project for Breeze. They invested a lot in the development process. It is certainly possible that cargo winches and other recently developed projects could add $20 million eventually. This would take Breeze up to a $100 million to $110 million in sales company. EBIT margin can be 15% to 20%. So, in theory, it would be possible to have EBIT of $15 million to $22 million in good years if these projects get wide acceptance. But that is a speculative value. So, Breeze could have a speculative value as high as $20 a share. But, as a value investor – not a speculator – you ought to insist on paying less than $15 a share for the stock. Understand there might be an extra upside there. But, don't invest on that basis. Invest on the basis of $13 million in normal EBIT.

Breeze has no good peers. Quan did some normal earnings calculations for the companies that come closest to being peers for Breeze. There is often some difference between reported EBIT and actual normal earnings at defense companies. Textron trades at 13 times normal EBIT. Textron owns Bell helicopters and makes aviation systems. It does other things too that are less related to Breeze. Textron grew less than 4% a year over the last decade. Textron is big and diversified. But, it's actually no better than Breeze. It's just a big, well-known stock. That's why it's more expensive.

Esterline Technologies trades at 14 times normal EBIT. It's a better business than Breeze. Bristow trades at 14 times normal EBIT. It provides helicopter services to oil and gas companies. It's not a high return business – asset turnover is poor – and it's highly speculative. Bristow is not a better business than Breeze. Breeze is a safer long term investment. Columbus McKinnon makes industrial hoists for use on factory floors. It has high market share in what it does. Other products it makes are not nearly as good. Columbus McKinnon is the closest "peer" a company like Breeze has. And it's not really a peer at all. But Columbus McKinnon and Breeze Eastern both make hoists. They both have roughly 50% market share (Breeze globally and Columbus McKinnon in the U.S.) and they both have the same low 10 year growth rate. It is reasonable to expect Columbus McKinnon and Breeze to trade at the same multiple. Columbus McKinnon trades at 10 times normal EBIT. It's a stock worth looking into if you had never heard of the company till just now. But, it's no better than Breeze. And Breeze is cheaper. Breeze trades at about 7 times EBIT versus 10 times for Columbus McKinnon.

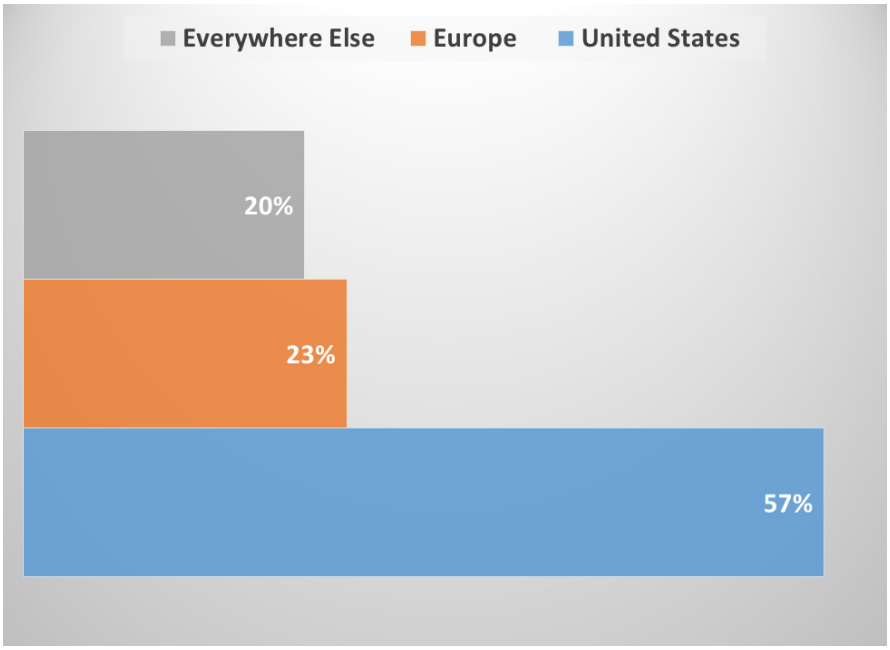
A good intrinsic value appraisal for Breeze would be a $130 million enterprise value. This is 10 times the normal EBIT estimate of $13 million. Breeze's EV is now $95 million. So, you can buy Breeze at about a 25% discount to intrinsic value. It definitely qualifies as a value stock.

GROWTH

Breeze Eastern Will Grow Through New Projects in the Short-Term and Search and Rescue Growth Outside the U.S. and E.U. in the Long-Term

Breeze-Eastern's growth prospects are limited. The number of civilian helicopters does not need to increase at the same rate as the number of civilian airplanes. In recent years, growth in helicopter sales at some manufacturers has been very high.

But this was due to the wars in Iraq and Afghanistan. Sikorsky had a 16% annual growth rate during those wars. Sikorsky makes Blackhawks and other military helicopters. It gets more of its sales from the U.S. military than some other helicopter manufacturers. From 2002 through 2014, Breeze-Eastern's sales grew 5% a year. Breeze is in a duopoly with UTC Aerospace. The two companies are the only real choices for rescue hoists in most countries that have search and rescue helicopters. Breeze gets 57% of its revenue from the United States. About 80% of revenue comes from the U.S. and Europe. These are generally NATO member countries. It is natural for them to use helicopters made by Sikorsky, Boeing, Airbus, Bell, and AgustaWestland. Former Soviet Union countries tend to use Russian Helicopters as their supplier. As a result, Breeze-Eastern and UTC Aerospace get a lot of sales from NATO countries. Rescue hoist sales outside of NATO and the former Soviet Union seem to be pretty small. This is probably because helicopter sales outside of NATO and the former Soviet Union are smaller than the population and GDP of those countries would suggest. Customers in Asia don't have other choices for their helicopters or their rescue hoists. The only real possible supply of helicopters are Sikorsky, Boeing, Airbus, Bell, AgustaWestland, and Russian Helicopters. The only possible supply of rescue hoists are Breeze-Eastern, UTC Aerospace, and Russian Helicopters. You would only use a Russian Helicopters rescue hoist with a Russian made helicopter. So, this is a worldwide oligopoly made up of 3 companies. And, for most helicopter operators in most of the world it is a duopoly between Breeze-Eastern and UTC Aerospace. Breeze has more than 50% market share in the continents – the U.S. and North America – where it competes best. It gets only 20% of sales from outside the U.S. and Europe. This is not because Breeze-Eastern simply has little or no market share in those countries. It is because these countries



Breeze-Eastern gets 80% of its sales from the mature American and European markets

have fewer search and rescue helicopters. Countries like China and India do not have as many search and rescue helicopters as you would expect if you used either a territorial size or population size comparison between the U.S. and Western European countries on one side and China and India on the other. In theory, China and India together could one day have as many or more search and rescue helicopters as all of the U.S. and E.U. Breeze-Eastern is in as good a position as anyone to compete in those countries. At worst, we would expect a possible three-way oligopoly with Breeze-Eastern and UTC Aerospace providing hoists for all non-Russian helicopters and then some sales of Russian helicopters limiting the size of the market opportunity. Even so, you would expect that at least one-third of the Chinese and Indian markets could easily belong to Breeze-Eastern one day. This could provide a huge growth opportunity long-term. It is possible to imagine that the total fleet of search and rescue helicopters around the world could one day double. This would be achieved through higher sales outside of NATO countries and the former Soviet Union. This would be a historical expansion of the use of search and rescue helicopters and therefore a permanent expansion of the possible installed base for rescue hoists. There is no reason to expect Breeze-Eastern would not be able to have 30% to 50% market share in countries like India and China. In fact, Breeze should be capable of having 30% to 50% market share everywhere except in the former Soviet Union. The reason for this is simple. The combined market share of Airbus, Boeing, Bell, Sikorsky, and AgustaWestalnd should be huge in all countries that use search and rescue helicopters. And rescue hoists meant for Airbus, Boeing, Bell, Sikorsky, and AgustaWestland helicopters should always be a duopoly between Breeze and UTC Aerospace.

As an illustration, imagine that Airbus, Boeing, Bell, Sikorsky, and AgustaWestland make 80% of all the new helicopters sold into some growing market like China or India or Brazil. Then imagine that Breeze and UTC Aerospace split their share of rescue hoists for Airbus, Boeing, Bell, Sikorsky, and AgustaWestland helicopters. Breeze and UTC Aerospace would then average a 40% share of the installed base of rescue hoists in that country. The required parts these two companies sell are not interchangeable. So, if all helicopter makers other than Russian Helicopters add up to 80% of some market then it follows that Breeze is likely to have about a 40%

share of the rescue hoist parts and repair aftermarket in perpetuity. The numbers above are not unreasonable – though they are speculative. Even if very low assumptions are made about the relative market share of all non-Russian helicopters sold into growing markets and even if Breeze had a slightly worse relative market share than UTC Aerospace, it would be very hard to come up with market share estimates that are not 25% or so. For this reason, Breeze should be capable of capturing 25% to 50% of the growth in search and rescue helicopters around the world, without doing a lot of sales work on its own specific to those countries. The amount of growth Breeze captures really just depends on the relative market share of non-Russian helicopters to Russian helicopters and the relative market share of Breeze to UTC Aerospace. There is no reason to believe that Russian Helicopters has an advantage over Airbus, Boeing, Bell, Sikorsky, and AgustaWestland as a group. And there is no reason to believe that UTC Aerospace has an advantage over Breeze. So, an expectation that 25% to 50% of the growth outside of Breeze's core markets of the U.S. and Europe could one day be added to Breeze's revenue is not unreasonable. Growth may be very slow in the U.S. and Europe.

The utilization of search and rescue helicopters is low. So, the actual needed growth in the fleet does not have to be as high as the rate of population growth. It really depends on the land area, government spending, and societal attitudes within a territory. Large countries that spend a lot on their police, firefighters, hospitals, tourism, and worker safety will probably end up spending a lot more on search and rescue than countries that don't. Each rescue is very expensive. There is a large overhead for the fleet that must be absorbed by how often the fleet is used. The number of rescues is very low. So, the expense per rescue will always be very high. This means rich countries that put very high values on individual lives are the ones that are going to spend on search and rescue. That is the only situation in which it makes sense to spend a lot on search and rescue. You do it because you think it is important to save lives at any cost. So, it is very possible that large developing countries will spend more on search and rescue as they grow. All of their additional spending will be captured by no more than three rescue hoist makers. Most of the growth will be split between Breeze-Eastern and UTC Aerospace.

Breeze spent a lot of money on new programs. In an earnings call, management once said these programs would eventually add more than $20 million to sales. Breeze's sales are now around $90 million. In the near-term, Breeze can grow to $100 million in sales as deliveries of these helicopters and airplanes occur. So, although Breeze does $90 million in sales now, it can do closer to $100 million to $110 million at some point in the near to medium term. In the long-term, Breeze can – as a duopolist – certainly raise prices in line with inflation. So, the company can grow 2% to 3% a year in countries like the U.S. where that is the rate of inflation. Unit volume can also grow. And Breeze can maintain its relative market share. Historically, Breeze grew 5% a year from 2002 to 2014. Something between the rate of inflation and 5% a year is a good guess for future growth. Maybe a 3% to 5% growth rate. Growth as low as 3% a year seems almost certain even for the very long-term. Search and rescue will not be a shrinking business. So, there is no reason for Breeze to ever grow slower than the rate of inflation.

MISJUDGMENT

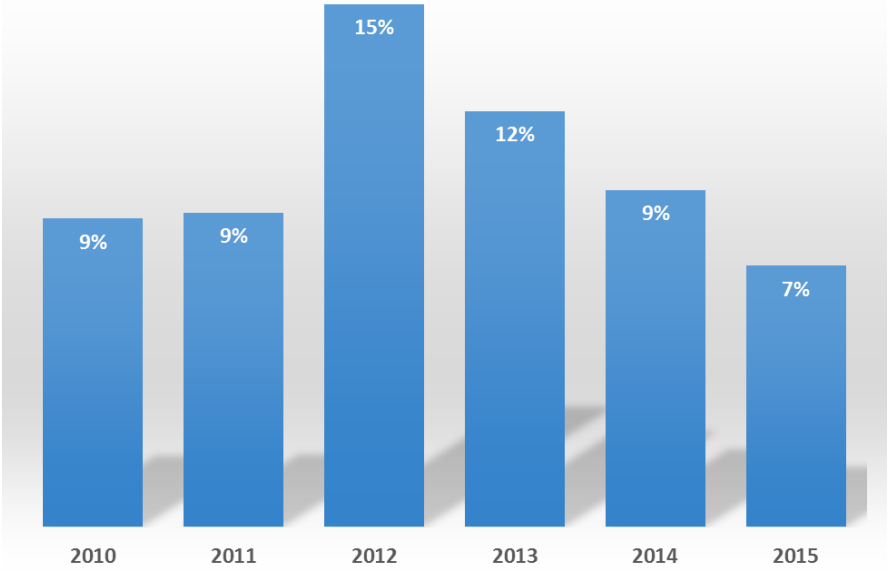
Will Breeze-Eastern Invest Enough in New Projects?

The biggest risk of misjudging Breeze-Eastern is not understanding the competitive position of the company. The rescue hoist aftermarket is a razor and blade style monopoly on each customer. Once a customer choose a Breeze-Eastern or UTC Aerospace rescue hoist and pays the $250,000 or so for that one unit – they are then locked in for years buying the proprietary parts for that unit. Parts are not interchangeable between Breeze and UTC. And, for almost all parts, the original equipment manufacturer is the sole source. In other words, the "blades" for Breeze -Eastern "razors" have to be bought from Breeze. The same is true at UTC. And this aspect of the power over their customers is very, very clear in the parts market. All customers we talked to – of both Breeze and UTC – said they are not sales oriented organizations. These are not customer service companies. Once you buy a rescue hoist, you have a contact in the company that you use when needed. The guy you work with at Breeze and UTC does not call you. You call him. Demand in the after-market is created simply by the need for repairs and replacement parts on the rescue hoists the operator already owns. Although there can be a bidding process on the original equipment – there is only one source and no negotiation in the aftermarket. Gross margins in the aftermarket are sky high at 60%. But that doesn't even begin to explain the weak bargaining position aftermarket customers are in. In many industries, the highest gross margins are achieved by the companies with the quickest delivery times. You might have an aerospace distributor who has good gross margins and not so good returns on capital because they stock a huge selection of every part you could possibly want at a variety of sites around the country. So, they always have the part you need in stock. And they always have it near you. They are more responsive to customers. They have good websites and systems for helping customers manage their own inventories and what they can get from the distributor. Businesses like that are the ones that tend to have higher than expected gross margins on re-orders of some sort. That is not why Breeze and UTC have high gross margins. In fact, Breeze and UTC combine high gross margins with low inventory. They don't keep the parts that customers frequently re-order in

stock. These are real manufacturers. They are far more centralized and less distribution oriented than you would expect. Why?

The market is very small. It's niche. And it's custom. A military or an airline or a lot of other aerospace customers can do a lot of business with a certain distributor for a lot of different parts. Breeze and UTC don't even sell more than one new rescue hoist per day. I can't provide an exact number – Breeze doesn't give unit statistics. But, we can break out original equipment from after-market. We can also separate the U.S. from Europe. Keep in mind that Breeze and UTC products are not interchangeable. So, if you were some sort of distributor for just one – you are limiting yourself to no more than half the market. Even if a company distributed for both Breeze and UTC in the U.S. (the biggest search and rescue market) the amount of volume they could possibly do would be small. Outside of direct sales to original equipment manufacturers and the U.S. government – the customers are pretty small. The economics of distributing rescue hoist parts would not be good for a company that thought it could keep Breeze or UTC parts in stock and deliver quickly to its customers. So, the small size of the market makes it less responsive to repair needs. Breeze is improving its delivery times now. But, customers we talked to said that – in the past – it was common for some parts to take much longer than 90 days to arrive. Obviously, the economics of 60% gross margins combined with 90 day lead times are very, very good for the seller and very, very bad for the buyer. It clearly demonstrates that the after-market is a monopoly. There is a Breeze part monopoly. And there is a UTC part monopoly.

What about competition for sales of the rescue hoists themselves? We know very little about this kind of competition. We know historically it has resulted in a duopoly. And we know that for some popular helicopter models used in search and rescue the



Breeze's new CEO cut engineering expense as a percent of sales

operator can choose to install either a Breeze or UTC rescue hoist. How do they choose?

A rescue hoist can cost up to $250,000. Operators are often government agencies in the U.S. and Europe. As you'd expect – that means the hoist is bought through a bidding process. Obviously, there are only two serious bidders: UTC and Breeze.

One customer suggested that operators already have a preferred supplier even when the business is officially bid for: "Most operators just have a preference for some feature or technical support offered by one brand or the other and they tend to stick with that when they get a new helicopter. So there is incentive for the airframe manufacturers to supply either brand. If more than one hoist is offered (on that helicopter model) then the customer decides (whether to buy a Breeze or UTC hoist). If only one hoist is available then as long as the customer has decided on that aircraft they would then just accept what is offered unless they were willing to pay the considerable costs involved in engineering a different installation on their own."

So, let's break down the degree of competition by the specific purchase decision. One, replacement parts are a monopoly. Two, rescue hoists for helicopters with only one qualified hoist for that model are a monopoly. Three, rescue hoists for helicopters with two qualified hoists for that model are a duopoly. They are a complete – no preference – duopoly with competitive bidding in cases where a new customer would be buying their first helicopter and first hoist. That has to be incredibly rare. Instead, the most common situation in competing hoists on the same model has to be that the operator already has one or more search and rescue helicopters and already uses Breeze or UTC for those models. So, the operator would already be using a supplier – and presumably prefer that supplier – when putting out for a new rescue hoist between the duopolists. As a result, the customer would have more of a preference beyond price than would be the case when asking for bids for some large one-off engineering project or something. A search and rescue helicopter operator would have more of a preference for UTC or Breeze even when they do compete on a specific helicopter model for the original rescue hoist sale then would a power plant operator that wants a boiler built by

Babcock & Wilcox or one of its competitors. This is because a pre-existing relationship for a $250,000 or less sale would be much more common than a pre-existing relationship for a $25 million or more sale. Also, even in a bidding process we are talking about a duopoly. The operator can choose only UTC or Breeze for the hoist. Eventually, they are going to need a supply of parts from either UTC or Breeze. There is no middle ground. And there is no third choice.

Finally, there is another kind of competition. That is the competition for getting qualified on a new helicopter or airplane project. Breeze explains in its 10-K that: "Once our products are qualified and approved for use with a particular aircraft model, sales of products and services generally continue for the life of the aircraft model, which can be for decades. It is expensive and difficult for a second supplier's product to become qualified and approved for the same aircraft."

This is clearly where Breeze and UTC are weakest. They don't have a lot of bargaining power with the helicopter manufacturer for a new model that company is designing. Breeze pays the development cost of the hoist. The manufacturer can choose between Breeze or UTC. Both Breeze and UTC know that winning the development deal can provide a stream of revenue for decades. It will also create at least some time in which they have a monopoly on sales of that hoist. However, we know that for popular models – Breeze and UTC do often eventually both get qualified and approved for use with the same aircraft. This is where the risk of competing too aggressively is greatest. Breeze and UTC are rivals for these new projects. They can spend too much time and money on these programs. As a result, they could end up with lower discounted cash flow type returns on these investments. Breeze is now controlled by shareholders who seem unlikely to make this mistake. But, the greatest risk of misjudging this business is not understanding the mistakes that can be made when competing for qualification on new aircraft models.

CONCLUSION

Breeze-Eastern Combines an Especially Strong Competitive Position with an Especially Low EBIT Multiple

Breeze Eastern is an obscure stock selling for a low price. It has above average returns on capital in an industry with less change than most. Breeze is part of a duopoly. Competition is limited in this industry. So, the higher returns on capital can be expected to last longer. As discussed earlier, Breeze should be able to earn a 20% return on equity without using debt. The company may be able to grow between 0% and 3% a year in real terms. With inflation – which Breeze, as a duopolist can easily pass along – added to that figure, sales growth may be in the 2% to 6% a year range. From 2002 through 2014, Breeze grew sales by 5% a year. It may be capable of doing that in the future. The company is now trading at about 7 times its peak EBIT. Margins are lower now than they were in the past. So, Breeze should be able to grow EBIT at least as fast – and maybe faster – than sales for some time. An EV/EBIT multiple of 7 works out to a P/E of about 11 after-tax. So, under normal future conditions, Breeze stock would be like a 5% grower with a 20% return on equity and a P/E of 11. That is a very good deal. Even if growth was 3% a year, it would not be a bad deal at all.

Whatever earnings Breeze retains will earn a decent return for the company. The return on the retained earnings is likely to be higher than the return you could get investing your own money. So, the earnings retained should not be valued less than a dividend paid out. As a result, we have the inverse of the P/E ratio at 9% as being like an earnings coupon. Breeze has a 20% return on equity. You would have to pay taxes on dividends and on interest from taxable bonds. So, there is no reason to believe buying Breeze at 7 times EBIT – which is a P/E of 11 – would be different from buying a 9% bond. Breeze might be able to grow at as much as 5% a year. But we will only assume it can grow at the rate of inflation.

That means you are buying a 9% bond indexed to inflation. So, it is a 9% real yield. Breeze has no debt and some cash. So, the common stock is the most senior security in this corporation. It really is like buying a bond that way.

What are the downsides to buying a stock like this instead of a bond? The company doesn't have to pay anything out to you. It can just retain the earnings and let them pile up. Legally, that is true. But, the 3 largest shareholders who control 70% of Breeze are all investment funds. It is not in their interest to pile up cash at Breeze any more than it is in your interest to pile up cash in your brokerage account. It is in their interest to sell the company outright. That could happen. We won't discuss the possible upside from a sale of the company or payment of a special dividend to disgorge the cash. But, these possibilities for larger returns sooner can help offset any fear you have that Breeze is inferior to a bond yielding 9% a year.

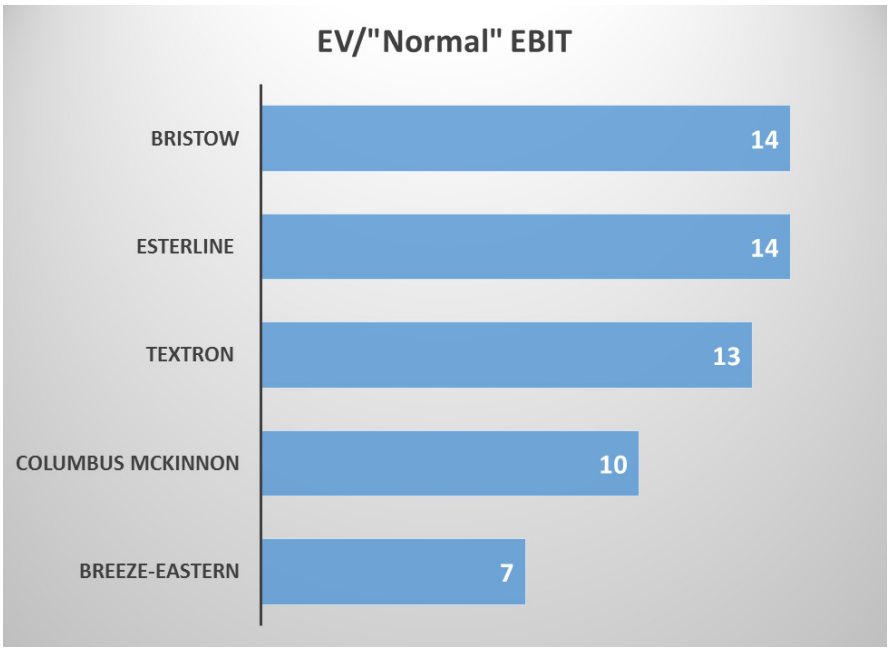
Breeze is obviously more attractive than a bond. Long-term corporate bonds that are not inflation protected now yield about half of Breeze's normal earnings yield. They also lack the upside potential that Breeze has. The company could pay almost $2 in special dividends if it wanted to. It may also be possible for the controlling shareholders to one day sell all of Breeze. Either of these possibilities could move the stock closer to the $15 to $20 a share range. That kind of appreciation is not a realistic outcome with any long-term bond you could buy today unless you are speculating on expectations for future interest rates to plummet.

That could happen. But, when something like that does happen, it should have an

added influence over other asset prices. If people really believe that long-term rates on bonds will be 4% or lower they should expect P/E ratios on stocks to be say 20 or higher. A 4% long-term rate is unusually low. A P/E of 15 is normal. Breeze trades for closer to – by our estimate – a P/E of 11. So, Breeze is cheap even by normal standards. And stocks are abnormally expensive today – as are most financial assets.

What should Breeze trade for? That is a hard question to answer. The answer based on Breeze's past record as a business would be high. It might be something like an EV/EBIT ratio of 12.5. A normal business trades for an EV/EBIT of 10. Breeze is above normal in quality. But it is not above normal in growth. But what growth Breeze does have will be cheaper – require less retention of owner's equity – than it is for an average company. If Breeze could have a ROE of 20% with a growth rate of 5% a year, it should be more expensive than the average stock. Breeze is also debt free. Leverage could be added to the company again. Many stocks with a P/E of 15 are not debt free. So, they really do not trade for 10 times EBIT. For these reasons, Breeze should – based on the merits of the business alone – be priced at between 10 and 15 times EBIT.

It is unlikely the stock market will put such a high value on Breeze. The company's normal EBIT is only $13 million. Even at a 10 times EBIT multiple, that would give the company a market cap of just $130 million. Sales are around $90 million. It is a small company. And 3 long-term shareholders own 70% of the stock. That doesn't leave a lot of shares for everyone else to trade. The stock's daily volume is only about 6,000 shares. That means the stock could trade as little as $1 million to $1.5 million a month. Some investors may not like that kind of illiquidity. Most traders don't like it. The company's name is unfamiliar to the public. It sells a product – rescue hoists – that are also unfamiliar to the public. And it has



Breeze-Eastern has no real peers – but it is much cheaper than all the most closely related public companies

no publicly traded peers. The only reason the stock gets any attention at all is because it trades in the U.S. So, it shows up on all sorts of screens that value investors and others run looking for stocks to buy.

Breeze is not a fast growing company. And it's not in an exciting industry. So, it is unlikely to get much attention based on anything but its numbers. This might cause investors to underappreciate the qualitative aspects of the company.

Breeze is one of the safest and best long-term buy and hold opportunities we have featured in Singular Diligence. We have picked stocks with more upside. And we have picked stocks that were cheaper. But we have not picked any stocks with a clearer future.

Breeze is the perfect buy and hold stock. Except for two things. It is possible that the investment funds that hold most of Breeze's stock will not run it for the long-term. They may want to sell the company. This means an investor could get a good return – but not a good long-term return. Of course, the risk of a company being sold while you own the stock is not a very scary risk at all. But, unlike something like John Wiley or Swatch – there is a question of whether Breeze will simply remain a public company indefinitely. I'm not sure it will.

It's also possible the investment funds will encourage Breeze's management to underinvest in new projects. I can't evaluate this risk. I don't think anyone outside of Breeze, UTC Aerospace, and the aircraft makers themselves can really know what new models offer the best potential returns and how much engineering expense is too much engineering expense on these programs.

That part of Breeze's future is impossible to evaluate. It is the one uncertainty an investor will have to deal with.

Other than those two things, Breeze is the most obvious buy and hold decision we've made for Singular Diligence.

Breeze-Eastern (NYSE: BZC)
Appraisal: $15.02

Margin of Safety: 27%

Breeze-Eastern Owner Earnings	(in millions)
Pre-tax Owner Earnings	
2005 EBIT	$9
2006 EBIT	$12
2007 EBIT	$13
2008 EBIT	$13
2009 EBIT	$11
2010 EBIT	$2
2011 EBIT	$10
2012 EBIT	$7
2013 EBIT	$8
2014 EBIT	$9
2015 EBIT	$13
Peak EBIT (2007, 2008, and 2015)	$13
Pre-tax Owner-Earnings	$13

Business Value

Breeze-Eastern's business value is $130 million.

- Pre-tax owner earnings are $13 million
- Fair multiple = 10x pre-tax owner earnings
- $13 million * 10 = $130 million

Fair Multiple

Breeze-Eastern's business is worth at least 10x pre-tax owner earnings

- Breeze-Eastern is in a duopoly
- Long-term revenue growth is 3-5%
- Tax rate is below 35%
- Breeze-Eastern deserves at least 15x after-tax owner earnings
- 15x after-tax owner earnings is equal to 10x pre-tax owner earnings

Share Value

Breeze-Eastern stock is worth $15.02 a share

- Business value is $130 million
- Cash is $22 million
- Net environmental liabilities are $4 million
- Equity value is $144 million
- $130 million + $22 million – $4 million = $148 million
- Equity Value = $15.02/share
    - 9.85 million outstanding shares
    - $144 million / 9.85 million = $15.02

Margin of Safety

Breeze-Eastern's stock has a 27% margin of safety.

- Business Value = $130 million
- Enterprise Value = $95 million
- Discount = $35 million ($130 million – $95 million)
- Margin of Safety = 27% ($35 million / $130 million)

	EV/Sales	EV/Gross Profit	EV/EBITDA	EV/EBIT	EV/Owner Earnings
Columbus McKinnon	1.01	3.24	8.62	10.41	9.61
Textron	1.12	6.35	10.37	14.93	13.46
Air Industries	1.59	7.25	19.42	58.91	30.96
Bristow Group	1.72	5.96	10.18	15.40	14.42
Esterline Technologies	2.16	6.16	12.33	18.19	14.44
Minimum	1.01	3.24	8.62	10.41	9.61
Maximum	2.16	7.25	19.42	58.91	30.96
Median	1.59	6.16	10.37	15.40	14.42
Mean	1.52	5.79	12.18	23.57	16.58
Standard Deviation	0.47	1.51	4.25	19.95	8.28
Variation	31%	26%	35%	85%	50%
Breeze-Eastern (Market Price)	1.06	2.72	6.30	7.34	7.29
Breeze-Eastern (Appraisal Price)	1.45	3.73	8.63	10.06	10.00

ABOUT THE TEAM

Geoff Gannon, Writer

Geoff is a writer, blogger, podcaster, and interviewer. He has written hundreds of articles for Seeking Alpha and GuruFocus. He hosted the Gannon On Investing Podcast, The Investor Questions Podcast, and The Investor Questions Podcast Interview Series. He wrote the Gannon On Investing newsletter in 2006 and two GuruFocus newsletters from 2010-2012. In 2013, he co-founded The Avid Hog (the predecessor to Singular Diligence) with Quan Hoang. Geoff has been blogging at Gannon On Investing since 2005.

Quan Hoang, Analyst

Quan is a stock analyst. Quan won first prize in Vietnam's National Olympiad in Informatics in 2006. He graduated from Manhattanville College in 2012 with a B.A. in finance and a minor in math. In 2013, Quan co-founded The Avid Hog (the predecessor to Singular Diligence) with Geoff Gannon.

Tobias Carlisle, Publisher

Tobias Carlisle is the founder and managing director of Eyquem Investment Management LLC, and serves as portfolio manager of the Eyquem Fund LP and the separately managed accounts.

He is best known as the author of the well regarded website Greenbackd, the book Deep Value: Why Activists Investors and Other Contrarians Battle for Control of Losing Corporations (2014, Wiley Finance), and Quantitative Value: a Practitioner's Guide to Automating Intelligent Investment and Eliminating Behavioral Errors (2012, Wiley Finance). He has extensive experience in investment management, business valuation, public company corporate governance, and corporate law.

Prior to founding Eyquem in 2010, Tobias was an analyst at an activist hedge fund, general counsel of a company listed on the Australian Stock Exchange, and a corporate advisory lawyer. As a lawyer specializing in mergers and acquisitions he has advised on transactions across a variety of industries in the United States, the United Kingdom, China, Australia, Singapore, Bermuda, Papua New Guinea, New Zealand, and Guam. He is a graduate of the University of Queensland in Australia with degrees in Law (2001) and Business Management (1999).

SINGULAR DILIGENCE

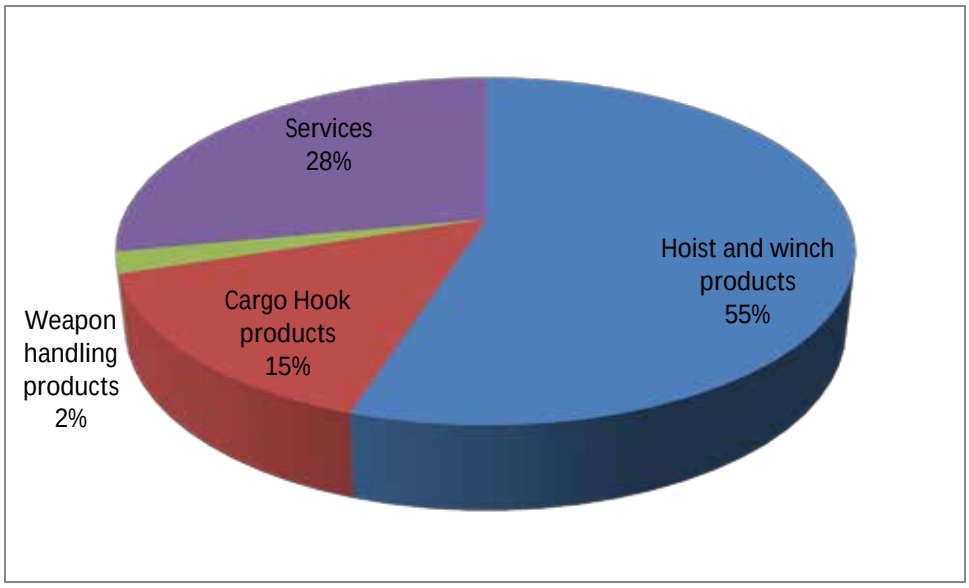
NOTES

Breeze-Eastern

(NYSE: BZC)

Overview

Breeze-Eastern: An Obscure Franchise with Some Catalysts



98% of Breeze-Eastern's revenue is from helicopter lifting products and services

- Breeze-Eastern makes
    - Rescue hoist
        - A cable winching device mounted to a helicopter
            - Capable of lowering or raising persons attached to the cable
        - Capacity: 600 pounds
        - Cost up to $250,000 per unit
    - Cargo winch
        - Capacities from 900 pounds to over 7,000 pounds
        - Is used for civilian and military cargo loading operations
    - Rescue hoist and cargo winches account for **55%** of sales
    - Cargo hook
        - **15%** of sales
        - Original equipment on leading military medium and heavy lift helicopters
            - Lifting and transporting external loads
        - Capacity from 1,000 pounds to 36,000 pounds
    - Weapon handling system

        - For land-based rocket launchers and munitions hoist for loading missiles
        - 2% of revenue
- Breeze began working with Sikorsky in early 1950s[1]
    - Developing better hoists for the H-19 Chickasaw
        - Initial hoist was capable of about 200 pounds
            - Could lift most adults
            - But only if they were well enough to work with the equipment
    - By using AC, Breeze's hoist capacity is 600 pounds
        - Can reel people back up quickly
- Rescue hoists are used for search and rescue missions
    - Rescue people from uneven terrain
        - Helicopters can't land
- Breeze successfully diversified into related products
    - Cargo hook
    - Weapon handling system
- Breeze has over 50% global market share
    - For rescue hoist and cargo hook
    - In a duopoly
        - The only competitor is a tiny subsidiary of United Technologies
    - Moat is created by
        - Expensive and time consuming qualification process
            - With each specific helicopter model
        - Rescue hoist is a critical component
            - Lives are at stake when the product is used
- Breeze was the crown jewel division of TransTechnology
    - In the 1990s
- Breeze's market is small
    - TransTechnology took Breeze's cash flow and embarked on a 10-year acquisition binge
        - Debt was $271 million in 2001
    - TransTechnology started reorganization in 2001
        - Sold all other businesses
        - Kept only Breeze in 2003
            - With $46 million net debt
                - Interest rate was over 20%

        - The company name was changed into Breeze
        - Tinicum Capital Partners invested in Breeze
            - In 2006
            - Through a private investment
        - Wynnerfield Partners Small Cap Value also invested in Breeze in 2006
        - Another value investor started investing in Breeze
            - In 2011
            - VN Capital
        - Today, these 3 investors control **69%** of Breeze
- Back in 2006, the management and investors had different opinions
    - The management was aggressive
        - Wanted to bid on new programs for growth
    - Investors wanted to reduce debt before any growth
- Breeze got some important contracts to enter the cargo winch business
    - But agreed to pay for development expenses
    - Breeze has to develop from scratch for these products
        - There's no existing product to build from
- Problems came
    - The Great Recession
    - Programs got delayed and cost overrun
        - Example:
            - Airbus A400M was scheduled for launched in 2009
                - Was delayed several times
                - Was first delivered in August 2013
- Major shareholders fired the CEO
    - (Robert White)
    - In August 2009
    - Hired another to clean up the mess
        - Mike Harlan
        - Fired again
            - In 2012
    - Hired Brad Pedersen as CEO
        - In May 2012
    - Brad Pedersen seems to do his job
        - Finishing the projects got in the 2005-2008 period
            - Start generating revenue

- Shipped products for Airbus A400M in 2013
- Engineering expenses are declining
  - Future expenses are only on minor modifications of existing products

§ Breeze has lower EV today than 2007-2008
- Today EV: $87 million
- 2007 EV: $122-$154 million
- 2008 EV: $119-$160 million

---

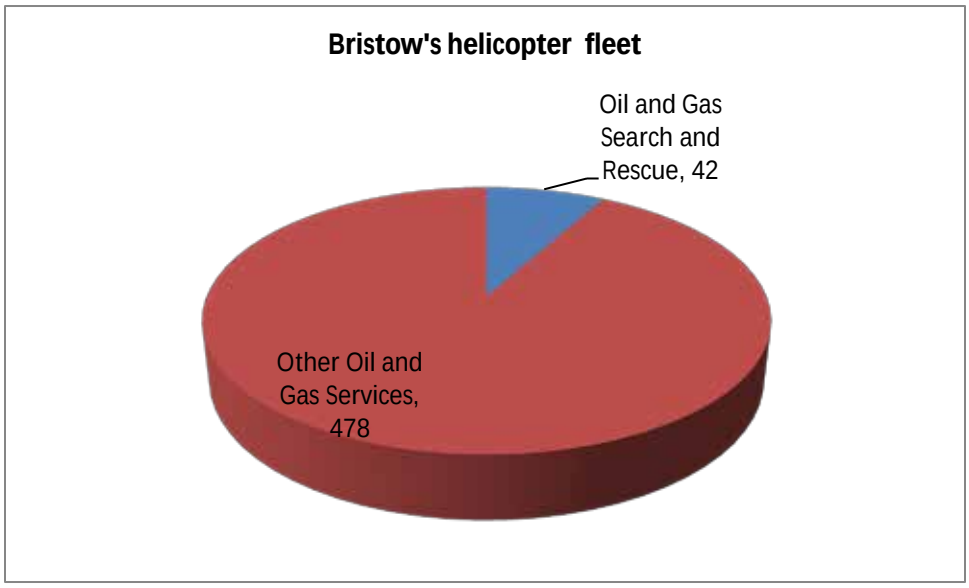
[1] "**According to Sergei Sikorsky, Breeze-Eastern began working with Sikorsky in the early 1950s, developing better hoists for the H-19 Chickasaw. The initial hoist "was capable of about 200 pounds or so**," he said. Such a hoist was capable of lifting most adults, but only if they were well enough to work with the equipment. **Unfortunately, many of the people being rescued "were severely wounded or in a state of shock, and consequently were unable or incapable of hooking themselves up, or getting into a sling**," Sikorsky said. This is where Breeze-Eastern's engineers came in: Faced with a U.S. military requirement for hoists with much more payload capacity, "**Breeze was able to fulfill it by going to much more powerful hoists," said Sikorsky. With this newer equipment, which could carry 400-500 pounds – "you had the option of taking a man, a rescue swimmer for instance, and he rides down on the hoist, picks up an injured person, and then together they come back up to the helicopter.**" "Our earliest hoists used the helicopter's hydraulic power system," noted Thomas McLoughlin, Breeze-Eastern's CTO. "Although this provided good lifting power, this reduced available hydraulic power for the aircraft's other systems. This is why Breeze-Eastern's hoists evolved to use DC power, and then AC, both of which we use today." "**By using AC, we can provide the same degree of 600 lb. lift with much greater performance, and much more speed variability and control on the hoist cable**," added Joe Selingo, Breeze-Eastern's Principal Electrical Systems Engineer. "This allows for better-controlled hoisting, and supports performance features that, for instance, allow the helicopter hoist to compensate for the rising and falling of people being lifted from boats in high seas." This achievement was in line with the U.S. military's hoist specifications.

"**The requirement also was, of course, to design a hoist that was very quick to reel them back up**," said Sergei Sikorsky. "**In combat, or in a heavy storm, that helicopter's most, most vulnerable when he's hanging there and picking up people out of the water. That's when nasty people shoot at it, or when, in a storm, the pilot is just going crazy trying to lift the helicopter up as a wave comes up**, and then as a wave drops down he has to drop down with

it because he doesn't want to injure the people hanging in the sling." Breeze-Eastern's hoist met the requirements back then, and still do today. Worth noting: Every single time a Mercury, Gemini, or Apollo astronaut was lifted from their bobbing capsule in the Pacific Ocean, the hoist was done doing Breeze-Eastern equipment. When the next-generation Orion capsule enters service, it too will land on water; requiring U.S. naval Breeze-Eastern hoists to be pressed into service. "**Sikorsky Aircraft has a choice of hoist manufacturers, but has stayed very, very strongly with Breeze for over half a century," Sikorsky observed. "I would say that speaks for itself."**" – Pioneer of the Helicopter Hoist, Helicopter Magazine, 01 December 2013

Durability

Only a Small Number of Helicopters Needs Breeze-Eastern's Products



Only 8% of Bristow helicopter fleet are used for search and rescue missions

- The demand for hoist and winch is durable
    - o There's always need for search and rescue (SAR)
        - § Rescue people from places where helicopters can't land
            - · Over water
            - · in mountainous or uneven terrain
        - § Example:
        - § Fire department
            - · All helicopters of California's Fire department are equipped with hoists
            - · Rescue firefighters who are injured
                - o or blocked from escape routes during wildland fire
        - § Police department
            - · Maryland State Police operate a fleet of[1]
                - o 9 AgustaWestland AW139s
                - o 11 Eurocopter AS365s
                - o Use for law enforcement or emergency medical transport
                - § Haul boaters out of the water of the eastern shores

        - Pluck injured hikers from the mountain tops of its western counties
    - Do about 10-12 hoist rescues a year
        - It's a big deal
            - Lives are at stake
- Military
    - Carry out SAR during wars
    - Special operations
    - Cargo delivery
- Emergency Medical Response companies also use helicopters equipped with hoists for SAR missions

- Demand doesn't depend much on wars or oil and gas
  - The helicopter market is driven by
    - Wars
      - Afghanistan
      - Iraq
    - Oil & gas support services
      - Provide logistics to offshore and remote areas
  - Oil & gas contributed little to rescue hoist market growth
    - Bristow had 42 SAR helicopters as of 2013
    - Bristow has about 1/3 global market share of helicopter services for oil and gas companies
    - => global SAR fleet for oil & gas is about 126
      - = 42*3
    - A rescue hoist may cost up to $250,000
      - => oil & gas added $31.5 million cumulated revenue
        - => not significant
  - Estimates of U.S.'s troops
    - In Afghanistan
      - 2002: 5,000
      - 2003: 78,000
      - 2004: 146,000
      - 2005: 163,000
      - 2006: 162,000
      - 2007: 172,000
      - 2008: 188,000
      - 2009: 186,000

        - 2010: 152,000
        - 2011: 107,000
        - 2012: 68,000
        - 2015: 9,800
    - In Iraq
        - 2003 – 2006: 140,000 - 150,000
        - 2007: 170,300
        - 2014: 1,400
        - 2015: 3,000
            - Including hundreds of trainers and advisers
- Sikorski's sales trend reflected the increased in military activities
    - Sales CAGR was **16.3%** from 2003 to 2011
        - 2003: $2,184 million
        - 2011: $7,355 million
    - Sales CAGR was **-3.4%** from 2011 to 2014
        - 2011: $7,355 million
        - 2012: $6,791 million
        - 2013: $6,253 million
        - 2014: $6,621 million
- Breeze's revenue didn't increase as much
    - 2003: $48 million
    - 2014: $86 million
        - 2.8% CAGR
    - Sales growth is more like a capital good company
        - Declined during the Great Recession
            - 2009 FY: -1% (FY end in March)
            - 2010 FY: -8%
        - Recovered after the recession
    - Market share remains above 50%
    - => Breeze's sales doesn't depend on wars as much as helicopter sales
- Military will always need hoist and winch for
    - Search & rescue
    - Special operation
    - Cargo delivery
    - Even in peacetime
        - The U.S. has tens of thousands of troops in

        - Japan
        - Germany
        - Korea
        - Italy
        - Kuwait
        - Etc.
    - Training
        - Full scale exercise for troops
- There's few change in customer base
    - Most end-customers are governments
        - Represented **81%** of revenue in 2014
            - U.S government: **53%**
        - Most SAR missions are done by government agencies
            - These end-customers are durable
    - OEM customers are the same for years
        - Light, single-engine aircrafts aren't suited for hoist operations
            - Must hold a crew of more than four
                - Pilot
                - Crew chief
                - Hoist operator
                - Victim
        - Medium and heavy-lift helicopters are more appropriate
        - According to AugustaWestland, the global SAR fleet averages about 7,000 kg in MTOW
            - MTOW = the **m**aximum **t**ake**o**ff **w**eight
            - 7,000 kg = over 15,000 pounds
        - 6 manufacturers makes about 95% of total helicopters with MTOW over 1,300 kg (2,866 pounds)
            - Airbus
            - Sikorsky
            - AgustaWestland
            - Bell
            - Russian Helicopters
            - Boeing
    - Some helicopter models are popular for SAR missions
        - In the U.S., the most popular models are
            - Sikorsky "Hawk Series"

        - Bell medium helicopters
            - Bell 205
            - Bell 407
            - Bell 412
        - Eurocopter
            - A-star AS350
            - EC-145
- There's little incentive for OEM customers to make their own rescue hoist
    - A small % of helicopters are equipped with rescue hoist
        - AgustaWestland' estimate of the global SAR fleet size was **1,499**
            - (In 2013)
        - Airbus estimate of the global helicopter fleet size was **45,191**
            - Civilian: 23,941
            - Military: 21,250
            - (in 2013)
        - It's unclear if AgustaWestland's number included military aircrafts
            - If yes, SAR fleet is **3.3%** of total fleet
            - If no, SAR is **6.3%** of total fleet
        - According to Bristow's investor presentation in 2013
            - Bristow had **520** helicopters providing services to oil and gas companies
                - Of which **42** aircrafts were SAR
                    - => **8%** of total aircrafts
        - => less than **10%** of helicopters are equipped with rescue hoists
            - Hoist and winch are just options that end-customers select when buying helicopters
    - Rescue hoist is less than **5%** of total cost
        - A rescue hoist can cost up to $250,000
        - Bell 412 is about $9 million
            - Rescue hoist is **2.8%** of total cost
        - Bristow uses larger aircrafts for SAR
            - Sikorsky S-92 costs $35-40 million per aircraft
            - AgustaWestland AW189 costs $20-25 million per aircraft
            - => rescue hoist is less than **1%** of total cost
    - Hoist and winch revenue is tiny compared to helicopter manufacturer revenue
        - 14% of Breeze's revenue came from Sikorsky

        - (in 2014)
        - About $12 million
            - **0.1%** of Sikorsky's 2014 revenue
                - ($6,621 million)
- Customer relationship is durable
    - New airplane models tend to work only with one hoist and winch manufacturer
        - Breeze or UTC bid for a development contract
            - The winner will develop for the program duration
                - Benefit from sales of the airplane models
    - Overtime, airplane models may work with both Breeze and UTC
        - Sikorsky Blackhawk
        - Sikorsky S-92
        - Bell 412
        - Eurocopter AS350, AS365
        - AugustaWestland 109, 139
        - Etc.
    - In most case, end-customers will select the rescue hoist brand[2]
        - They have preference for a brand
            - For some features or technical support
        - End-customers tend to switch when there's issue with customer relationship
- Breeze is more focused than United Technologies (UTX)
    - There was concern when UTX acquired Goodrich
        - United Technologies owns Sikorsky
        - Goodrich is the only competitor of Breeze
        - In 2012
    - It's unclear if the acquisition hurt Breeze's relationship with Sikorski
    - But UTX is spinning off Sikorski
    - There are signs that UTX neglected the hoist & winch business
        - Hoist & winch is a tiny part of UTX
            - Less than $100 million revenue
            - UTX's revenue is $120 billion
        - There are very few product news of UTC hoist and winch
        - One customers told us that their longtime sales person retired[3]
            - He was the customer's "go to guy"

        - The only communication the customer see is a relatively new customer web
            - Little information
            - Don’t even list important rescue hoist models
        - Email is returned by not as fast as the customer wants
    - Quan’s experience:
        - Sent emails to 4 customer contacts
            - 2 emails were undeliverable
                - Perhaps these employees left the company
            - 1 employee didn’t reply
            - 1 employee replied after 2 days
- Breeze is getting closer with customers
    - Reduced spare parts delivery time
        - Customers complained about long spare parts time of both Breeze and UTC
            - Way more than 90 days for some items
        - Breeze has reduced commercial spare parts delivery time[4]
            - From 90 days to less than 30 days
                - 14 days for the most commonly ordered spares
            - Commercial overhaul and repair turn times have been cut in half
                - Over the last 2 years
    - Established a customer web portal and expanded training programs[5]
        - Customers can complete online transactions
    - Build a more robust customer support team[6]
        - Relies less on outside market consultants
        - Phones are staffed 24 hours per day
    - Breeze’s website lists customer support contacts in 13 countries
        - USA
        - Australia
        - Taiwan
        - New Zealand
        - Canada
        - Italy
        - Brazil

- South Africa
- Japan
- Switzerland
- Sweden
- India
- Germany

- UTC's website has little information about products
  - Lists only 3 product contacts
  - Being asked about product, they send a product brochure
    - The brochure lists only
      - 3 repair centers in
        - USA
        - France
        - Singapore
      - And the segment contact
        - Phone number of UTC Aerospace System Sensors & Integrated Systems

- Breeze introduced the MissionView system
  - Give personnel in the aircraft monitor information
    - Real-time streaming of the video
    - How far down the hook has dropped
    - How much of the cable is released
    - How much weight is on the hook
  - Without MissionView, crew members get information from rescuers via a wireless intercom system

---

[1] "Maryland State Police (MSP) operates a fleet of nine AgustaWestland AW139s and 11 Eurocopter AS365s, primarily in law enforcement and emergency medical transport roles. But each aircraft is equipped with a UTC Aerospace Systems (formerly Goodrich) hoist for the times when crews must haul boaters out of the waters of the eastern shore, or pluck injured hikers from the mountain tops of its western counties.

"We do about 10-12 hoist rescues a year," explained Chris Lovejoy, MSP's deputy director of aviation. "But when we have to do them, it's a big, big deal, because lives are at stake."

[2] One customer told us: "**Over the years many operators have switched from Breeze to UTC or vice versa when they get upset over customer service or for some other reason and in most cases any particular helicopter can be set up to work with either brand but there are significant changes in the fixed provisions in the cases I am familiar with**. I am not an expert on what if any differences there are in the fixed provisions between the two brands for any given helicopter. It is not a usual thing for a fleet operator or a company with one helicopter with a hoist to want to or be able to switch back and forth between brands on any kind of short term basis. **Most operators just have a preference for some feature or technical support offered by one brand or the other and they tend to stick with that when they get a new helicopter. So there is incentive for the airframe manufacturers to supply either brand**.

If more than one hoist is offered [for the helicopter model] then the customer decides [the hoist brand to buy]. If only one hoist is available then as long as the customer has decided on that aircraft they would then just accepted what is offered unless they were willing to pay the considerable costs involved in engineering a different installation on their own. It is possible to do that."

[3] One customer told us about his experience with UTC hoist and winch:

"I can't say that anything is different after UTC acquisition except that **their longtime sales person retired. He was my "go to guy" anytime I needed information. Neither company is likely to call me on the phone. E mail is returned but not usually as fast as I'd like. UTC has a relatively new customer web portal with access to their service information. That is really the only company communication I see**. I am old school, so talking to someone, especially if they call me, is very inexpensive and much appreciated customer service. I've never spoken to the guy in charge at UTC and **you would be able to knock me over with a feather if he called and said "so, how do you like us?" I have called and talked to their customer service folks a few times and they have been responsive**.

My issue is that we equip all 12 of our helicopters with hoists and the operations are things we train extensively on. **If a hoist is taken out of service we get very uncomfortable because one of our prime reasons for having them is to rescue our own firefighters from getting burned over by a forest fire or for getting an injured person in a remote area out for medical attention**. I'm not sure either company [*Quan added: Breeze-Eastern or UTC*] gets that and it may be that the armed services have enough spares so that it never happens. The hoist is used because in almost all instances where it is used it is not possible to

land the helicopter. So we don't like having a helicopter available but no hoist. They don't break that often but they do break.

I should add that when I have called UTC recently I've spoken to engineers and a couple of marketing people who have been responsive and helpful but the calls were initiated from my end. UTC is the only mfg. that makes the type of hoist we use and we selected it for some very specific reasons. **I suspect that things would be different if there were 5 manufacturers who made a hoist like this and they were interchangeable, with little or no work, but the market is too small for that to happen, so here we are.**"

[4] "**Breeze-Eastern Corporation has reduced commercial spare parts delivery times from 90 days to less than 30, and the most commonly ordered spares are now reaching customers in just 14 days. Commercial overhaul and repair turn times have also steadily declined and have been cut in half over the last two years**.

President and CEO Brad Pedersen said **the company's investment in staff and inventory — and a focused two-year effort to reach the 30-day goal — is paying off.** "Breeze-Eastern is changing," he said. "Our entire team knows that we cannot rely on past success to build a future that's truly worthy of the Breeze-Eastern name and legacy." – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

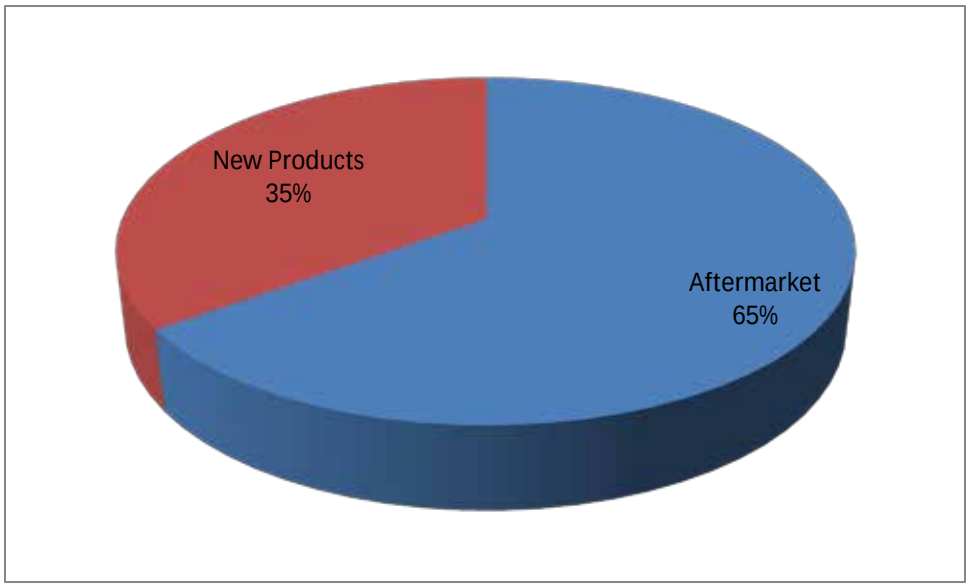
[5] "**A customer web portal and expanded training programs have also been established**. Customers and suppliers are encouraged to register products and use the portal login feature to open an account at www.breeze-eastern.com. **With a secure account, users may access information and submit requests. Future enhancements to the user-friendly portal will enable customers to complete online transactions.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[6] "In 2014, Pedersen said the company assumed more responsibility for direct accountability and contact with its customers and partners, reducing its reliance on outside market consultants and building a more robust internal team that is regionally focused according to customer location. "**Everything we are doing is designed to bring us closer to the customer and better support the mission**," said Pedersen. "**We have a dedicated group of people who genuinely care about helping the customer." For example, phones are staffed 24 hours per day, because "time zones will not impede a direct connection and immediate help for a customer in need.**" – *Breeze-Eastern*

Reduces Spare Parts Delivery Times to Fewer than 30 Days, Aviation Today, 26 February 2015

Moat

Stable and Sticky Customer Bases Create a Duopoly



65% of gross profit comes from aftermarket sales

- Global market share is over 50% for rescue hoist and cargo hook
    - Breeze says its market share is over 50% in 2011 10-K[1]
    - Breeze didn't disclose its market share in recent 10-Ks
        - Revenue grew somewhat since 2011
            - 2011: $78 million
            - 2012: $85 million
            - 2013: $80 million
            - 2014: $86 million
    - It's likely that market share is still over 50%
- Breeze has only one competitor
    - A tiny subsidiary of United Technologies (UTX)
        - Originally a subsidiary of Lucas Aerospace
        - Goodrich acquired Lucas Aerospace in 2002
        - UTX acquired Goodrich in 2012
    - There's one Russian competitor but insignificant
- It's impossible to enter the business
    - Expensive and time-consuming
        - There's no entrance other than through OEM customers

        - 6 manufacturers makes about 95% of helicopters over 1,300 kg MTOW
    - There's chance to enter only when a new airplane model is developed
        - Go through rigorous development and qualification process
            - Takes years
    - It's easy to modify existing base models[2]
        - Only some modifications to electrical or mechanical interface
    - It's expensive to build from scratch
        - Pay a lot in product development
            - OEM won't pay for the development cost
                - Otherwise they would select existing solutions
            - Delays are expected
            - Cost overrun is usual
        - The market is too small to justify the development cost
            - Example:
            - Breeze tried to enter the cargo winch market in mid-2000s
            - Aggressively bid for development contracts for some new airplane models
                - AgustaWestland AW101
                - Airbus A400M
                - Alenia C-27J
                - Sikorsky CH-53D
                - Boeing B22
            - Breeze had to develop from scratch[3]
            - Total investment in the Airbus A400M program is **over $20 million**[4]
            - The programs were delayed
                - Airbus A400M was scheduled for launch in 2009
                    - Delayed until 2013
            - Expected annual revenue from those programs is just **$20 million**[5]
- High consequence
    - SAR Helicopter won't work without rescue hoist[6]

- (**SAR** = Search And Rescue)
- It's not able to land the helicopter in most instances when it's used
  - Lives are at stake in SAR missions

- Hoist and winch is just a tiny part of total helicopter revenue
  - A small % of helicopters are equipped with rescue hoist
    - AgustaWestland estimated that the global SAR fleet size was **1,499**
      - (In 2013)
    - Airbus estimated that the global helicopter fleet size was **45,191**
      - Civilian: 23,941
      - Military: 21,250
      - (in 2013)
    - It's unclear if AgustaWestland's estimate of SAR fleet included military aircrafts
      - If yes, SAR fleet is **3.3%** of total fleet
      - If no, SAR is **6.3%** of total fleet
    - According to Bristow's investor presentation in 2013
      - Bristow had 520 helicopters providing services to oil and gas companies
        - Of which 42 aircrafts were SAR
          - => **8%** of total aircrafts
    - => less than **10%** of helicopters are equipped with rescue hoists
      - Hoist and winch are just options that end-customers select when buying helicopters
  - Rescue hoist is less than **5%** of total cost
    - A rescue hoist can cost up to $250,000
    - Bell 412 is about $9 million
      - Rescue hoist is **2.8%** of total cost
    - Bristow uses larger aircrafts for SAR
      - Sikorsky S-92 costs $35-40 million per aircraft
      - AgustaWestland AW189 costs $20-25 million per aircraft
      - => rescue hoist is less than **1%** of total cost

        - Hoist and winch revenue is tiny compared to helicopter manufacturer revenue
            - 14% of Breeze revenue came from Sikorsky
                - (in 2014)
                - About $12 million
                    - **0.1%** of Sikorsky's 2014 revenue
                        - ($6,621 million)
    - About **65%** of gross profit is from aftermarket
        - After-market sales is about **50%** of total revenue
            - ½ is spare parts
            - ½ is overhaul and repair
        - Spare parts have **60%** gross margin
            - Breeze is the sole source of 90% of the products
            - Parts aren't interchangeable between Breeze and UTX[7] [8]
        - OEM margin is just **30%**[9]
            - Contributes about **35%** of total gross profit
                - 0.3*0.5 = 15% of revenue
                - Total gross margin is 40-44% of revenue
                - 15/42 = 35%
    - Training and customer support network are needed
        - Breeze has training partners
            - Like Priority 1 Air Rescue
        - Breeze has an extensive network of overhaul and repair stations around the world
            - Has customer support contacts in 14 countries
- Market share can be stable
    - End-customers usually select the hoist brand
        - New airplane models tend to work only with one hoist and winch manufacturer
            - Breeze or UTC bid for a development contract
                - The winner will develop for the program duration
                    - Benefit from sales of the airplane models
        - Overtime, airplane models may work with both Breeze and UTC
            - Sikorsky Blackhawk or S-92
            - Bell 412
            - Eurocopter AS350, AS365
            - AugustaWestland 109, 139

        - Etc.
    - In most case, end-customers will select the rescue hoist brand[10]
        - They have preference for a brand
            - For some features or technical support
        - Rescue hoist is just a tiny part of total budget
        - End-customers tend to switch when there's issue with customer relationship
- Customers have only two choices
    - The most likely outcome is 50-50 market share

---

[1] "We design, develop, manufacture, sell, and service sophisticated engineered mission equipment for specialty aerospace and defense applications. **With over 50% of the global market, we have long been recognized as the world's leading designer, manufacturer, service provider, and supplier of mission-critical rescue hoists and cargo hook systems**. We also manufacture weapons-handling systems, cargo winches, and tie-down equipment. Our products are designed to be efficient and reliable in extreme operating conditions and are used to complete rescue operations and military insertion/extraction operations, move and transport cargo, and load weapons onto aircraft and ground-based launching systems." – Breeze-Eastern 2011 10-K

[2] A former engineer at Breeze-Eastern told us: "In general I would say **rescue hoists though somewhat customizable for each airframe in general the overall design was consistent**. **As with any aerospace product there is some uniqueness per aircraft whether it is electrical or mechanical interface or some unique performance requirement**. But breeze had a great baseline hoist that was easily modified as needed for the application."

[3] "George Melas: Yes, very good. And then, a second question. As you look at new programs that you're bidding on, is there -- I'm sure you have a lot of hoists. Do you have, also, quite a few winches that you are bidding on? And have you through the -- all the work that you've done with -- on the Airbus system, have you really beefed up your capability in that space to be a good long-term viable player in the winches area?

Mike Harlan (Breeze-Eastern's Former CEO): I think with the wins that we've had and the ongoing development -- and **we've been working with the Airbus program, with the C-27/JCA program for Alenia, with the CH-53K for Sikorsky. I think we're -- and also, the previous win we had with the B22 for Boeing.**

I think we have a very strong position in cargo winches today. And **we are using the engineering work that we've done for those in our bidding on other programs -- so trying to use derivatives off of that with much less engineering -- incremental engineering investment or effort than we had to make to do the from-scratch development on a couple of those cargo winches.**" – Breeze-Eastern's 2011 Q3 Earnings Call Transcript

[4] "James Vanasek: Sure. And then I was wondering if you could go a little bit more in depth on the A400M program. I know you have got the big milestone coming up. How much as far as engineering resources and what sort of timetable you need to meet going forward over the next six months on that program, and when do you anticipate reaching the final milestone if you are able to accomplish everything?

Mike Harlan (Breeze-Eastern's former CEO): You are right, Jim. That involves a number of different questions. Let me try to respond to as many of them as I can --

James Vanasek: You don't mean, Mike, I ask more than one question at a time?

Mike Harlan (Breeze-Eastern's former CEO): Yes. But it is perfectly fair. Let me try. **For the A400M program, we are working on the retrieval winch system that is used for parachutists operations. We are working on the cargo winch system and also on the crane system**. For both the cargo winch and the retrieval winch system, our projection is to be able to make deliveries of the qualified units that have substantially finished their qualification testing in the first half of calendar 2012, and that will be a very important milestone for both of those programs. That is in support of their flight test program as it is going forward.

The crane program is going to take a little bit longer than that, and I don't have a number -- a hard date that I feel comfortable with that yet. But certainly I would hope no longer -- no more than a year after that.

So in our fiscal year terms, that means that we continue significant engineering spending on the combination of those programs in FY 12 and to a certain extent in the beginning of our FY 13, the next fiscal year, but should at some point will be finishing up the qualifications for the cargo winch and retrieval winch and be just focused on the crane project and bringing that one to closure and to bed, so to speak.

JAMES VANASEK: How much engineering spending do you anticipate making over that time period?

MIKE HARLAN: **I don't have a firm number on that right now. Our total investment in those programs is in excess of $20 million.**" – Breeze-Eastern's 2012 Q1 Earnings Call Transcript

[5] "James Vanasek: I know that you sort of touched on this briefly in sort of one sentence. But **I was wondering if you could go into a little bit more in-depth detail about the new projects that you've got coming on stream, the C27, the CH53 and the Airbus 400**?

Mark Mishler (Breeze-Eastern's former CFO): The C27J is very close to completion of development, there is 1 test to go on that and we are on track to have that finished this month., and we are very glad to be going forward with that. That is a program that is being well received by the end-user customer. Our understanding is that the aircraft that our equipment are going on to will be in active deployment in short-term.

CH53K, we are also making good progress on that and have a key deliverable milestone coming up in July. Which we expect to hit on track to do that.

A400M is a challenge for us. 3 different projects going on there, the cargo wench, the retrieval wench and the crane. We are making progress, particularly in the cargo wench and retrieval wench. And in active dialogue with Airbus about what we can do work together effectively to try to put in some delivery schedules on those. But all 3 of those programs are still moving forward. As well as several others that we are working on.

James Vanasek: What kind of revenues are you expecting this year and next year from those 3?

Mike Harland (Breeze-Eastern's former CEO): From those 3 in particular? They're just going to start to ramp up this year. So we won't have a full year, but it will be measured in millions.

James Vanasek: Any little further clarification? Are we talking for next year would you be talking like $5 million, $10 million, $20 million? Sort of a rough idea?

Mark Mishler (Breeze-Eastern's former CFO): **It will eventually get up to $20 million, but it's not going to hit $20 million in 2012**." – Breeze-Eastern's 2011 Q4 Earnings Conference Call

[6] One customer told us: "My issue is that we equip all 12 of our helicopters with hoists and the operations are things we train extensively on. **If a hoist is taken out of service we get very uncomfortable because one of our prime reasons for having them is to rescue our own firefighters from getting burned over by a forest fire or for getting an injured person in a remote area out for medical attention**. I'm not sure either company [*Quan added: Breeze-Eastern or UTC*] gets that and it may be that the armed services have enough spares so that it never happens. **The hoist is used because in almost all instances where it is used it is not possible to land the helicopter. So we don't like having a helicopter available but no hoist**. They don't break that often but they do break."

[7] One customer told us: "The fixed parts of a hoist are going to be different for different manufacturers. Our internal hoists can be moved from helicopter to helicopter but except for the hoist mechanism itself **the external hoists from both manufacturers do not have any interchangeable parts. Wiring diagrams are also specific to each manufacturer. Each hoist type comes with a helicopter model specific flight manual supplement** so these are also different between hoist manufacturers and helicopter models."

[8] One customer told us: "I should add that when I have called UTC recently **I've spoken to engineers and a couple of marketing people who have been responsive and helpful but the calls were initiated from my end**. UTC is the only mfg. that makes the type of hoist we use and we selected it for some very specific reasons. **I suspect that things would be different if there were 5 manufacturers who made a hoist like this and they were interchangeable, with little or no work, but the market is too small for that to happen, so here we are.**"

[9] "Let me answer it this way. Because of the typical margin that we -- you really zeroed in on the fact that **spare parts margins are typically about 60%. New production is around 30%. So, the mix certainly drives the overall performance.**" – Robert White, Breeze-Eastern's former CEO, 2008 Q3 Earnings Call Transcript

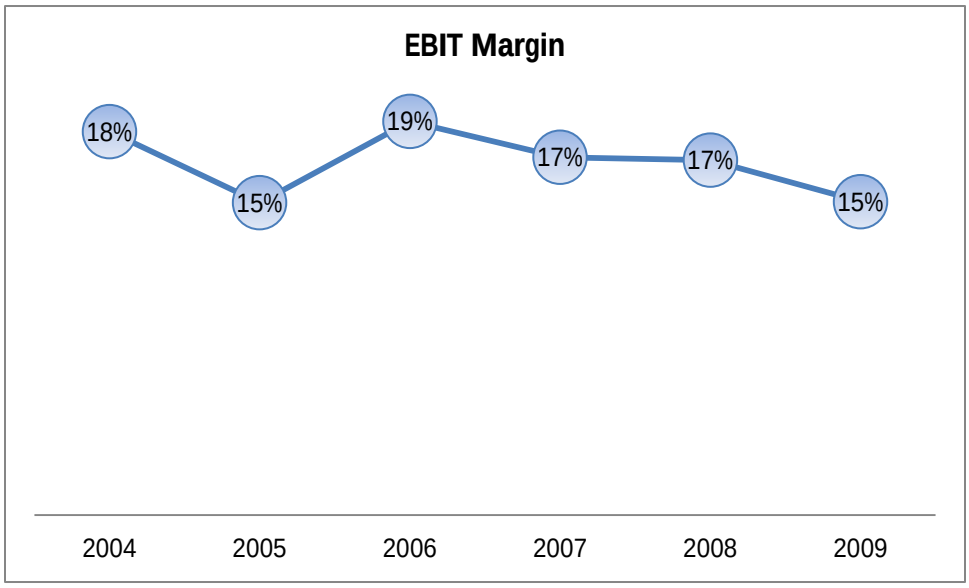
[10] One customer told us: "**Over the years many operators have switched from Breeze to UTC or vice versa when they get upset over customer service or for some other reason and in most cases any particular helicopter can be set up to work with either brand but there are significant changes in the fixed provisions in the cases I am familiar with**. I am not an expert on what if

any differences there are in the fixed provisions between the two brands for any given helicopter. It is not a usual thing for a fleet operator or a company with one helicopter with a hoist to want to or be able to switch back and forth between brands on any kind of short term basis. **Most operators just have a preference for some feature or technical support offered by one brand or the other and they tend to stick with that when they get a new helicopter. So there is incentive for the airframe manufacturers to supply either brand**.

If more than one hoist is offered [for the helicopter model] then the customer decides [the hoist brand to buy]. If only one hoist is available then as long as the customer has decided on that aircraft they would then just accepted what is offered unless they were willing to pay the considerable costs involved in engineering a different installation on their own. It is possible to do that."

Quality

Breeze-Eastern Can Make 20% EBIT Margin



EBIT margin was between 15% and 19% in the 2004-2009 period

- Demand is stable
    - Customers can't reduce SAR missions in bad times
        - Critical missions
    - Revenue declined by 8% in FY2010
        - (ended in March)
        - That's a small decline for most capital goods companies
            - Customers tend to delay capital spending in bad times
- Capital requirement is low
    - Low fixed cost
        - Sales/PPE is about 8
    - PPE is smaller than both receivables and inventories
        - PPE: $11 million
        - Inventories: $19 million
        - Receivables: $24 million
    - Sales/NTA is currently 2.5x
    - Breeze need more inventories for better customer service
        - Customers complained about long spare parts time of both Breeze and UTC
            - Way more than 90 days for some items

        - Breeze has reduced commercial spare parts delivery time[1]
            - From 90 days to less than 30 days
                - 14 days for the most commonly ordered spares
            - Invested in staff and inventory
            - Commercial overhaul and repair turn times have been cut in half
                - Over the last 2 years
    - Inventory risk is low
        - There are only 4 rescue hoist models
            - 2 cargo hook models
            - 1 cargo winch model
    - Further investment in inventories may reduce Sales/NTA to 2x
- EBIT Margin can be 15-20%
    - Gross margin was historically in the low 40%
        - Spare parts: over 60%[2]
        - OEM: 30%
    - Achieved 19% EBIT margin in 2005
        - Ranged between 15% and 19% in the 2003-2008 period
    - Margin was under pressure due to engineering expenses
        - Invested in new programs since 2006
            - Tried to enter the cargo winch market
                - Major contracts are
                    - Airbus A400M
                    - Alenia C-27J
                    - Sikorsky CH-53K
                    - Boeing B22
            - Had to develop from scratch
                - Paid for all the development costs[3]
            - Spent more than $20 million in the Airbus A400M program alone[4]
                - From 2007 to 2011 FY
                - => hurt EBIT margin by more than **5%**
        - Gross margin is lower than the historical level
            - Was 36% in FY2014
                - Due to low gross margin on new products[5]
                    - Cargo winch for Airbus A400M
            - Gross margin has improved slightly in FY 2015

        - For the first 9 months
            - FY 2015: 38%
            - FY 2014: 36%
- Breeze has been in a prototype production mode
    - Developed cargo winch products from scratch
        - Has finished the Airbus A400M program
        - Is finishing some other programs
- Breeze will be in a serial product mode
    - Margin will improve overtime
        - Reduce cost per unit overtime
            - Higher gross margin
        - Get more aftermarket sales
            - Much more higher gross margin
    - Huntington Ingalls is an example
        - The last decade was about lead ships
        - Got problems with cost estimates[6]
            - Took a substantial charge on LHD-8
                - Had priced it as if it was a repeat ship
                - But there was a substantial amount of new design on that ship
            - Had the same problem with LHA-6
                - Had even more design change
                - Yet it was a fixed-price incentive contract
                - Also assumed a learning curve off of LHD-8
                - The contract performed well below expectations
        - Then Huntington rolled off underperforming contracts
        - Entered new contracts[7]
            - Based on cost they know
            - Repeat production
        - Huntington has been improving margin towards the 9%+ target
            - Segment operating income margin

        - 2011: 6.3%
        - 2012: 6.8%
        - 2013: 8.3%
        - 2014: 9.1%
    - EBIT margin can return to 15-20%
        - Improve gross margin on cargo winches overtime
        - More aftermarket sales of cargo winches overtime
        - Lower engineering expenses
            - New product development will be minor modification of existing models[8]
        - There's sign that Breeze and UTC have learnt to share the market
            - Breeze is making change to not to invest 100% of its own money in new products[9]
                - Get funding from customers
- ROIC is very good
    - Is currently 26%
        - EBIT margin: 11%
        - Sales/NTA: 2.5x
    - Potential
        - EBIT margin: 15-20%
        - Sales/NTA: 2x
        - => 30-40% pre-tax ROIC
- 8 dimensions of quality
    - **Relative size**
        - Breeze is tiny compared to helicopter manufacturers
        - Customer concentration is lower than Breeze market share
            - Breeze has over 50% market share
                - Only one competitor
            - 6 manufacturers share about 95% of the helicopter market
                - (over 1,300 Kg MTOW)
    - **Focus**
        - Breeze is more focused than its competitor
        - There are signs that UTX neglected the hoist & winch business
            - Hoist & winch is a tiny part of UTX
                - Less than $100 million revenue
                - UTX's revenue is $120 billion

- There are very few product news of UTC hoist and winch
- One customers told us that their longtime sales person retired[10]
    - He was the customer's "go to guy"
    - The only communication the customer see is a relatively new customer web
        - Little information
        - Don't even list important rescue hoist models
    - Email is returned by not as fast as the customer wants
- Quan's experience:
    - Sent emails to 4 customer contacts
        - 2 emails were undeliverable
            - Perhaps these employees left the company
        - 1 employee didn't reply
        - 1 employee replied after 2 days

- Breeze is getting closer with customers
    - Reduced spare parts delivery time
        - Customers complained about long spare parts time of both Breeze and UTC
            - Way more than 90 days for some items
        - Breeze has reduced commercial spare parts delivery time[11]
            - From 90 days to less than 30 days
                - 14 days for the most commonly ordered spares
            - Commercial overhaul and repair turn times have been cut in half
                - Over the last 2 years
    - Established a customer web portal and expanded training programs[12]
        - Customers can complete online transactions
    - Build a more robust customer support team[13]
        - Relies less on outside market consultants
        - Phones are staffed 24 hours per day

- Breeze website lists customer support contacts in 13 countries
    - USA
    - Australia
    - Taiwan
    - New Zealand
    - Canada
    - Italy
    - Brazil
    - South Africa
    - Japan
    - Switzerland
    - Sweden
    - India
    - Germany
- UTC's website has little information about products
    - Lists only 3 product contacts
    - Being asked about product, they send a product brochure
        - The brochure lists only
            - 3 repair centers in
                - USA
                - France
                - Singapore
            - And the segment contact
                - Phone number of UTC Aerospace System Sensors & Integrated Systems
- Introduced the MissionView system
    - Give personnel in the aircraft monitor information
        - Real-time streaming of the video
        - How far down the hook has dropped
        - How much of the cable is released
        - How much weight is on the hook
    - Without MissionView, crew members get information from rescuers via a wireless intercom system

- **Customer engagement**

        - Breeze is perhaps closer to customer than UTC
    - **Cross-selling**
        - Few opportunities
    - **Retention**
        - High
        - End-customer tend to prefer a brand over another
    - **Words of mouth**
        - No information
        - Most end-customers are aware of two options they have
            - Breeze-Eastern
            - UTC
    - **Reinvestment rate**
        - Normal engineering expense is about $6-8 million[14]
            - $3-4 million for new products
                - 4% of revenue
            - $3-4 million for existing products
        - Accumulated engineering expense has been well over $50 million
    - **Stock's popularity**
        - Short-interest/Float: 0.3%
        - Share turnover: 56%
        - 3-month average daily volume: 6,465 shares
            - About $65,000

---

[1] "**Breeze-Eastern Corporation has reduced commercial spare parts delivery times from 90 days to less than 30, and the most commonly ordered spares are now reaching customers in just 14 days. Commercial overhaul and repair turn times have also steadily declined and have been cut in half over the last two years**.

President and CEO Brad Pedersen said **the company's investment in staff and inventory — and a focused two-year effort to reach the 30-day goal — is paying off.** "Breeze-Eastern is changing," he said. "Our entire team knows that we cannot rely on past success to build a future that's truly worthy of the Breeze-Eastern name and legacy." – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[2] "Let me answer it this way. Because of the typical margin that we -- you really zeroed in on the fact that **spare parts margins are typically about 60%. New**

production is around 30%. So, the mix certainly drives the overall performance." – Robert White, Breeze-Eastern's former CEO, 2008 Q3 Earnings Call Transcript

[3] "I think I've said before that **we have been victims of our success in the mid-2000s when we won a number of significant programs and have been working on the engineering for those new product development programs over the last couple of years**. And the Airbus program is certainly a large piece of that, but there have been a number of others as well that we've been working on at the same time." – Mike Harlan, Breeze-Eastern's former CEO, 2011 Q3 Earnings Call Transcript

[4] "James Vanasek: Sure. And then I was wondering if you could go a little bit more in depth on the A400M program. I know you have got the big milestone coming up. How much as far as engineering resources and what sort of timetable you need to meet going forward over the next six months on that program, and when do you anticipate reaching the final milestone if you are able to accomplish everything?

Mike Harlan (Breeze-Eastern's former CEO): You are right, Jim. That involves a number of different questions. Let me try to respond to as many of them as I can --

James Vanasek: You don't mean, Mike, I ask more than one question at a time?

Mike Harlan (Breeze-Eastern's former CEO): Yes. But it is perfectly fair. Let me try. **For the A400M program, we are working on the retrieval winch system that is used for parachutists operations. We are working on the cargo winch system and also on the crane system**. For both the cargo winch and the retrieval winch system, our projection is to be able to make deliveries of the qualified units that have substantially finished their qualification testing in the first half of calendar 2012, and that will be a very important milestone for both of those programs. That is in support of their flight test program as it is going forward.

The crane program is going to take a little bit longer than that, and I don't have a number -- a hard date that I feel comfortable with that yet. But certainly I would hope no longer -- no more than a year after that.

So in our fiscal year terms, that means that we continue significant engineering spending on the combination of those programs in FY 12 and to a certain extent in the beginning of our FY 13, the next fiscal year, but should at some point will be finishing up the qualifications for the cargo winch and retrieval winch and be just focused on the crane project and bringing that one to closure and to bed, so to speak.

JAMES VANASEK: How much engineering spending do you anticipate making over that time period?

MIKE HARLAN: **I don't have a firm number on that right now. Our total investment in those programs is in excess of $20 million.**" – Breeze-Eastern's 2012 Q1 Earnings Call Transcript

[5] "As a percent of sales, the gross profit margin was 36.2% for fiscal 2014 compared with 41.0% for fiscal 2013. **Product gross profit as a percent of sales declined primarily due to a greater proportion of sales of new equipment to large OEM's and some newly-developed products which have lower profitability**. Spare parts had slightly lower margins. Services gross profit as a percent of sales declined from losses on billable engineering and a greater proportion of U.S. government volume in overhaul & repair." – Breeze-Eastern's 2014 10-K

[6] "On LHD-8, I think some of you are familiar that within about 30 days of us arriving, we were deep into figuring out where we actually were on LHD-8. And we were moving in a test program on that ship, and it wasn't coming together the way that is should have. And at the end of the first quarter, we took a pretty substantial charge on LHD-8 to get us reset on the program to get it across the finish line.

On the LHA-6, what we saw there -- we had LHD-8, as we kind of stepped back, **one of the things we saw in LHD-8 was we had priced it as if it was a repeat ship, but there was a substantial amount of new design on that ship**. So we took a look at LHA-6 and asked ourselves, did we do the same thing on LHA-6? And, in fact, we had.

LHA-6 had even more design change than LHD-8. And yet it was a fixed-price incentive contract that assumed a learning curve off of LHD-8. That contract was signed in the aftermath of Katrina. And I think there were a lot of folks with a lot of good intentions to get that contract moving to get the workforce congealed and moving ahead. But the reality is from a business standpoint, it

would probably -- there was a lot of risk that was not recognized when the contract was signed.

Today we are performing on that contract well below our expectations. We're not on a forward loss position on that program, but we are performing well below what we think is appropriate for that kind of a program.

When we took a look at the LPD program we saw the contract for LHA-6, so we took a look at the other contracts that were signed in that timeframe, and it was the LPD. We have a four ship contract, LPD-22, 23, 24, and 25. That ship contract assumed that you would have serial production, and you would have a pretty substantial learning curve as you came down.

Again, I think the contract -- it clearly was signed in the aftermath of Katrina. I don't think that the cost base -- the new cost baseline on the shipyard was well understood. I also don't think it was well understood how you go capture the benefits of serial production. It doesn't just happen; you actually have to go thoughtfully prosecute those benefits, though, to make sure you get them.

What we found was, not only do we have a contract for a fixed-price incentive contract for four ships that assumed serial production efficiencies, it also assumed process efficiencies from a six sigma program that the company was trying to put into place.

And what we saw was, there was nothing happening to actually those benefits. **Two ships were going to be built in Avondale; two ships were going to be built in Pascagoula. There were four different outsourcing plans because the shipyard -- in a lead ship situation, you really push on the schedule.**

In a serial production mode, you really push on the progress. And so, in order to hole the schedule, four different outsourcing plans have been created. Well, four different outsourcing plans and two different shipyards, there were no benefits of serial production being captured. So, we have to reset that." – Mike Peters, Huntington Ingalls CEO, Deutsche Bank 2011 Conference

[7] "Getting Avondale right. We made a decision to close that, and do all the ships in Ingalls and get into serial production. **And then, negotiating these new contracts based on actual performance, not wishful performance and building them in serial production. So we've completed some ships since Katrina. we know what it costs to build them, and the contracts reflect the**

appropriate costs." – Barb Niland, Huntington Ingalls CFO, Deutsche Bank 2011 Conference

[8] "George Melas: Yes, very good. And then, a second question. As you look at new programs that you're bidding on, is there -- I'm sure you have a lot of hoists. Do you have, also, quite a few winches that you are bidding on? And have you through the -- all the work that you've done with -- on the Airbus system, have you really beefed up your capability in that space to be a good long-term viable player in the winches area?

Mike Harlan (Breeze-Eastern's Former CEO): I think with the wins that we've had and the ongoing development -- and **we've been working with the Airbus program, with the C-27/JCA program for Alenia, with the CH-53K for Sikorsky. I think we're -- and also, the previous win we had with the B22 for Boeing.**

I think we have a very strong position in cargo winches today. And **we are using the engineering work that we've done for those in our bidding on other programs -- so trying to use derivatives off of that with much less engineering -- incremental engineering investment or effort than we had to make to do the from-scratch development on a couple of those cargo winches.**" – Breeze-Eastern's 2011 Q3 Earnings Call Transcript

[9] "**Mike Harlan, Private Investor**: Good morning, gentlemen. First of a question to follow up on Bobby's question; **engineering expenses for this company tend to be driven by new platform wind**; has there been any wins recently or that you anticipate that would commit the company to significant development expenses? That's the first question.

The second question is that it's very encouraging to read about the progress on the Airbus A400 program, and how it's moving into production with 4 aircrafts due to be delivered this year. would you care to comment on how that would affect Breeze-Eastern and when the development for the A400 program will wind down, and what you anticipate the revenues from the A400 program might be once it gets up to full rate?

Brad Pedersen, Breeze-Eastern's CEO: When we fully divide question into -- I'll answer the second question first, we don't give the forward-looking, and all I can is we are supporting the Airbus A400 delivery schedule and working with them to meet all their needs and met their customer needs.

The first question -- new platform -- Yes, we've had several new platform wins, **we are trying to make the change now to not invest 100% of our own money, that we are getting customer funding for the new platform, the new products**, and we've had several again, we can't comment, as of, because of confidentially with our customers, but we've had two or three new program wins this year. And again, those will be long-term revenue generators for us." – Breeze-Eastern's 2013 Q3 Earnings Call Transcript

[10] One customer told us about his experience with UTC hoist and winch:

"I can't say that anything is different after UTC acquisition except that **their longtime sales person retired. He was my "go to guy" anytime I needed information. Neither company is likely to call me on the phone. E mail is returned but not usually as fast as I'd like. UTC has a relatively new customer web portal with access to their service information. That is really the only company communication I see**. I am old school, so talking to someone, especially if they call me, is very inexpensive and much appreciated customer service. I've never spoken to the guy in charge at UTC and **you would be able to knock me over with a feather if he called and said "so, how do you like us?" I have called and talked to their customer service folks a few times and they have been responsive**.

My issue is that we equip all 12 of our helicopters with hoists and the operations are things we train extensively on. **If a hoist is taken out of service we get very uncomfortable because one of our prime reasons for having them is to rescue our own firefighters from getting burned over by a forest fire or for getting an injured person in a remote area out for medical attention**. I'm not sure either company [*Quan added: Breeze-Eastern or UTC*] gets that and it may be that the armed services have enough spares so that it never happens. The hoist is used because in almost all instances where it is used it is not possible to land the helicopter. So we don't like having a helicopter available but no hoist. They don't break that often but they do break.

I should add that when I have called UTC recently I've spoken to engineers and a couple of marketing people who have been responsive and helpful but the calls were initiated from my end. UTC is the only mfg. that makes the type of hoist we use and we selected it for some very specific reasons. **I suspect that things would be different if there were 5 manufacturers who made a hoist like this and they were interchangeable, with little or no work, but the market is too small for that to happen, so here we are.**"

[11] "**Breeze-Eastern Corporation has reduced commercial spare parts delivery times from 90 days to less than 30, and the most commonly**

ordered spares are now reaching customers in just 14 days. Commercial overhaul and repair turn times have also steadily declined and have been cut in half over the last two years.

President and CEO Brad Pedersen said **the company's investment in staff and inventory — and a focused two-year effort to reach the 30-day goal — is paying off.** "Breeze-Eastern is changing," he said. "Our entire team knows that we cannot rely on past success to build a future that's truly worthy of the Breeze-Eastern name and legacy." – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[12] "**A customer web portal and expanded training programs have also been established**. Customers and suppliers are encouraged to register products and use the portal login feature to open an account at www.breeze-eastern.com. **With a secure account, users may access information and submit requests. Future enhancements to the user-friendly portal will enable customers to complete online transactions.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[13] "In 2014, Pedersen said the company assumed more responsibility for direct accountability and contact with its customers and partners, reducing its reliance on outside market consultants and building a more robust internal team that is regionally focused according to customer location. "**Everything we are doing is designed to bring us closer to the customer and better support the mission**," said Pedersen. "**We have a dedicated group of people who genuinely care about helping the customer." For example, phones are staffed 24 hours per day, because "time zones will not impede a direct connection and immediate help for a customer in need.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[14] "**Brad Pederson, Breeze-Eastern's CEO**: Thanks for the question, Bobby. **I would say the normal for somebody like us would probably be 4% of sales, plus or minus, for investment in R&D and new technology going forward**, I think -- that would be our once we get through some of these development programs.

Now there may be lumps in that road with new helicopter OEMs that we would increase our investment and it may be lower, but I would -- I think I would target 4%.

Bobby Melnick: Okay. So 4%, again, and I'm not trying to be brilliant here, I'm just trying to interpret what you're saying. The Company has been a $75 million -- $70 million or $80 million Company for the last several years, or there about, so you're suggesting that in a normal year engineering cost could be $3 million, $3.5 million, maybe $4 million on the outside. Is that right?

Brad Pederson, Breeze-Eastern's CEO: I would say that would be for new product development, new development, those types of things. There's obviously support to production and support to existing customer engineering costs that are in there as well.

BOBBY MELNICK: I'm not trying to trap you here; I'm just trying to understand. Normal engineering expenses would be 4% of sales, or more than 4% of sales?

Brad Pederson, Breeze-Eastern's CEO: I would say, I'm sorry, it was our investment in future growth and R&D I think our target should be about 4% of sales, plus or minus. I don't have the figures on top of my head --

Bobby Melnick: Generally speaking, because I'm really not trying to trap you I'm just trying to get a sense here. (Inaudible) report on our income statement a line item called engineering expenses it was $1.7 million this quarter, it's $2.1 million the year-ago quarter, it was -- I don't need to read off the income statement. We reported on a broken-out basis. It will be on an annualized basis, it looks like somewhere between $9 and $10 million.

Under a normal -- **that engineering expense line, just to be clear, includes investment for new projects and for support for existing platforms**, obviously. Correct?

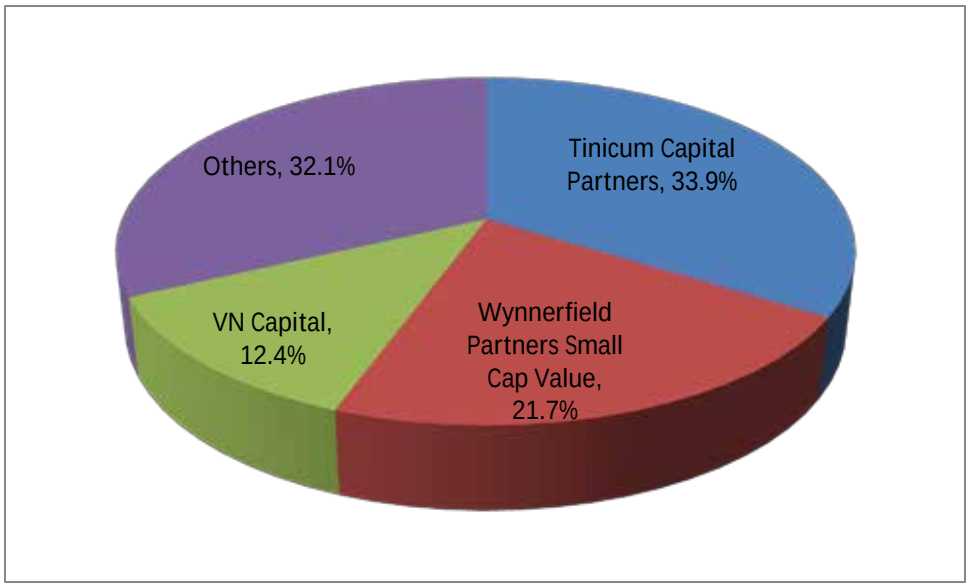
Brad Pederson, Breeze-Eastern's CEO: Correct.

Bobby Melnick: Okay. So that number that this year will be $9 million or $10 million includes some unusual engineering expenses associated with positioning us to deliver on the A400M and the Sikorsky products, which we've said for years. My only question is when that unusually high level of engineering expenses runs out, maybe it's at the end of next year, maybe it's in the 2015, I don't know, but when that expires **what would be a normal engineering expense for the Corporation**; i.e. the number that you would report on the engineering expense line item on the income statement?

Brad Pederson, Breeze-Eastern's CEO: Bobby, **I would say the normal, probably $6 million to $8 million at the current level of sales would be normal.**" – Breeze-Eastern's 2013 Q3 Earnings Call Transcript

Capital Allocation

Breeze-Eastern Is Controlled by Value Investors



Three largest shareholders own 69% of Breeze-Eastern

- 3 shareholders own 69% of Breeze
    - Tinicum Capital partners
        - Currently own 3.3 million shares
            - **35%** of outstanding shares
        - Started investing in Breeze in 2006
            - Through a private placement
            - Acquired 2.5 million shares
            - $7.5 per share
        - Acquired 0.8 million additional shares in 2011
    - Wynnefield Partners Small Cap Value
        - Bought 2.1 million shares in 2006
        - Currently owns 2.1 million shares
            - **22%** of outstanding shares
    - VN Capital Fund
        - Bought 0.6 million shares in 2011
        - Continued buying more shares afterwards
        - Currently owns 1.2 million shares
            - **12.4%** of outstanding shares
    - Wynnefield and VN Capital are small cap value funds

        - VN Capital's annual return since 2002 is 14%
            - Concentrate on 8-12 stocks
            - Focus on small, overlooked stocks
            - Tend to hold stocks for many years
        - Wynnefield focus on underfollowed and undervalued stocks[1]
    - Tinicum acquires companies in private transactions or restructuring[2]
        - Or make minority investments in public and private companies
        - Focus on companies or industries that are
            - Undergoing change, or
            - Out of favor
- Breeze had a lot of debt as a legacy of its corporate history
    - Breeze was the crown jewel division of TransTechnology
        - In the 1990s
    - TransTechnology took Breeze's cash flow and embarked on a 10-year acquisition binge
        - Debt was $271 million in 2001
    - TransTechnology started reorganization in 2001
        - Sold all other businesses
        - Kept only Breeze in 2003
            - With $46 million net debt
                - Interest rate was over 20%
        - Wynnefield and Tinicum invested in Breeze in 2006
            - The company name was changed into Breeze
- The vision of major shareholders were
    - A debt-free company in several years
        - Nelson Obus wanted to see deleveraging before any growth[3]
            - (CIO of Wynnerfield)
        - Bobby Melnick had a hot debate with the CEO in 2007 about reducing debt instead of bidding on new projects[4]
            - Bobby Melnick is a founder of Terrier Partner
                - Terrier Partner bought shares of Breeze before 2006
                    - 4^{th} or 5^{th} biggest shareholder of Breeze
            - Bobby Melnick was also a general partner of Wynnerfield
    - $20 million EBITDA[5]
- Major shareholders have changed CEO 3 times since 2006
    - Disagree with the first CEO on the strategy
        - The first CEO wanted to grow

        - Bid on new projects
    - Shareholders wanted deleveraging before growth
- They fired the CEO in 2009
- Appointed Mike Harland as CEO
    - In August 2009
    - His mandate was
        - Clear up the project engineering backlog
        - Tighten up cost control
        - Make sure the company doesn't enter new developmental contracts with financial risks like previous CEO
- Mike Harland was fired in 2012
    - He remained a shareholders
    - Ask questions in the conference call frequently
- Brad Pedersen was appointed as CEO
    - In May 2012
- Brad Pedersen seems to do the job
    - Breeze now has net cash
    - Finished the Airbus A400 program
        - Started getting revenue in FY2014
    - About to finish some other major projects
    - Reducing engineering expenses
        - After finishing major projects
    - Makes Breeze a stronger organization
        - Reduced spare part delivery time from over 90 days to less than 30 days
        - Established a customer web portal and expanded training programs[6]
            - Customers can complete online transactions
        - Built a more robust customer support team[7]
            - Relies less on outside market consultants
            - Phones are staffed 24 hours per day
        - Established an Innovation and New Product Development Center
            - In Fredericksburg, Virginia
        - Introduced the MissionView system
            - Give personnel in the aircraft monitor information
                - Real-time streaming of the video

        - § How far down the hook has dropped
        - § How much of the cable is released
        - § How much weight is on the hook
    - o Without MissionView, crew members get information from rescuers via a wireless intercom system
- Breeze won't enter developmental projects with significant financial risk
    - o They now have base cargo winch model
        - § Don't have to develop from scratch
    - o Won't pay for 100% of development cost[8]
        - § Get funding from OEM customers
- Breeze hasn't made any acquisition since 2001
    - o Shareholders might not be interested in acquisitions
    - o From our conversation with one of the three biggest shareholders
        - § Breeze just couldn't find a good acquisition target
        - § They expect cash return to shareholders
            - · Share repurchase
                - o Not practical because of illiquidity
            - · Dividend
            - · Or a potential sale of the company

---

[1] Nelson Obus, CIO of Wynnefield Partners, said in an interview with The Manual of Ideas: "Well the trick is of course I mean I'm not Warren Buffett. Okay, I'm not. I haven't abandoned the value [inaudible] and gone looking for wonderful businesses. **What we're looking for are mundane businesses that aren't affording an enormous multiple, particularly the free cash flow yield we look at, the enterprise value are very important metrics, where the opportunity exists but is not perceived and so that may be involved in a long lead time. And so we're not looking particularly for wonderful companies. We're looking for companies that could become wonderful for one reason or another or otherwise we wind up overpaying**. And you know what overpaying is … it's a complicated issue for somebody who is not a deep value guy and I know people who are deep value guys who I would argue more in my camp of being a catalytic type special situation buyers. Some of them have gone through this entire bull market with more than 50% cash because of I would say the orthodoxy of their views in terms of the metrics whether they consider that to be value. I've always felt that you've got a [inaudible] just what you're gonna pay for a company on the basis that what the alternative is which is fixed income and that of course is determined by government yields and so in the current situation where the government has gotten to a point where they've

pushed interest rates to a level where people have no choice but to buy stocks, I may be willing to pay a little more for a company, say an industrial company when I got in the business, almost all industrial companies were trading between three and six times EV/EBITDA and then there was a lot of consolidation and they began to trade between 5 and 7 [EV/EBITDA] because obviously they survived, they had something going for them. And then of course in this world over globalization, maybe their opportunities expanded. **And finally you know when interest rates got pushed down, a lot of these companies you know went to 13x EV/EBITDA so at some point in there I said enough is enough. Maybe between 8-9x and then you have to sell and you have to really sell and get out otherwise you're no longer a value guy**; you wandered into the GARP or something whatever Buffett's in. But finding that tension point about where you wanna sell is more of an art than a science I mean you can and again we scale out just like we scale in so it's a dynamic process"

[2] "**We are business owners who seek to generate superior returns over the long term without relying on excessive leverage. We combine a long-term perspective and partnership orientation with an ability to understand the intrinsic value of a business and the skill, discipline and patience needed to create equity value for our investors**. We pride ourselves on the quality and longevity of our relationships as well as our ability to work with managers to make businesses more valuable. Tinicum is currently investing $1.5 billion of committed capital.

Tinicum acquires companies in private transactions or restructurings and also makes minority investments in public and private companies. We have experience across a wide number of industries but tend to focus on companies or industries that are undergoing change or are out of favor.

A significant portion of the capital we manage is from Tinicum's general partners, including the professionals who make and manage Tinicum's investments, creating an uncommonly close alignment of interests between the general partner and limited partners." - http://www.tinicum.com/

[3] "NELSON OBUS: Yes, hi. By the way, Bob, I will say that **I would expect deleveraging to be the first and foremost goal of the Company before any growth initiative. And I am the second largest holder, owning over 15% of the Company. So, I hope that it's not just a part of the mix, but it has to be the critical part of the mix**. We've seen that this is not a -- I mean, we're not looking for two birds in the bush. We're looking for one bird in the hand, which is right there." – 2007 Q3 Earnings Call Transcript

[4] "**Bobby Melnick, Terrier Partners**: Hi, good morning. I wanted to flesh out a little, if you will, Bob, your comment about the 5-year plan at the next board meeting, in which you said that you -- **Breeze-Eastern intends to increase the penetration of your reputation in niche markets**, if I got this right, and that the key is to continue to participate in operations consistent with the Company's principles.

You state clearly in your outlook for fiscal '07, words that I'm sure Gerald Harvey reviewed, "As we have previously stated, **our primary focus for the remainder of '07 includes the continued pursuit of new hoist, winch and weapons handling systems sales on a global basis to provide a solid base upon which to provide value for shareholders.**"

Now, on December 11th you presented to shareholders a series of meetings. A public breakfast, a public lunch, and a series of private one-on-one meetings in the interim, an indication of this plan without specificities. And in the following 12 trading days your stock declined every day, suggesting that the shareholders didn't necessarily -- excuse me. The shareholders did not approve of your pending 5-year plan.

I'm just curious. Is the plan that you as CEO are presenting to the Board consistent with the plan that you hinted at December 11th, which your shareholders have expressed to you they did not want you to pursue? Or **has the new 5-year plan changed or been modified in any way to reduce RFPs, to reduce pursuit of sales growth and new once in a lifetime opportunities, with a gear more towards reducing debt, growing sales more slowly, and boosting operating margins more aggressively**? Please.

Bob White, Breeze-Eastern's former CEO: Let me answer your question this way. It's a bit long, but let me go through it. You know, our business is a business that produces high gross margins and high operating income. **Our gross margins are in the 40 range and our operating income ranges are about 20%**. And why is that?

The reason why the business produces margins at that rate is we pursue long-term programs, programs that last for 10 years and beyond. We are a sole source provider of equipment to the aerospace industry that gives us a large aftermarket component of our business. About 50% of our sales are

part of that aftermarket component. Our sole source position is about 90% of the products that we sell. How do you do that?

Well, we bid on work that meets our business model. Our business model is one in which we provide highly engineered products. We maintain the intellectual property rights, retain them by our Company. We become a sole source provider of equipment and we look for opportunities that have a strong aftermarket.

The work that we bid on is all rifle-shot opportunities. These opportunities are developed over long periods of time by our engineering staff and by the management. The opportunities are for long production runs. The opportunities at any one given time are low in quantity, maybe in the range of about 5 at a given time. Sometimes it's 1 or 2 and sometimes it's 10.

Today, we have in the order of 10 opportunities that are clumped together that we are pursuing. We won't win all of them, but we will try to win as many as we can afford to win. This is our normal way of conducting business. Nothing is different except today we have more opportunities than usual.

For the last 13 years, my team have been successful at pursuing work in this fashion successfully. The business unit has 12 years of sales compounded annual growth rates of 8% per year, 12 years of operating income compounded annual growth rate of over 15% per year.

In the short term, our results have also been good. Our share price one year ago was $6.20. Our diluted share price yesterday was $10.60, or 71% higher than last year. Our debt at the end of December 2005 was $60 million. Our debt at the end of 2006 was $42 million, about $18 million lower.

Our net worth at the end of December 2005 was negative $6 million. Our net worth at the end of the calendar 2006 was positive $15 million, or a difference of $21 million better. This year, our net income through the end of the third quarter was $2.6 million, $1 million higher than any of the last full five years.

Overall, our business value, or the value of our business, is the potential of the long-term programs that we have won, whether the work is in our backlog or not. **By winning new programs we will increase the value of our business by growing its potential. Just harvesting the current program wins will not increase the long-term value of the business.**

That's been a long answer to your question, but that really sums up how the plan is progressing, and it gives you a sense of the plan that will be presented to the Board of Directors by the management.

Bobby Melnick, Terrier Partners: I appreciate the clearly ad lib, off-the-cuff response.

Bob White, Breeze-Eastern's former CEO: Well, you're welcome, Bobby.

Bobby Melnick, Terrier Partners: It suggests to me a shorter way to answer that would be the following. "**Bobby, we've decided to defy the shareholders' wishes as expressed to us in the last six weeks and we're going to pursue our plan regardless of what the owners of the Company want.**" That to me sounds like the short answer.

Bob White, Breeze-Eastern's former CEO: I wouldn't agree with that.

Bobby Melnick, Terrier Partners: Well, **you've had multiple shareholders tell you that that's not the plan that we want**. And you continue to press on with a plan that we don't want that you think is best for the Company.

Bob White, Breeze-Eastern's former CEO: I don't agree with you, Bobby. I don't think--.

Bobby Melnick, Terrier Partners: It sounds like the plan you just stated is exactly the plan you presented to us on December 11th, with no changes whatsoever. That's these are rifle-shot opportunities. And I think what the shareholders have consistently expressed to you is that one has to look at constraints.

This company has $44 million of debt and you've got high cost debt with a significant chunk of NOLs, which advocates reducing the debt, monetizing the NOLs and producing high earnings and forsaking one or more of the 10 projects that you're citing to bid for on the RFPs. That's what the shareholders have consistently told you they want.

So, if you're not going to listen to the shareholders, then you're going to press on with your own plan. **And I just caution you to read the newspapers as to what happens to Boards of Directors and senior management who defy the will**

of their owners. You know, the graveyards are littered with people once deemed irreplaceable, Bob.

Bob White, Breeze-Eastern's former CEO: Thank you for your input."

[5] "**Bobby Melnick, Terrier Partners**: Okay. I appreciate the update.

And just a last comment as a long-term shareholder, and whether this reflects the views of other shareholders, I can't say. **It's incumbent upon this company to exhibit tremendous urgency with respect to paying down the debt**, and we recognize that there are limitations, obviously, to the extent we don't have the government appropriations, we have less earnings, we have less cash towards pursuing that.

But, when one looks out two, three or four years, as at least this long-term shareholder does, you can very easily create a scenario where you have a debt-free company producing double-digit EBIT and very high teens EBITDA margins, throwing off somewhere north of $20 million a year in virtually free, undedicated EBITDA cash flow which makes for a very, very appealing enterprise with a lot of flexibility in terms of what we want to do next as an organization.

So, in order for any of that to materialize, though, we have to dramatically whittle down the debt. And I'm sure it comes as no surprise to you that it's as disappointing to us as it is to you that we've only retired $1 million a quarter in debt this year.

So, keep it up and keep petal to the metal in aggressively looking to monetize non-core assets. I would rather see you sell these and pay down debt even if we leave a nickel on the table than to try and hold out for the very, very last cent. This is not a bull market in real estate any longer. And I would be very, very urgently encouraging you to rapidly monetize and pay down debt as expeditiously as possible." – Breeze-Eastern 2008 Q3 Earnings Call Transcript

[6] "**A customer web portal and expanded training programs have also been established**. Customers and suppliers are encouraged to register products and use the portal login feature to open an account at www.breeze-eastern.com. **With a secure account, users may access information and submit requests. Future enhancements to the user-friendly portal will enable customers to complete online transactions.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[7] "In 2014, Pedersen said the company assumed more responsibility for direct accountability and contact with its customers and partners, reducing its reliance on outside market consultants and building a more robust internal team that is regionally focused according to customer location. "**Everything we are doing is designed to bring us closer to the customer and better support the mission**," said Pedersen. "**We have a dedicated group of people who genuinely care about helping the customer." For example, phones are staffed 24 hours per day, because "time zones will not impede a direct connection and immediate help for a customer in need.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[8] "**Mike Harlan, Private Investor**: Good morning, gentlemen. First of a question to follow up on Bobby's question; **engineering expenses for this company tend to be driven by new platform wind**; has there been any wins recently or that you anticipate that would commit the company to significant development expenses? That's the first question.

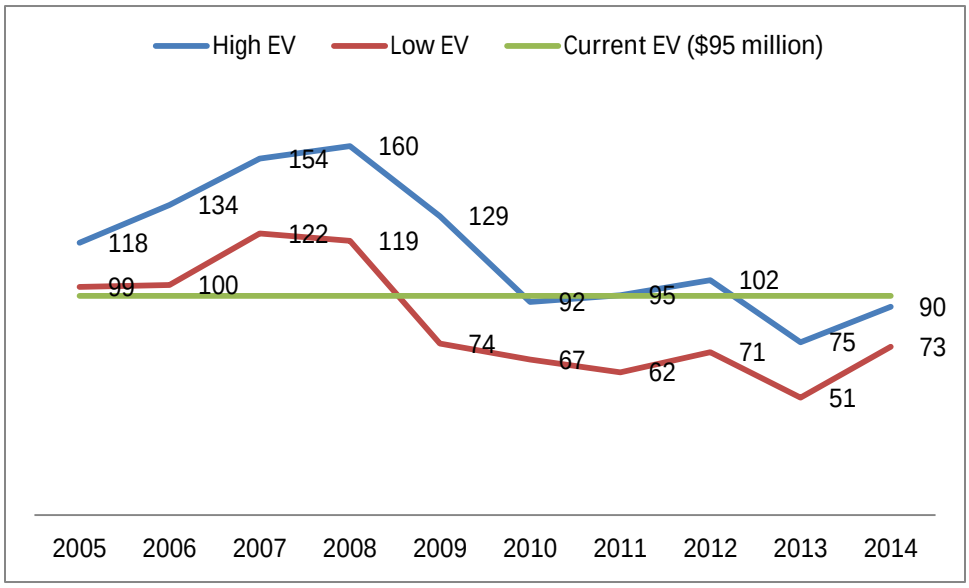
The second question is that it's very encouraging to read about the progress on the Airbus A400 program, and how it's moving into production with 4 aircrafts due to be delivered this year. would you care to comment on how that would affect Breeze-Eastern and when the development for the A400 program will wind down, and what you anticipate the revenues from the A400 program might be once it gets up to full rate?

Brad Pedersen, Breeze-Eastern's CEO: When we fully divide question into -- I'll answer the second question first, we don't give the forward-looking, and all I can is we are supporting the Airbus A400 delivery schedule and working with them to meet all their needs and met their customer needs.

The first question -- new platform -- Yes, we've had several new platform wins, **we are trying to make the change now to not invest 100% of our own money, that we are getting customer funding for the new platform, the new products**, and we've had several again, we can't comment, as of, because of confidentially with our customers, but we've had two or three new program wins this year. And again, those will be long-term revenue generators for us." – Breeze-Eastern's 2013 Q3 Earnings Call Transcript

Value

Breeze-Eastern Is Cheaper than It Was in 2005-2008



Breeze-Eastern's enterprise value was about $120-$160 million in 2007-2008

- Key inputs
  - Number of outstanding shares: 9.85 million
  - Share price: $11.5
  - Market cap: $113 million
  - Cash: $23 million
  - Debt: $0
  - Net environmental liabilities: **$4 million**
    - Liabilities: $9.2 million
    - Assets:
      - Deferred tax – environmental reserves: $1.1 million
      - Asset held for sale: $3.8 million
    - Saltzburg, Pennsylvania
      - Zero book value
    - Irvington, New Jersey
      - Zero book value
    - Glen Head, New York
      - Subject to a sale agreement at a price of $4 million
        - Book value: $3.8 million
    - These liabilities are related to own properties

            - These properties were disposed of by Breeze's former parent
                - Were never required for Breeze's current operations
        - Breeze may sell the properties in Saltzburg, PA and Irvington, NJ
    - EV: **$95 million**
    - EV/EBIT: 7.3
    - Tax rate: Below **35%**
        - Effective tax rate is about 40-41%
            - 35% federal tax
            - 5-6% state tax
        - Cash tax rate is 10-12%
        - Breeze has been realizing deferred income tax assets
            - 2005: $31 million
                - Including $26 million NOL carryforward
            - 2014: $8.8 million
                - Zero NOL carryfoward
        - Cash tax rate should be below 35% in the future
            - 57% of revenue is in the U.S.
                - 40-41% tax rate
            - 43% of revenue is in other countries
                - Below 30% tax rate
- Normal EBIT is at least $13 million
    - Breeze can make at least **$13 million** EBIT
        - Made $13 million in 2015 FY
            - Gross margin improved
                - For the first 9 months
                    - FY 2014: 36%
                    - FY 2015: 39%
                - Gross margin will keep improving toward the normal level of low 40s
                    - Improve cargo winch gross margin
                    - More aftermarket sales of cargo winches
            - Engineering expense is declining
                - FY 2013: $9.4 million
                - FY 2014: $8.2 million
                - FY 2015: $6.6 million

        - Engineering expenses will keep declining as Breeze finishes some major development programs[1]
    - Breeze made $13 million EBIT in 2007 and 2008
    - Breeze still maintains a duopoly position
    - Revenue today is higher than 2007-2008
        - 2007: $73 million
        - 2008: $76 million
        - 2014: $86 million
        - 2015: $90 million
    - There's no reason Breeze can't make more than $13 million EBIT
- Realistic expectation is **$15-20 million** EBIT
    - New products will add about $20 million annually to revenue[2]
        - New products are
            - Airbus A400
            - Alenia C27J
            - Sikorski CH53K
        - Breeze only started selling products for Airbus A400 in FY 2014
            - CH53K is well into qualification
                - Expect to get qualified by the end of this year
        - New stream of revenue from the 3 programs would add up to $100 million revenue
    - EBIT margin was in the 15-19% range in 2004-2009
        - => $15-19 million EBIT

- Peers trade at 10x EV/EBIT or higher
    - Textron (TXT)
        - Share price: $44.31
        - EV: $15.6 billion
        - EV/EBIT: **14.93**
        - EV/Pre-tax Owner Earnings: **13.46**
            - (Pre-tax Owner Earnings = EBIT + Acquisition and restructuring costs + Amortization)
        - Textron is one of the major helicopter manufactures
        - Textron 2014 revenue was $13.9 billion, including
            - Textron Aviation: $4.6 billion
                - (**33%** of total revenue)
                - Products include

            - Business jets
            - Turboprop aircraft
            - Piston aircraft
            - Military trainer and defense aircraft
        - Bell: $4.2 billion
            - (**31%** of total revenue)
            - Manufacturer helicopter
        - Textron Systems: $1.6 billion
            - (**12%** of revenue)
            - Products include
                - Unmanned systems
                    - Almost ½ of segment revenue
                - Weapon and sensors
                - Marine and land systems
                - Simulation, training and other
        - Industrial segment: $3.3 billion
            - (**23%** of revenue)
            - Products include
                - Fuel system for cars, light trucks, all-terrain vehicles
                - Selective catalytic reduction systems to reduce emissions from diesel engines
        - Finance segment: **1%** of revenue
    - Revenue grew only 3.7% over the last 10 years
        - 2005: $10,043 million
        - 2014: $13,878 million
- Esterline Technologies (ESL)
    - Share price: $115.64
    - EV: $4.4 billion
    - EV/EBIT: **18.19**
    - EV/Pre-tax Owner Earnings: **14.44**
        - (Owner Earnings = EBIT + Restructuring charges + Amortization)
    - 3 segments
    - Avionics & controls: **38%** of revenue
        - Cockpit systems integration and avionics subsystems for commercial and military applications

        - Technology and interface systems for
            - Military and commercial aircraft
            - Sea-based military vehicles
    - Sensors & systems: **38%** of revenue
        - High-precision temperature, pressure and speed sensors for aerospace customers
        - Electrical interconnection systems for severe environments for
            - Aerospace
            - Defense
            - Geographic & marine,
            - And nuclear customers
    - Advanced materials for the aerospace industry: **24%** of revenue
    - Esterline enjoyed higher growth than Breeze
        - 10.5% annual sales growth over the last 10 years
            - 2005: $835 million
            - 2014: $2,051 million
    - Esterline's EBIT margin was stable
        - About 11-12%
    - Esterline deserves a higher multiple than Breeze
- Bristow (BRS)
    - Share price: $61.01
    - EV: $2.9 billion
    - EV/EBIT: **15.4**
    - EV/Pre-tax Owner Earnings: **14.42**
        - (Owner Earnings = EBIT + Impairment of Inventories)
    - Bristow provides helicopter services to oil and gas companies
        - About 1/3 global market share
        - Search and rescue services is a growing business
    - Bristow enjoyed great growth driven by the high oil price over the last 10 years
        - Sales CAGR was 10.6% since 2005
            - 2005: $674 million
            - 2014: $1,670 million
    - Bristow is facing head wine due to lower oil price
    - EBIT/NTA is poor
        - Sales/NTA is just 0.7 or 0.8

        - Even at the highest EBIT margin of 18% achieved 2009
            - EBIT/NTA is just 14%
    - Bristow doesn't deserve a higher multiple than Breeze
- Columbus McKinnon
    - Share price: $24.89
    - EV: $586 million
    - EV/EBIT: **10.41**
    - EV/Pre-tax Owner Earnings: **9.61**
        - (Owner Earnings = LTM Sales * Median EBIT Margin)
    - Columbus McKinnon makes hoists and other lifting products for manufacturing companies
        - Most products cost less than $5,000 per unit
    - 69% of Columbus McKinnon revenue is from hoist
    - Columbus McKinnon has 46% market share for hoist in the U.S.
        - Has 3 global competitors
    - Hoist revenue was cyclical but grew overtime
        - 2001: $254 million
        - 2014: $401 million
            - (3.6% CAGR over the period)
    - Revenue of other products has declined
        - 2001: $332 million
        - 2014: $183 million
    - Columbus McKinnon's hoist business deserves the same multiple as Breeze
        - Both have dominant market share
        - Both sell a critical component
            - But a small portion of total cost
        - Both have similar growth profile
- Air Industries
    - Share price: $10.69
    - EV: $102 million
    - EV/EBIT: **58.91**
    - EV/Pre-tax Owner Earnings: **30.96**
        - (Owner Earnings = EBIT + Acquisition costs + Amortization)
    - Air Industries makes flight safety products for aerospace and defense customers

            - Landing gear
            - Arresting gear
            - Engine mounts
            - Flight controls
            - Throttle quadrants
        - Principal customers are
            - Sikorsky: 26.8% of revenue
            - Goodrich Landing Gear Systems: 20.5% of revenue
        - Air Industries made 10.4% EBIT margin in its best year
            - In 2012
                - $6.7 million EBIT
        - EV/max EBIT = 15.2x
        - EV/Sales * Max EBIT margin = 15.3
        - There's no reason why Air Industries trades at where it is
- Sikorsky is valued at **10-14.3** times EBIT
    - United Technologies is considering a sale or a spin-off of Sikorsky
        - A spin-off is more likely
        - Few buyers are interested in Sikorsky due to
            - Uncertainties about the U.S.'s defense spending
            - Sikorsky revenue declined recently
                - For 2015 Q1
                    - Sales declined 7%
                    - EBIT declined 11%
    - Analysts estimate Sikorsky's value between $7 billion and $10 billion
        - (according to Thompson Reuters)
        - In 2014, Sikorsky made
            - Revenue: $6,621 million
            - EBIT: $699 million
        - => Sikorsky is valued between 10 and 14.3 times EBIT
- Breeze is cheaper than itself in 2005-2008
    - Breeze's EV was
        - 2005:
            - Low: $99 million
            - High: $118 million
        - 2006:
            - Low: $100 million

        - High: $134 million
    - 2007:
        - Low: $122 million
        - High: $154 million
    - 2008:
        - Low: $119 million
        - High: $160 million
- Today's EV: $95 million
- There's no good reason for a lower EV today
    - The stock market is more expensive today
        - Due to low interest rates
    - Breeze has record revenue today
    - Competitive position remains the same
    - Major programs got in the 2005-2008 period are now starting to generate revenue
        - Upside is more certain than in 2005-2008

---

[1] "Mike Harlan: Good morning gentlemen. Congratulations on good set of numbers. Good quarter. I'm curious as to the engineering expenses, which are considerably lower than they were before, do you think you're going to be able to sustain them at that level or will they start to creep back up?

Brad Pedersen, Breeze-Eastern CEO: Thanks for the call, or for the question Mike. **I don't think we've really hit the equilibrium yet for the engineering expenses, we're winding down on several of the major development programs and we're also starting up a new development, new Development and Innovation Center in Virginia. So I think that we are probably close but we've not hit that equilibrium yet.**" – Breeze-Eastern 2015 Q3 Earnings Call Transcript

[2] "James Vanasek: I know that you sort of touched on this briefly in sort of one sentence. But **I was wondering if you could go into a little bit more in-depth detail about the new projects that you've got coming on stream, the C27, the CH53 and the Airbus 400**?

Mark Mishler (Breeze-Eastern's former CFO): The C27J is very close to completion of development, there is 1 test to go on that and we are on track to have that finished this month., and we are very glad to be going forward with that.

That is a program that is being well received by the end-user customer. Our understanding is that the aircraft that our equipment are going on to will be in active deployment in short-term.

CH53K, we are also making good progress on that and have a key deliverable milestone coming up in July. Which we expect to hit on track to do that.

A400M is a challenge for us. 3 different projects going on there, the cargo wench, the retrieval wench and the crane. We are making progress, particularly in the cargo wench and retrieval wench. And in active dialogue with Airbus about what we can do work together effectively to try to put in some delivery schedules on those. But all 3 of those programs are still moving forward. As well as several others that we are working on.

James Vanasek: What kind of revenues are you expecting this year and next year from those 3?

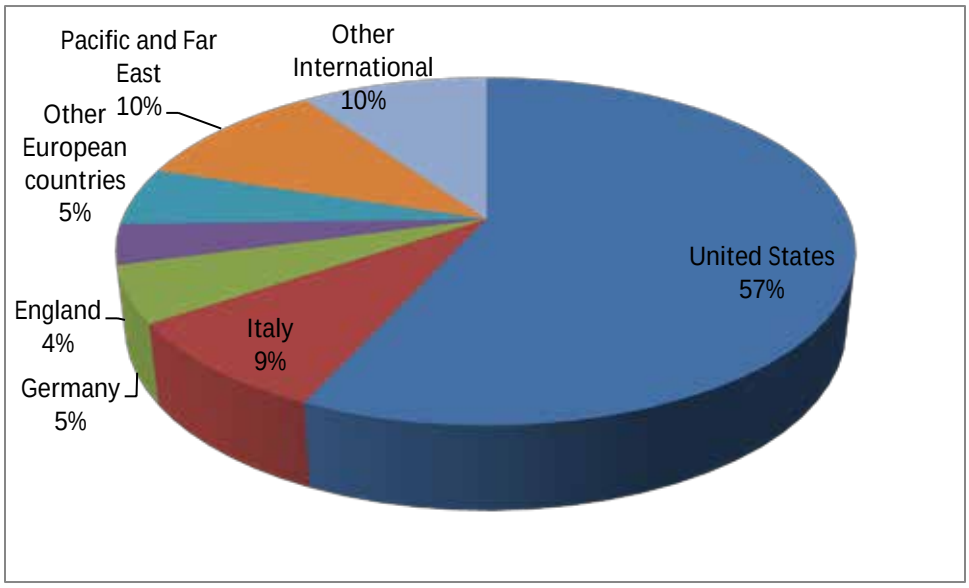
Mike Harland (Breeze-Eastern's former CEO): From those 3 in particular? They're just going to start to ramp up this year. So we won't have a full year, but it will be measured in millions.

James Vanasek: Any little further clarification? Are we talking for next year would you be talking like $5 million, $10 million, $20 million? Sort of a rough idea?

Mark Mishler (Breeze-Eastern's former CFO): **It will eventually get up to $20 million, but it's not going to hit $20 million in 2012**." – Breeze-Eastern's 2011 Q4 Earnings Conference Call

Growth

Volume Growth Will Be Driven by International Markets



The U.S. and Europe currently account for 80% of Breeze-Eastern's revenue

- Breeze can make $100 million in near term
    - o New products will add about $20 million annually to revenue[1]
        - § New products are
            - · Airbus A400
            - · Alenia C27J
            - · Sikorski CH53K
        - § Breeze only started selling products for Airbus A400 in FY 2014
            - · CH53K is well into qualification
                - o Expect to get qualified by the end of this year
        - § New stream of revenue from the 3 programs would add up to $100 million revenue
- The market can grow 3-5% annually in the long term
    - o The hoist and winch market doesn't track the helicopter market
        - § The helicopter market is driven by
            - · Wars
                - o Afghanistan
                - o Iraq
            - · Oil & gas support services
                - o Provide logistics to offshore and remote areas

- Sikorsky has more exposure to military helicopter than other companies
  - Sales CAGR was **16.3%** from 2003 to 2011
    - 2003: $2,184 million
    - 2011: $7,355 million
  - Sales CAGR was **-3.4%** from 2011 to 2014
    - 2011: $7,355 million
    - 2012: $6,791 million
    - 2013: $6,253 million
    - 2014: $6,621 million
- Other manufacturers depends less on military helicopter
  - Also have lower growth after 2011
  - Bell
    - Sales CAGR was **11.8%** from 2004 to 2011
      - 2004: $1,615 million
      - 2011: $3,525 million
    - Sales CAGR was 6.4% from 2011 to 2014
      - 2011: $3,525 million
      - 2014: $4,245 million
  - Airbus
    - Sales CAGR was **10%** from 2004 to 2011
      - 2004: EUR 2,786 million
      - 2011: EUR 5,415 million
    - Sales CAGR was **6.4%** from 2011 to 2014
      - 2011: EUR 5,415 million
      - 2014: EUR 6,524 million
  - AgustaWestland
    - Sales CAGR was **8.4%** from 2005 to 2011
      - 2004: EUR 2,413 million
      - 2011: EUR 3,915 million
    - Sales CAGR was **3.8%** from 2011 to 2014
      - 2011: EUR 3,915 million
      - 2014: EUR 4,376 million
- Breeze sales growth is lower
  - Sales CAGR was **5%** from 2002 to 2014
    - 2002: $48 million
    - 2014: $86 million

        - Sales growth is more like a capital good company
            - Declined during the Great Recession
                - 2009 FY: -1% (FY end in March)
                - 2010 FY: -8%
            - Recovered after the recession
- It's unlikely that the growth gap is explained by Breeze losing market share
    - Breeze sales growth is far lower than the helicopter market growth in the 2002-2011 period
    - Market share remained over 50% in 2011
        - (Breeze doesn't disclose market share after 2011)
- Possible reason for the disconnect between Breeze and the helicopter market
    - Utilization of existing SAR fleet is low
        - Do several dozens of rescues a year
        - Example:
            - Maryland State Police does **10-12** rescues a year[2]
            - AGL Action Rescue Helicopter does about **40** rescues a year[3]
                - An Australian non-profit organization
                - Performs SAR missions in south-east Queensland, Australia
                    - A 97,000 Km square tasking zone
    - SAR fleet size doesn't increase as much as demand increase
        - Doesn't decrease as much as demand decrease
- Long-term growth will follow inflation
    - The duopoly position allows them to raise price at inflation rate
    - SAR fleet size won't increase as much as population growth
        - Due to the low utilization
    - The Global SAR fleet size depends more on area coverage than on population
- There're growth opportunities in other countries
    - Someone said that Canada is 25 years behind on rescue hoist[4]
    - The China market should be as big as the U.S. market
    - The U.S. currently represents 57% of Breeze's revenue
        - Next countries are
            - Italy: 9%

        - Germany: 5%
        - The U.K.: 4%
        - Etc.
    - => total market can grow at 3-5% annually
        - 0-3% volume growth
- Breeze can gain market share overtime
    - End-customers usually select hoist and winch brand
    - They tend to have preference for a brand
    - BZC is more focused than UTC
        - (see Durability, Page 5)
        - Customer service is a problem
        - BZC has reduced spare part delivery time
            - And reduce repair and overhaul time
        - BZC introduced minor innovation
            - MissionView
- Conclusion
    - 3% is a realistic growth expectation
    - 5% is achievable if Breeze gains some market share

---

[1] "James Vanasek: I know that you sort of touched on this briefly in sort of one sentence. But **I was wondering if you could go into a little bit more in-depth detail about the new projects that you've got coming on stream, the C27, the CH53 and the Airbus 400**?

Mark Mishler (Breeze-Eastern's former CFO): The C27J is very close to completion of development, there is 1 test to go on that and we are on track to have that finished this month, and we are very glad to be going forward with that. That is a program that is being well received by the end-user customer. Our understanding is that the aircraft that our equipment are going on to will be in active deployment in short-term.

CH53K, we are also making good progress on that and have a key deliverable milestone coming up in July. Which we expect to hit on track to do that.

A400M is a challenge for us. 3 different projects going on there, the cargo wench, the retrieval wench and the crane. We are making progress, particularly in the cargo wench and retrieval wench. And in active dialogue with Airbus about what we can do work together effectively to try to put in some delivery schedules on

those. But all 3 of those programs are still moving forward. As well as several others that we are working on.

James Vanasek: What kind of revenues are you expecting this year and next year from those 3?

Mike Harland (Breeze-Eastern's former CEO): From those 3 in particular? They're just going to start to ramp up this year. So we won't have a full year, but it will be measured in millions.

James Vanasek: Any little further clarification? Are we talking for next year would you be talking like $5 million, $10 million, $20 million? Sort of a rough idea?

Mark Mishler (Breeze-Eastern's former CFO): **It will eventually get up to $20 million, but it's not going to hit $20 million in 2012**." – Breeze-Eastern's 2011 Q4 Earnings Conference Call

[2] "Maryland State Police (MSP) operates a fleet of nine AgustaWestland AW139s and 11 Eurocopter AS365s, primarily in law enforcement and emergency medical transport roles. But each aircraft is equipped with a UTC Aerospace Systems (formerly Goodrich) hoist for the times when crews must haul boaters out of the waters of the eastern shore, or pluck injured hikers from the mountain tops of its western counties.

"We do about 10-12 hoist rescues a year," explained Chris Lovejoy, MSP's deputy director of aviation. "But when we have to do them, it's a big, big deal, because lives are at stake."

[3] "Chief Executive Officer David Donaldson said he was thrilled to receive the council's financial support through its Major Community Grant Scheme.

"It's great to see our local council helping keep our not-for-profit helicopter rescue service in the air," said Mr Donaldson.

"**The winch allows us to extract patients requiring urgent medical care from locations that cannot be reached by road or foot**," he said.

"**We also use it to conduct life-saving rescues. A lot of our search and rescue tasks are to rescue fisherman whose vessels have sunk at sea.**"

Last year alone, the AGL Action Rescue Helicopter conducted more than 40 winch rescues across its 97,000 km square tasking zone." – *Council Grant Helps AGL Rescue Helicopter Hoist*, View News, 07 June 2013

[4] "Wildcat, said Wilson [Wilson is Vice-President of Wildcat Helicopter], is well qualified to provide the service given its long history doing it in other countries, such as the UK and Australia.

"Canada is about 25 years behind on this (helicopter hoist rescue)," he said. "We find that amazing given this country is a leader in aviation."

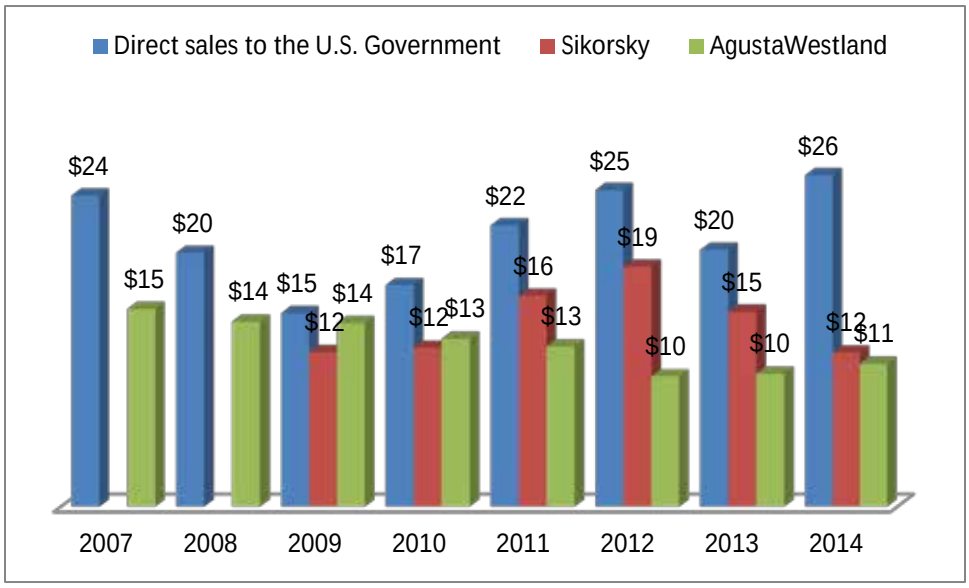
With the type of terrain in this province, Wilson says the need for helicopter hoist rescue capability is crucial.

He gave the example of a rescue in the wilderness in the Williams Lake area.

He said his aircraft could be dispatched from its West Kelowna base, pick up SAR techs and paramedics in Vernon, fly to the scene, lower the paramedics to the help the injured person, hover above, hoist everyone back into the helicopter and have paramedics continue to work on the patient as they are flown directly to hospital in Kamloops faster than a regular ambulance could get to the scene from Williams Lake by road in the winter." – *West Kelowna Firm Backs Helicopter Rescue Initiatives*, Alistair Waters, Kelowa Capital News, 13 February 2015

Misjudgment

Did Breeze-Eastern Lose Market Share?



Sales to AgustaWestland declined from $15 million in 2008 to $11 million in 2014

- Did Breeze lost market share?
    - Revenue from Sikorsky and AgustaWestland declined
    - Revenue from Sikorsky:
        - 2008: Less than $10 million
            - Breeze's 2008 revenue was $76 million
            - Sikorsky wasn't listed as a major customer
                - Perhaps less than 10% of Breeze's revenue
        - 2009: $12 million
        - 2010: $12 million
        - 2011: $16 million
        - 2012: $19 million
        - 2013: $15 million
        - 2014: $12 million
    - Revenue from AgustaWestland
        - 2007: $15 million
        - 2008: $14 million
        - 2009: $14 million
        - 2010: $13 million
        - 2011: $13 million

        - § 2012: $10 million
        - § 2013: $10 million
        - § 2014: $11 million
    - o AgustaWestland's revenue grew consistently over the period
        - § 2008: 2%
        - § 2009: 15%
        - § 2010: 5%
        - § 2011: 7%
        - § 2012: 8%
        - § 2013: -4%
        - § 2014: 7%
    - o Two possibilities
        - § Fewer AgustaWestland helicopters are used for SAR missions
        - § Breeze lost market share for AgustaWestland helicopters
- We have little information about Breeze's competitor
    - o UTC hoist and winch business is just a tiny part of the company
        - § Very few information
    - o We only know that Breeze has over 50% market share
        - § Breeze had been saying that they have over 50% market share in 10-Ks up until FY 2011
            - · Stop saying so in FY 2012 10-K
                - o Revenue grew 9% that year
    - o It's unlikely that Breeze lost a lot of market share
        - § Revenue performance looks normal considering the market condition
        - § Breeze only lost market share if the total market grew a lot
            - · Unlikely
            - · Wars, oil and gas didn't drive SAR growth very much
        - § One major shareholder told us that the competitive position didn't change over the last 5 years
- If Breeze and UTC cooperate, good money can be made
    - o If they engage in a pricing war, Breeze can go out of business
- It's unclear how some helicopter models ended up using both rescue hoist from Breeze and UTC
    - o Helicopter manufacturer works with one brand when developing a new model[1]

        - § It's difficult and expensive for a second supplier's product to become qualified and approved
- It's unclear about how end-customer makes decisions
    - o The purchase decision is done through a bidding process
        - § Recue hoist can cost up to $250,000
    - o But out source says end-customer tend to prefer a brand[2]
        - § For some features or technical support
- Gross margin declined
    - o 2001-2008: 43%
    - o 2009-2013: 40-41%
    - o 2014: 36%
    - o 2015: 38%
    - o Margin erosion doesn't make sense in a duopoly
    - o This is possibly a company problem
        - § New projects
- It's unclear about future capital allocation
    - o Breeze has focused on reducing debt from 2001 to 2012
    - o Only had cash surplus recently
        - § No dividend
        - § No share buyback
    - o Major shareholders are value investors
        - § Focus on unlocking Breeze's value
        - § Prefer cash return or a sale of the company to acquisitions
    - o We can be quite sure about major shareholders' incentive

---

[1] "Once our products are qualified and approved for use with a particular aircraft model, sales of products and services generally continue for the life of the aircraft model, which can be for decades. **It is expensive and difficult for a second supplier's product to become qualified and approved on the same aircraft.**" – Breeze-Eastern 2014 10-K

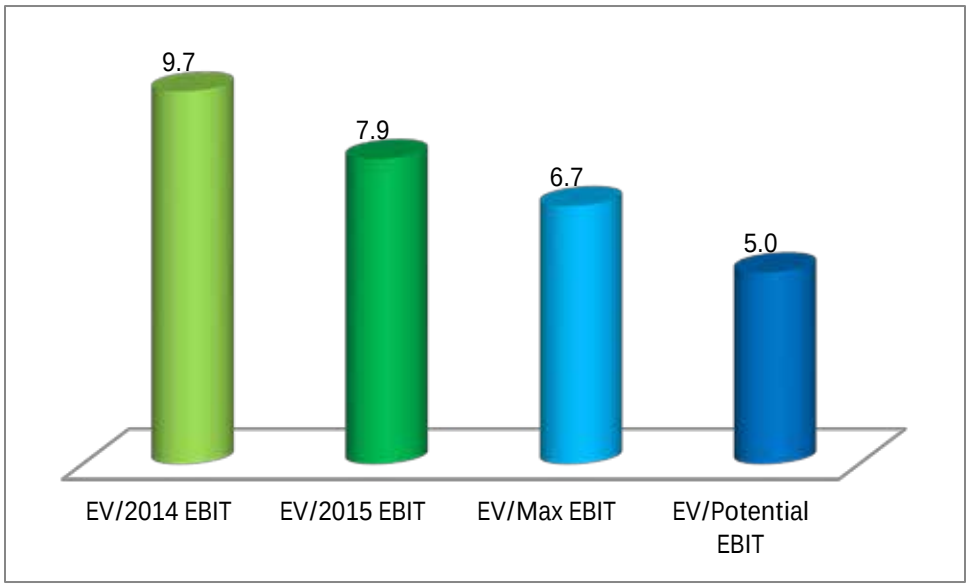
[2] One customer told us: "**Over the years many operators have switched from Breeze to UTC or vice versa when they get upset over customer service or for some other reason and in most cases any particular helicopter can be set up to work with either brand but there are significant changes in the fixed provisions in the cases I am familiar with**. I am not an expert on what if any differences there are in the fixed provisions between the two brands for any given helicopter. It is not a usual thing for a fleet operator or a company with one helicopter with a hoist to want to or be able to switch back and forth between brands on any kind of short term basis. **Most operators just have a preference**

for some feature or technical support offered by one brand or the other and they tend to stick with that when they get a new helicopter. So there is incentive for the airframe manufacturers to supply either brand.

If more than one hoist is offered [for the helicopter model] then the customer decides [the hoist brand to buy]. If only one hoist is available then as long as the customer has decided on that aircraft they would then just accepted what is offered unless they were willing to pay the considerable costs involved in engineering a different installation on their own. It is possible to do that."

Conclusions

Breeze-Eastern Has Low Downside and Significant Upside at Current Price



Breeze-Eastern is trading at 5 times potential EBIT

- Breeze-Eastern deserves a lower multiple than Babcock's nuclear business
    - Breeze-Eastern has a duopoly position
        - Babcock nuclear has a monopoly position
    - Both are in a serial production mode
        - Breeze-Eastern doesn't have guaranteed volume
        - Babcock nuclear has guaranteed volume
    - Breeze-Eastern can have 0-3% real growth
        - Babcock nuclear has 3-4% guaranteed real growth
- Breeze-Eastern deserves an above average multiple
    - In a duopoly
    - Above average return
        - 30-40% EBIT/NTA
    - Average growth
        - 0-3% real growth
    - Aligned interests with shareholders
        - Controlled by value investors
    - Below 35% tax rate
- Breeze-Eastern deserves between 10x and 13x EBIT
- Breeze-Eastern is an obscure stock

    - Daily volume is just about 6,000 shares
- Breeze-Eastern's price is currently below average
    - $87 million EV
    - FY 2014 EBIT: $9 million
        - 9.7 EV/EBIT
    - FY 2015 EBIT (Expected): $11 million
        - 7.9 EV/EBIT
- Breeze-Eastern can have significant upside
    - There will be new sources of revenue
        - Airbus A400
        - Alenia C27J
        - Sikorsky CH53K
    - Engineering expenses are declining
    - Breeze can make $15-20 million EBIT if margin returns to 15-20%
        - Worth $15-20 per share
    - Breeze-Eastern is controlled by value investors
        - May start paying dividend
        - Or sell the company

Financial Positions

- Absolute debt level from year to year
    - Zero debt
- Relative leverage to peers?
    - Peers have a decent amount of debt
- Is management aggressive or conservative?
    - Conservative
- Has the company ever paid down debt?
    - All cash flow was used to reduce debt
- Does it constantly grow debt?
    - No
- Are they willing to stay the same size ever?
    - They haven’t made any acquisitions since 2001

Management

- CEO tenure
    - Brad Pedersen
    - Bio
        - 17 years as a helicopter flight test with Boeing
        - 6 years with Sikorsky
            - He was
                - the Canadian Maritime Helicopter program manager
                - the UH-60M program manager (Black Hawk)
    - His tenure at Breeze-Eastern has been a success
        - He didn't got fired
            - Which suggest controlling shareholders are satisfied with him
        - Completing some major projects
            - Started shipping products for Airbus A400M in FY 2014
            - Expects products for Sikorsky CH53K to get qualified by the end of this year
        - Engineering expenses are declining
            - FY 2013: $9.4 million
            - FY 2014: $8.2 million
            - Declined $1.1 million the first 9 months of FY 2015
        - Improved customer service
        - Reduced spare parts delivery time
            - His previous experience taught him the importance of quick delivery time[1]
                - Customers can't do anything without having everything ready
            - Customers complained about long spare parts time of both Breeze and UTC
                - Way more than 90 days for some items
            - Breeze has reduced commercial spare parts delivery time[2]
                - From 90 days to less than 30 days
                    - 14 days for the most commonly ordered spares
                - Commercial overhaul and repair turn times have been cut in half

        - Over the last 2 years
    - Established a customer web portal and expanded training programs[3]
        - Customers can complete online transactions
    - Build a more robust customer support team[4]
        - Relies less on outside market consultants
        - Phones are staffed 24 hours per day
    - Open the Innovation Center
        - In Fredericksburg, Virginia
    - Introduced the MissionView system
        - Give personnel in the aircraft monitor information
            - Real-time streaming of the video
            - How far down the hook has dropped
            - How much of the cable is released
            - How much weight is on the hook
        - Without MissionView, crew members get information from rescuers via a wireless intercom system
- Number of consecutive profits?
    - Never made a loss
- Share ownership
- Amount of stock holdings?
    - Including shares issuable upon exercise of options, Brad Pedersen owns 2.7% of the company
    - Directors, nominees and executive officers owns 29% of the company
    - 3 biggest shareholders own 68% of the company
- Incentive compensation?
- Compensation Plan measures against Board-approved targets for
    - EBITDA
    - Return on working capital
    - Individual bonus objectives
    - Performance metrics
- Candor?
- No obvious sign
- Overoptimistic?
- No obvious sign

[1] "Pedersen says that his business sense started being accumulated from those early days. "**We did flight testing off site and got to know that if I didn't have something, often something small, then we couldn't fly. So logistics and support were factors that I appreciated from an early stage." At Breeze-Eastern he wants to ensure logistics and customer support are made cornerstones of the business**: "Some components have lead times up to a year or more so we have to anticipate the demand and have to have our own orders in with suppliers." – One-on-One with Heads of Sikorsky, Avincis Group, and Breeze-Eastern, Andrew Parker, Aviation Today, 01 May 2013

[2] "**Breeze-Eastern Corporation has reduced commercial spare parts delivery times from 90 days to less than 30, and the most commonly ordered spares are now reaching customers in just 14 days. Commercial overhaul and repair turn times have also steadily declined and have been cut in half over the last two years**.

President and CEO Brad Pedersen said **the company's investment in staff and inventory — and a focused two-year effort to reach the 30-day goal — is paying off.** "Breeze-Eastern is changing," he said. "Our entire team knows that we cannot rely on past success to build a future that's truly worthy of the Breeze-Eastern name and legacy." – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[3] "**A customer web portal and expanded training programs have also been established**. Customers and suppliers are encouraged to register products and use the portal login feature to open an account at www.breeze-eastern.com. **With a secure account, users may access information and submit requests. Future enhancements to the user-friendly portal will enable customers to complete online transactions.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

[4] "In 2014, Pedersen said the company assumed more responsibility for direct accountability and contact with its customers and partners, reducing its reliance on outside market consultants and building a more robust internal team that is regionally focused according to customer location. "**Everything we are doing is designed to bring us closer to the customer and better support the mission**," said Pedersen. "**We have a dedicated group of people who genuinely care about helping the customer." For example, phones are staffed 24 hours per day, because "time zones will not impede a direct connection and immediate help for a customer in need.**" – *Breeze-Eastern Reduces Spare Parts Delivery Times to Fewer than 30 Days*, Aviation Today, 26 February 2015

Customer

- Is the customer fickle?
    - No
- Is the customer happy?
    - Yes and No
    - They agree that Breeze-Eastern and UTC make very high quality products
    - Customers are unhappy about customer service[i]
        - Spare part delivery time of some items may take way more than 90 days
        - SAR helicopters are useless without hoists
- What is the buyer/user situation?
    - For new helicopter models
        - OEM customers select either Breeze-Eastern or UTC through a bidding process
    - For most helicopter models
        - End-customers select either Breeze-Eastern or UTC
            - Through a bidding process
        - End-customers tend to be loyal to a brand
- Is customer concentration high?
    - U.S. government: 53%
    - Other governments: 28%
    - Sikorsky: 14%
    - AgustaWestland: 13%`

---

[i] One customer told us about his experience with UTC hoist and winch:

"I can't say that anything is different after UTC acquisition except that **their longtime sales person retired. He was my "go to guy" anytime I needed information. Neither company is likely to call me on the phone. E mail is returned but not usually as fast as I'd like. UTC has a relatively new customer web portal with access to their service information. That is really the only company communication I see**. I am old school, so talking to someone, especially if they call me, is very inexpensive and much appreciated customer service. I've never spoken to the guy in charge at UTC and **you would be able to knock me over with a feather if he called and said "so, how do you like us?" I have called and talked to their customer service folks a few times and they have been responsive**.

My issue is that we equip all 12 of our helicopters with hoists and the operations are things we train extensively on. **If a hoist is taken out of service we get very uncomfortable because one of our prime reasons for having them is to rescue our own firefighters from getting burned over by a forest fire or for getting an injured person in a remote area out for medical attention**. I'm not sure either company [*Quan added: Breeze-Eastern or UTC*] gets that and it may be that the armed services have enough spares so that it never happens. The hoist is used because in almost all instances where it is used it is not possible to land the helicopter. So we don't like having a helicopter available but no hoist. They don't break that often but they do break.

I should add that when I have called UTC recently I've spoken to engineers and a couple of marketing people who have been responsive and helpful but the calls were initiated from my end. UTC is the only mfg. that makes the type of hoist we use and we selected it for some very specific reasons. **I suspect that things would be different if there were 5 manufacturers who made a hoist like this and they were interchangeable, with little or no work, but the market is too small for that to happen, so here we are.**"