

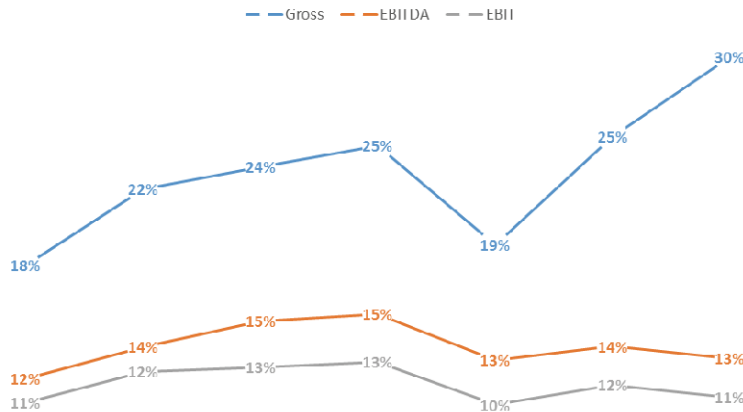
SINGULAR DILIGENCE



Babcock & Wilcox (BWC)

Babcock & Wilcox (NYSE: BWC)

Stock Price: \$27.15



	EV/Sales	EV/Gross Profit	EV/EBITDA	EV/EBIT	EV/Owner Earnings
Fuel Tech	0.71	1.66	7.14	9.73	19.47
Quanta Services	1.08	6.68	8.78	13.39	12.64
Huntington Ingalls	1.16	6.39	10.70	15.43	12.74
General Dynamics	1.54	8.33	11.26	13.04	12.85
US Ecology	7.69	19.57	23.08	29.17	26.93
Minimum	0.71	1.66	7.14	9.73	12.64
Maximum	7.69	19.57	23.08	29.17	26.93
Median	1.16	6.68	10.70	13.39	12.85
Mean	2.44	8.53	12.19	16.15	16.93
Standard Deviation	2.95	6.65	6.30	7.56	6.31
Variation	121%	78%	52%	47%	37%
Babcock & Wilcox	1.09	3.67	8.36	10.02	8.66

	2007	2008	2009	2010	2011	2012	2013	Min	Max	Median	Mean	STDEV	CV
Sales	3,200	3,399	2,855	2,689	2,952	3,291	3,269	2,689	3,399	3,200	3,094	263	9%
Gross Profit	580	759	673	665	568	830	968	568	968	673	720	143	20%
EBITDA	379	463	430	416	381	450	425	379	463	425	420	32	8%
EBIT	338	417	357	344	308	380	354	308	417	354	357	34	10%
Receivables			397	356	368	405	416	356	416	397	389	25	6%
Inventory			340	336	374	432	462	336	462	374	389	56	14%
PP&E			400	424	420	435	447	400	447	424	425	17	4%
Working Liabilities			1,167	1,038	1,060	1,107	991	991	1,167	1,060	1,072	68	6%
Net Tangible Assets			-30	78	103	165	335	-30	335	103	130	134	103%

MARGINS													
Gross Profit/Sales	18%	22%	24%	25%	19%	25%	30%	18%	30%	24%	23%	4%	0.17
EBITDA/Sales	12%	14%	15%	15%	13%	14%	13%	12%	15%	14%	14%	1%	0.09
EBIT/Sales	11%	12%	13%	13%	10%	12%	11%	10%	13%	12%	12%	1%	0.08

TURNS													
Sales/Receivables			7.20	7.54	8.01	8.13	7.85	7.20	8.13	7.85	7.75	0.38	5%
Sales/Inventory			8.39	8.01	7.88	7.62	7.07	7.07	8.39	7.88	7.80	0.49	6%
Sales/PPE			7.13	6.34	7.02	7.57	7.31	6.34	7.57	7.13	7.08	0.46	7%
Sales/NTA			-95.33	34.29	28.58	20.01	9.76	-95.33	34.29	20.01	-0.54	53.79	-99899%

RETURNS													
Gross Profit/NTA				848%	550%	505%	289%	289%	848%	527%	548%	230%	0.42
EBITDA/NTA				530%	369%	273%	127%	127%	530%	321%	325%	169%	0.52
EBIT/NTA				439%	298%	231%	106%	106%	439%	265%	268%	139%	0.52

GROWTH													
Sales		6%	-16%	-6%	10%	11%	-1%	-16%	11%	3%	1%	11%	12.60
Gross Profit		31%	-11%	-1%	-15%	46%	17%	-15%	46%	8%	11%	24%	2.20
EBITDA		22%	-7%	-3%	-8%	18%	-6%	-8%	22%	-4%	3%	14%	5.20
EBIT		23%	-14%	-4%	-10%	23%	-7%	-14%	23%	-5%	2%	17%	8.83
Receivables			-17%	-2%	8%	11%	-5%	-17%	11%	-2%	-1%	11%	-14.24
Inventory			3%	-5%	29%	4%	10%	-5%	29%	4%	8%	13%	1.60
PP&E			16%	-3%	1%	6%	0%	-3%	16%	1%	4%	7%	1.84
Working Liabilities			-10%	-12%	18%	-7%	-14%	-14%	18%	-10%	-5%	13%	-2.61
Net Tangible Assets			-133%	321%	-37%	212%	69%	-133%	321%	69%	86%	183%	2.13

SINGULAR DILIGENCE

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Babcock & Wilcox (NYSE: BWC) Erects Massive Steam and Nuclear Components for Navy Ships and Coal Power Plants

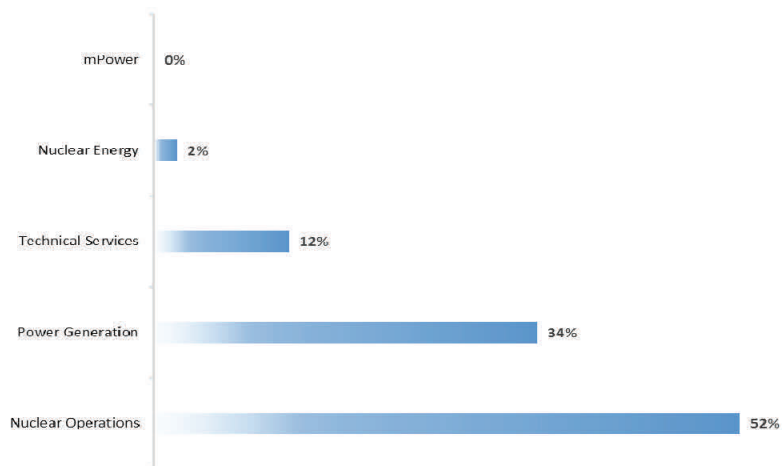
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OVERVIEW

Babcock & Wilcox will separate into two publicly traded companies in “mid-summer” 2015. At that time, investors will be able to choose which of the two newly minted stocks they prefer to buy. One stock will be the power generation business. The other stock will be the government and nuclear operations business. For now, however, investors can buy shares in the combined Babcock & Wilcox Company and then hold those shares through “mid-summer” 2015 when their investment will then be split into two different shares in two different public companies.

Babcock & Wilcox has 5 business segments: nuclear operations, power generation, technical services, nuclear energy, and mPower. mPower loses money. So it does not contribute to corporate profit at all. Nuclear operations contributes 52% of Babcock & Wilcox’s total profit. Power generation contributes 34% of total profit. Technical Services contributes 12%. Nuclear energy contributes 2%. This means that two business – nuclear operations and power generation – account for more than 85% of Babcock & Wilcox’s value. In fact, because mPower loses money, the 3 smallest segments – nuclear energy, technical services, and mPower – account for less than 15% of the group’s earning power. Prospective buyers of Babcock & Wilcox should focus on the two big profit contributors.

Contribution to Corporate Profit



Two business units – Nuclear Operations and Power Generation – provide 86% of Babcock’s total profits

The most valuable segment of Babcock & Wilcox is the nuclear operations unit. Nuclear operations has just one end user: the United States Navy. Babcock & Wilcox is the sole provider of critical nuclear components for the onboard nuclear plants that power U.S. Navy ballistic missile submarines, attack submarines, and aircraft carriers. More than 90% of this unit’s profit comes from critical nuclear components such as: core barrels, reactor vessels, closure heads, steam generators, and pressurizers. Each of these components can weigh more than a blue whale (150 – 250 tons a piece is normal). Babcock also provides control rod drive mechanisms that manage the movement of control rods inside the nuclear reactors. Babcock is the only company in the U.S. licensed to receive, process, and store highly enriched uranium. The company “down blends” highly enriched uranium into low enriched uranium for private sector use. These related activities are a small part of Babcock’s overall business. The single most important line of business for Babcock – contributing about 45% of the group’s profit – is providing critical nuclear components for nuclear powered military ships. This line of business has just one end customer: the U.S. Navy. Babcock is completely dependent on the U.S. Navy as its sole customer for these critical nuclear components. At the same time, the U.S. Navy is completely dependent on Babcock & Wilcox as its sole supplier for its critical nuclear component needs.

Babcock's second most valuable segment is the power generation group. The power generation group contributes 34% of Babcock's total profit. About half this amount (17% of total profit) is after-market products and services. This is maintenance revenue that Babcock has because it built the original equipment. The equipment is custom built on site. For this reason, customers generally purchase all the lifetime needs of the plant – replacement parts and services – from the company that installed the equipment. The other half (17% of total profit) is evenly divided (about 8% of total profit each) among “new build” steam and “new build” environmental projects. Steam generating equipment is used by power plants to convert heat into steam. Power plants that convert heat into steam include coal fired, biomass fired, and waste-to-energy plants. Historically, coal power plants were the largest portion of Babcock's utility customers. Babcock's steam generating equipment includes boilers, burners, pulverizers, soot blower, and ash handling systems. Babcock sells a roughly equal amount of environmental systems to power plant owners who want to reduce emissions of various pollutants. Regulations often require power plant operators to reduce emissions. There are a variety of regulated pollutants including: carbon dioxide, mercury, acid gases, and toxic metals. Examples of environmental equipment include scrubbers and baghouses. These are big building jobs that are erecting on site – never in a factory.

The third most valuable part of Babcock is its technical services unit. This unit contributes about 12% of total profit. It works in consortiums to manage nuclear fission related sites for the U.S. Department of Energy and National Nuclear Security Administration. Some of Babcock's most frequent consortium partners are Bechtel (a private company), URS (a public company), and Battelle (a non-profit). Some of the sites Babcock helps run assemble, refurbish, and dismantle nuclear

weapons. Others store uranium and plutonium. Consortium run nuclear sites also oversee the production of plutonium pits, monitor the aging of nuclear weapons, manage the production of critical nuclear components like Tritium – which helps boost the yield in all nuclear weapons and initiate the fission stage in hydrogen bombs – and operate test reactors. Most of the revenue in the technical services segment is not consolidated. So this unit accounts for just 3% of Babcock's reported revenue but more than 12% of its total profit. The 12% of total profit figure is a much more accurate gauge of the unit's economic importance to Babcock.

Babcock's nuclear energy group is its least important money making business. The nuclear energy group contributes just 2% of Babcock's total profit. It supplies commercial nuclear steam generators and components to utility customers in Canada. This is a legacy business for Babcock. Babcock was one of the suppliers to virtually all 104 commercial reactors built in the U.S. However, U.S. utility companies stopped building new nuclear reactors after the Three Mile Island accident in 1979. In 1989, Babcock sold its U.S. nuclear energy business to Areva. Babcock kept its Canadian business. The total market for nuclear reactors in Canada is small. However, Babcock dominates the Canadian nuclear reactor market. For decades, Babcock was banned from re-entering the U.S. market as part of its agreement to sell its U.S. nuclear energy business to Areva (thus protecting Areva from competing with Babcock in the U.S.). That ban has now lapsed. If a new commercial nuclear reactor is ever built in the U.S., there is nothing stopping Babcock from bidding for the contract.

Babcock's fifth business unit – and the only one that loses money – is mPower. Babcock has cut annual spending on mPower to \$15 million a year. The company has already sunk more than \$400 million into mPower since 2009. The unit will have no commercially available products until before the early 2020s. It is a highly speculative start-up. mPower is a small, modular nuclear power plant. Each modular 125 megawatt nuclear power plant is just 70 feet long by 10 feet wide. It has a five year fuel cycle. So, it can be moved by a railroad and run for 5 years without anyone ever having to touch the fuel. mPower was a production departure for Babcock. Most of what Babcock does is steam related on site custom construction jobs using heavy components in high priced jobs. For example, the nuclear operations group – which supplies critical nuclear components to the nuclear power plants onboard U.S. navy ships – spends about 5 to 9 years building a component which is then installed and run by the navy for more than 30 years before being retired.

Babcock & Wilcox has a more than century long record of working on the biggest steam and nuclear projects in United States history. Babcock & Wilcox was founded in 1867 by George Babcock and Stephen Wilcox (inventor of the water tube boiler). It manufactured water tube boilers during the 1800s. In 1902, Babcock & Wilcox provided boilers to New York City's first subway system. In 1903, the Commonwealth Edison Company of Chicago used Babcock & Wilcox as its supplier when it pioneered the use of steam turbines exclusively for utility power generation. Babcock & Wilcox boilers were installed on the ships in Teddy Roosevelt's Great White fleet in the early 1900s. During World War 2, Babcock & Wilcox participated in the United States' Manhattan Project (which built the world's first nuclear fission bombs). In the early 1950s, Babcock designed and built components for the world's first nuclear powered submarine (the USS Nautilus). From the 1960s till the Three Mile Island accident in 1979, Babcock made many of the heavy nuclear components for the 104 commercial nuclear reactors built in the U.S. Babcock also designed and built components for the Nimitz-class nuclear powered aircraft carriers first built in 1966. Since then, Babcock has supplied heavy components to every nuclear powered ship in the U.S. Navy.

Babcock was acquired by McDermott International for \$750 million in 1977. United Technologies was the next highest bidder. McDermott had to spin-off Babcock & Wilcox in 2010, because McDermott was an inverted company – incorporated in Panama – and the U.S. changed a law to ban the awarding of government contracts to inverted companies.

Three of the world's big nuclear component makers can trace their roots to Babcock & Wilcox: Doosan Babcock, Babcock Power, and Hitachi (originally "Tokyo Babcock"). Other competitors – with no historical ties to Babcock & Wilcox – include Alstom and Foster Wheeler.

About 85% of the value of Babcock & Wilcox comes from the nuclear operations business that serves the U.S. Navy as its end customer and the power generation business that serves mainly U.S. coal power plants. Those are the two business units an investor in Babcock needs to understand. And they are the only two units that will be discussed in the rest of this issue.

DURABILITY

In the Future: Coal Will Fuel Less of America's Electricity

The majority of Babcock & Wilcox's profits come from its nuclear operations unit. This unit mainly supplies critical, heavy nuclear components for use on U.S. Navy attack submarines, ballistic missile submarines, and aircraft carriers. Babcock's nuclear operations business is completely dependent on just one customer: the U.S. Navy. The future earnings of this business will be determined by the U.S. Navy's carrier and submarine building plans. These plans are outlined far in advance of the ships entering service.

Right now, the U.S. Navy is building one nuclear powered aircraft carrier every 5 to 6 years. To maintain a steady aircraft carrier fleet size of 10 carriers, the U.S. Navy needs to build one carrier every 4

to 5 years. There is a federal law requiring the U.S. Navy to maintain a fleet size of 11 aircraft carriers. Since the inactivation of the Enterprise in December 2012, the U.S. has had only 10 aircraft carriers active at any one time. Congress granted the U.S. Navy a temporary waiver of the 11 aircraft carrier requirement.

The U.S. Navy's current fleet of carriers all entered service between 1977 and 2009. These ships were built about 3-4 years apart. They will be retired between 2027 and 2059. To maintain a steady fleet size of 11 aircraft carriers forever, the Navy would need to build one new carrier every 4 to 5 years. Reasonable changes in the rate of production planned by the Navy for its aircraft carrier program could be anywhere from 4-5 years between carriers entering service to 6-7 years between carriers. Such a difference in the rate of production would be the equivalent of about 0.3 submarines less ordered per year from Babcock. The impact on Babcock's long-term earning power would not be dramatic. A particularly fast or slow order rate for aircraft carriers would change the booking rate for the nuclear operations business at Babcock by maybe 10%. This Navy contributes about half of Babcock's overall profit. So, changes to the speed at which the U.S. Navy orders new nuclear power aircraft carriers might add or subtract 5% of corporate profit from Babcock.

There is very little risk the Navy will cancel its nuclear powered aircraft carrier business. The U.S. Navy is organized into carrier groups with an aircraft carrier and its associated air wings (planes launched from the carrier), destroyers, and other ships (including subs). Cancelling or drastically downsizing the number of aircraft carriers would require a complete reorganization of the U.S. Navy.

Babcock also supplies components for nuclear powered ballistic missile submarines. The Navy plans to maintain 10 ballistic missile subs at all times. These subs are a critical part of the United States' nuclear deterrence strategy. The ballistic missile subs are armed with long-range missiles that each carry multiple nuclear warheads. The subs remain hidden at sea. In the event of a nuclear attack against the United States, the ballistic missile subs all surface and launch a cataclysmic "second strike" against the country that used nuclear weapons against the United States. The U.S. has a three part approach to nuclear deterrence: 1) Land-based intercontinental ballistic missiles. 2) Land-based long-range bombers, 3) Sea-based ballistic missile submarines. This third group – the ballistic missile subs – is both mobile and hidden and therefore would survive even the largest imaginable launch of a country's nuclear arsenal against the U.S.

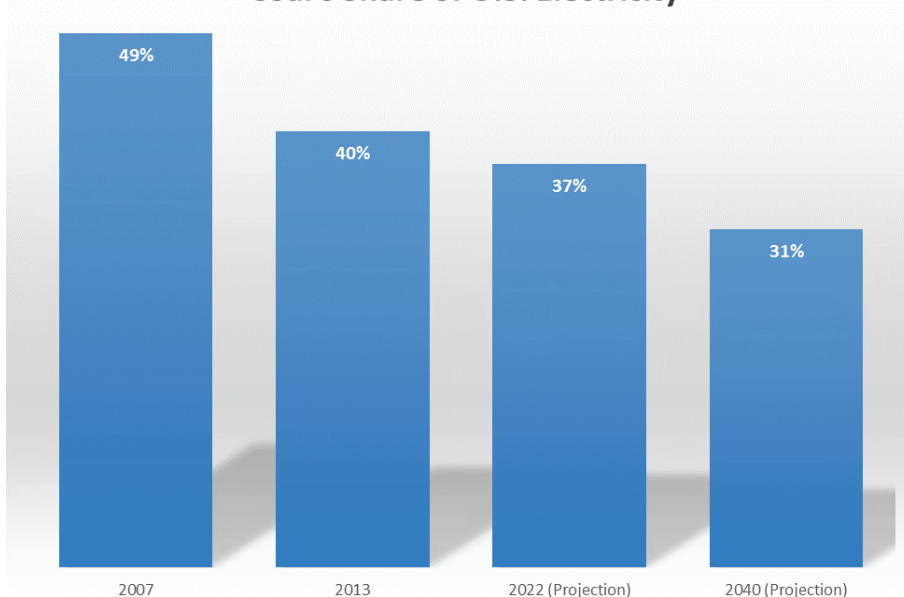
Cancelling the U.S. Navy's ballistic missile sub program would require a complete overhaul of the nuclear deterrence strategy the U.S. has relied on for the last 50 years. The U.S. has a much larger fleet of ballistic missile subs than all of its NATO allies combined. So, the cancellation of the program would have strategic implications not only for the U.S. but also for all members of NATO and any other countries that believe the U.S.'s second strike capability helps to deter attacks against them. For these reasons, the ballistic missile sub program is at least as durable as the aircraft carrier program – and probably more so.

Babcock & Wilcox is also the sole supplier of heavy nuclear components for the U.S. Navy's nuclear powered attack submarines. The U.S. had 54 attack submarines – all American subs are nuclear powered – in 2013. The Navy plans to have 48 attack submarines in the future. These subs often conduct national level – rather than purely Navy level – missions during times of both war and peace. Missions include covert intelligence gathering, surveillance, and reconnaissance. These attack subs also insert and recover special operations forces and launch cruise missiles against land based targets. The number of nuclear attack subs peaked during the Cold War at 98. Since 1987, the Navy's fleet of nuclear powered attack subs has declined

from 98 to 54. Under the Navy's current plan it will have as few as 41 attack subs in 2030. Of the three types of nuclear powered ships Babcock is a supplier for, the future of nuclear powered attack subs is the least integral to the nation's national security plans. However, the growth of China's submarine fleet could encourage a shift in strategy toward building the U.S. attack sub fleet back up to Cold War levels. Today, U.S. subs mostly perform intelligence tasks unrelated to the original "hunter-killer" role of finding and destroying enemy subs. If the U.S. became concerned with the size of China's submarine fleet, the first recommendation by national security experts would almost certainly be a big increase in the U.S. Navy's submarine fleet. For more than 20 years now, all U.S. subs have been nuclear powered. And Babcock & Wilcox is the sole supplier of heavy nuclear equipment to these subs. So any subs the U.S. Navy builds will be nuclear powered and that nuclear equipment will be supplied by Babcock. For those reasons, Babcock's sub supplying business is as durable as the U.S. Navy's demand for subs.

About 4 out of every 10 coal power plants in the U.S. use a Babcock & Wilcox boiler. The number of coal power plants in the U.S. will decline over time. That makes Babcock's power generation business the least durable part of the company. This business supplies steam and environmental equipment to utilities. The unit's most important customers are U.S. coal power plants. In 2007, coal accounted for 49% of all electricity generated in the U.S. In 2013, coal accounted for just 40% of the nation's electricity. The U.S. Energy Information Administration estimates that coal will fuel 37% of all electricity in the U.S. in 2022 and just 31% in 2040. In other words, the current expectation is for a decline in the "market share" of coal from 40% to 30% over a period of 25 years. If U.S. electricity demand was perfectly stable, this would be a decline of about 1% a year in coal fueled electricity. The

Coal's Share of U.S. Electricity



Electricity fueled by coal is expected to decline less than 1% a year in the U.S.

market for U.S. electricity does grow – very, very little – from year to year. This can offset some of the decline. A good estimate of the decline of Babcock's coal business in the U.S. is probably for a perpetual decline of 1% a year in this unit. New capital costs are a major reason for the retirement of coal power plants. Coal power plants require new cap-ex when they are either very old or need to comply with new environmental regulations. New cap-ex needs to meet environmental regulations will cause the least efficient coal plants to shut down rather than make those new one-time investments. However, those plants that do invest in the environmental cap-ex will create more "new build" business for Babcock. About 50% of Babcock's power generation business is after-market revenue on the heavy components it erected for power plants in the past. The other 50% of this unit's revenue is evenly divided between steam related equipment and environmental equipment. Fewer coal power plants in the U.S. will generally mean lower revenue for Babcock's power generation unit. However, greater environmental regulations will also mean more new build environmental equipment for Babcock. Babcock does supply other power plants – like biomass and waste to energy plants – besides coal power plants. That business can grow.

Back in 2011, Babcock's Chief Operating Officer discussed coal plant retirements: "Well these are older...coal fired units, lower efficiency built in (the) 50s (and) 60s that are generally below...250 megawatts...one impact that I think has been a concern is what does this do to a really good, sustainable B&W services business. It's less of an impact than you might otherwise think. Because as these units...are removed from service, we also have some very large newer units in the fleet that will be reaching points in their lifetime when more of the service work that we have been performing would be expected. So we actually see a good possibility for the overall service market...to continue to be a growth opportunity." Estimate of the pace of coal plant retirements are speculative. Actual retirements will depend on new environmental regulations, the price of natural gas (which competes with coal as a fuel), and electricity demand in the U.S. The only long-term trends that seem reliable to predict are that the U.S. will favor cleaner power – like new wind and

solar plants and additional capital invest in environmental equipment for coal plants – and that the country will not build new nuclear plants.

MOAT

Babcock's Markets Are Either Monopolies or Oligopolies

The markets Babcock and Wilcox competes in are either monopolies or oligopolies. Babcock is the sole supplier of heavy nuclear components to the U.S. Navy's submarines and aircraft carriers. That market is a monopoly. In the Dry Flue-Gas Desulfurization business Babcock is the number one supplier out of six major suppliers. Babcock has a 49% share of that market. Babcock has a 38% share of the U.S. boiler market. It has a 35% share in wet electrostatic precipitators. Babcock is the largest of four major suppliers in that business. In the Selective Catalytic Reduction business Babcock is the largest of 20 suppliers with a 32% share of the market. In Wet Flue Gas Desulfurization Babcock has a 28% share of the market and is the largest of 8 suppliers. Finally, in the Pulse Jet Fabric Filter Baghouse market, Babcock has a 21% market share making it the second largest of 5 suppliers in that market. In all of these markets, the leader has more than a 20% share of the total market. Most of the sales in each market go to a handful of companies.

In the steam related (boilers) and environmental equipment businesses Babcock generally has a 20% to 40% share of the U.S. market. The company targets a 30% to 40% share of the overall market during a full cycle of bidding. Babcock tends to get a lower share of the total industry contracts early on as the CEO explained in 2011: "...classically you see a lot more intense competitive pressures in the early part of the cycle than you do mid-way through. That is not changing. However, I can assure (you) that we're holding our bidding discipline as we've described in the past and we did in the last cycle."

Alstom has the largest installed base of boilers worldwide. The company's global market share is about 30%. Babcock has a little over one-third the worldwide installed base of Alstom. However, Babcock's business is concentrated in the U.S. In general, Babcock is more focused on fewer products, markets, and customers than larger companies like Alstom. In the markets in which Babcock has a meaningful presence, their market share is usually the largest or among the largest. For example, Babcock's power generation group revenue was \$1.77 billion in 2013. Almost 70% of that (\$1.22 billion) came from the U.S. Alstom's North American Thermal Power revenue was \$1.72 billion versus just \$1.22 billion for Babcock. So, Alstom is bigger in U.S. power generation than Babcock. However, Alstom's power business in the U.S. sells to gas fired power plants, nuclear plants, and coal fired plants. The first two customer groups do not overlap with Babcock in North America. The two companies compete directly on contracts to build boilers for coal power plants. Foster Wheeler also competes with Babcock. However, Babcock is probably 6 or 7 times the size of Foster Wheeler in the U.S. Foster Wheeler gets 78% of its power group revenue from outside the U.S. while Babcock gets 69% of its power group revenue from inside the U.S.

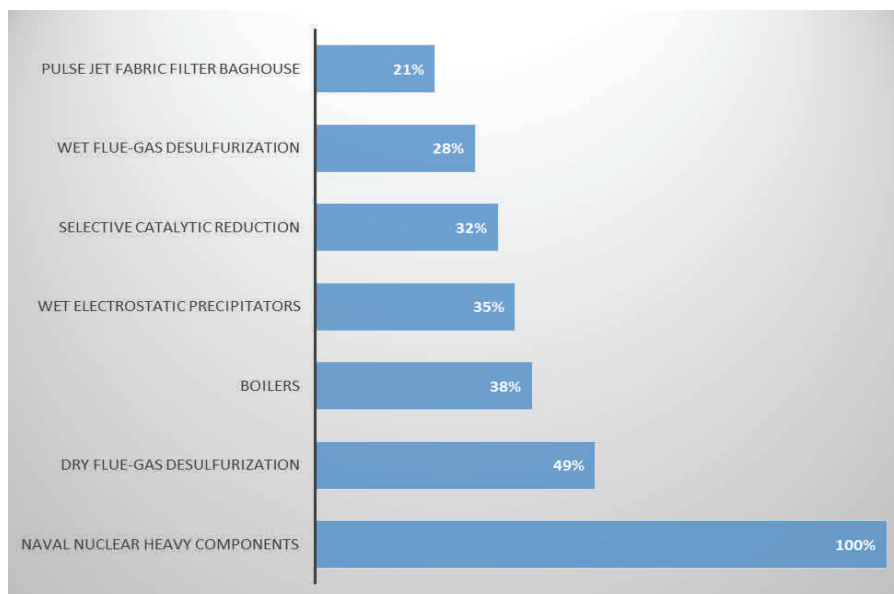
Other companies that do the same sort of work as Babcock and Wilcox's power generation group include Doosan Babcock, Babcock Power, and Hitachi. Doosan Babcock was originally the U.K. subsidiary of Babcock & Wilcox which was started in 1881 and spun-off in 1891. This company got the rights to the Babcock & Wilcox name outside the U.S. and Cuba (Cuba was then controlled by the U.S.). Babcock International sold its boiler business to Mitsui Engineering and Mitsui was later sold to Doosan Heavy Industries and Construction. Babcock Power had a similar origin story. Babcock & Wilcox created the company in 1887 in Germany under the name Deutsche Babcock. During World War One, the relationship between Babcock's British and German businesses broke down. Eventually, Deutsche Babcock resolved its dispute with its British parent and got the exclusive right to use the Babcock name in Central and Eastern Europe. Deutsche Babcock supplied nuclear reactors to the NS Otto Hahn (the first German powered ship and one of only four nuclear powered cargo ships ever built) in 1961. Deutsche Babcock went on to install the majority of boilers in Western Germany during the Cold War. Hitachi's boiler business is descended from Tokyo Babcock which was created by the British offshoot of Babcock & Wilcox to do business in Japan. It was a joint venture with Mitsui. Hitachi had its own boiler business. Tokyo Babcock and Hitachi's boiler business merged in the 1950s.

All of the leading companies that supply massive steam related and environmental equipment to power plants are very, very old. Babcock itself was founded in 1867. Its descendants in different countries were established at various points before World War One. Alstom was formed in 1928 but was a combination of much older companies. It was a merger of the Society of Alsatian mechanical engineering (formed in 1826) with the French business of Thomson-Houston (the U.S. part of Thomson-Houston merged with Edison to form General Electric). Alstom created its U.S. subsidiary in 1912. So, Alstom has been in the U.S. market for a little over 100 years now. Foster Wheeler was formed in 1927 from a merger of two companies founded in 1891 and 1900.

Generally, the companies that supply massive steam related and environmental equipment to power plants have their roots in the use of steam boilers for the generation of power sometime after the boom in railroads and before the start of nuclear fission. These companies used their expertise in big steam projects to do similar work once the wartime investigation of nuclear fission during World War Two (especially the Manhattan Project in which Babcock took part) opened up new but similar engineering work for civilian and military nuclear reactors. In this way,

Babcock's power generation business and U.S. Navy business are historically related. Both businesses involve supplying large components to huge thermal powerstations (coal and nuclear turn water heated in boilers to steam – they do not make use of combustion the way natural gas does).

It is difficult for new entrants to gain experience in the kind of engineering work Babcock does. All projects are large. The average new-build contract is for over \$100 million. Such a project takes 3-5 years to complete. Each piece of equipment tends to be truly massive. Some of Babcock's nuclear components weigh up to 250 tons. Some of Babcock's steam generating equipment is 250 feet tall. In other words, some of the equipment Babcock erects weighs more than a blue whale. Other equipment is taller than a 20-story building. None of this equipment can be built modularly in a factory. Nor is it realistic to move it to the site because no system of transportation – railroad cars, trucks, etc. – exists to smoothly transport anything of such scale. It is easy to underestimate the size of much of this equipment. For example, Babcock's 20% market share in baghouses was mentioned earlier. A baghouse actually has a larger footprint than a boiler. A baghouse in an asphalt plant can be small. But a baghouse in a coal plant has to be huge because the boiler in a coal plant is huge. There are very few opportunities to get experience bidding on smaller jobs. It costs \$60 million to build a coal 180 Megawatt coal fired power plant. The average U.S. coal power plant generates 228 megawatts. In the future, it is the smallest coal power plants that will be shuttered. Small power plants are inefficient. So, the opportunity to bid on projects as small as \$60 million is not common now and may become even less common in the future. A lack of small contracts makes it hard for new competitors to gain experience. Because these are all custom jobs erected in place, after-market equipment is usually bought from the original equipment provider.



Babcock's market share in its non-monopoly businesses ranges from 20% to 50%

After-market revenue is 50% of Babcock's business. Until a company is able to win a series of new build contracts, it does not have a sustainable source of after-market revenue. Therefore, new entrants and smaller players are in the weak position of having to bid for contracts merely to keep a meaningful amount of revenue coming in from year-to-year. Larger players like Babcock have a huge installed base and do not need to rely on a couple winning bids to keep revenue coming in every year.

The same is true of Babcock's business with the U.S. Navy. The U.S. Navy is the only customer capable of awarding serial production runs for naval nuclear reactors that can keep the producer of the components constantly working. For example, the U.S. ordered a series of 10 Nimitz class aircraft carriers (Babcock made all the heavy nuclear components for all 10 ships) while every other country in the world combined built exactly one ship – France's Charles de Gaulle – which was a unique project, not a class that went into serial production. Serial production is necessary to maintain a country's industrial base. France has a nuclear powered aircraft carrier. But France can not rely on its own country's resources to keep a nuclear powered carrier active at all times because the Charles de Gaulle is unique and can not be replaced when refueling, undergoing repairs, or if it were destroyed.

The power generation group has a very wide moat. The nuclear operations group has an even wider moat. Babcock has more experience in nuclear steam supply systems than anyone else in the world. Babcock worked on the Nautilus (1950s), Sturgeon (1960s), Los Angeles (1970s), Ohio (1970s), Seawolf (1980s), Virginia (1990s), and Ohio Replacement (planned 2020s) nuclear powered submarine classes. Babcock is the sole supplier of heavy nuclear components to the U.S. Navy. And the U.S. Navy has relied solely on nuclear power for its subs for more than 20 years now. Babcock also worked on the Nimitz and Ford class nuclear powered aircraft carriers. As a result of this history, all of the U.S. Navy's subs and carriers depend on Babcock's designs and production capabilities.

Very few navies other than the United States have ever had an aircraft carrier in service. Even fewer actually oversaw the building of their own carrier. And even fewer of those have an ongoing aircraft carrier program with actual future orders being built as we speak. There is literally only one nuclear powered aircraft carrier outside the U.S. Navy: the Charles de Gaulle. The Charles de Gaulle was ordered in

1986 and commissioned in 2001. In the almost 30 years since the de Gaulle was ordered, no country other than the U.S. has put a nuclear powered aircraft carrier into service. It is not realistic for any manufacturer to be idle for 30 years between orders. So, realistically, any producer of nuclear components for ships would need to rely on the U.S. Navy as their customer. The U.S. Navy uses only Babcock. And the Navy uses Babcock for both its submarine and aircraft carrier needs. This is a tremendous synergy for Babcock – and for the U.S. Navy – because it allows one producer to stay in the business of making heavy nuclear components for use onboard ships even though the quantity of individual pieces demanded is so small and infrequent.

From time-to-time other countries consider building either one or a series of nuclear powered capital ships. However, these plans often fail to actually be carried out to the point where a ship is built and put in service. Even when a unique capital ship – like France’s nuclear powered aircraft carrier, the Charles de Gaulle – is built, the efficiency of the product is poor compared to serial production of a class. Work stopped on the Charles de Gaulle at several different points. The ship was over 5 years behind schedule. Since the fall of the Soviet Union, no country has come remotely close to having an ongoing demand for nuclear reactors in their Navy’s capital ships other than the United States. So, Babcock’s nuclear operations group is a true monopoly. It is a co-dependent monopoly. The U.S. Navy is dependent on Babcock as its supplier. And any supplier of nuclear reactors onboard military ships would have to be dependent on the U.S. Navy as its key customer to be a viable producer of such heavy nuclear components. This historical co-dependency between Babcock & Wilcox as the producer and the U.S. Navy as the customer is the bond that makes Babcock’s nuclear operations group a durable monopoly.

QUALITY

Babcock Will Split into Two High Quality Stocks: One’s Results Will Be Predictable; The Other’s Lumpy

About 85% of Babcock and Wilcox’s profits come from two business units: nuclear operations and power generation. The power generation group’s revenue is cyclical. The nuclear operations group’s revenue grows steadily each year. The power generation group is about half after-market revenue and half new build. This business depends on capital spending by U.S. coal power plants. Meanwhile, the revenue in the nuclear operations business depends on a long range plan put forward by the U.S. Navy. Analysts have little visibility into the capital spending plans of U.S. utilities. A deep recession like the one in 2008 and 2009 can cause utilities to delay their capital spending. On the other hand, the U.S. Navy does not slow down or speed up its plans depending on the business cycle. Some spending can be delayed in situations like budget disputes between the two parties in Congress and the President. Right now, Babcock and Wilcox has contracts for Virginia class submarines from now (2015) till 2018. They are also in the midst of producing Ford-class carrier CVN-79 (a nuclear powered aircraft carrier) which is planned for delivery in 2018. Work on CVN-79 started in 2013. So, Babcock has contracts in place and is working on ships that will not be delivered till 2018. That business is already contracted. But the Navy plans well beyond the period it contracts for. For example, the Navy’s plan includes not just the 2 Virginia class submarines per year it has contracted for through 2018 but also the same number (2 subs) per year in 2019. Beyond that, the Navy is planning for 2 Virginia class subs every 3 years (1.5 subs per year) after 2020. The Ohio replacement class has also been planned even though Babcock is not yet under contract to provide heavy nuclear components for it. Babcock has supplied all previous classes of U.S. Navy subs. This includes the Ohio class subs the new class is set to replace. The first Ohio replacement class subs are planned for delivery in 2021, 2024, and then one per year for every year from 2026 to 2035. The Navy also plans to build one Ford class carrier every 5 to 6 years. Work on the second ship in the Ford class series started in 2013. The Navy plans to build 10 Ford class carriers. If each carrier is built 5 years apart and the same suppliers are used for each ship in the class’s series – Babcock will be kept busy making the heavy nuclear components for Ford class carriers into the 2050s. Work has already begun on the second ship in the Ford class series (the plan is to deliver this second ship in 2018) which means that Babcock will be supplying heavy nuclear components to aircraft carriers in serial production for at least the next 40 years under the Navy’s plan.

The profit on a ship in serial production is more predictable than the profit on the lead ship in a class, because the lead ship includes the design costs of the class. The first ship in a series is effectively a prototype. When building mega projects like the nuclear powered capital ships the U.S. Navy orders, the first ship in the class is both a prototype and a part of the series. The cost for the lead ship – when the design cost is included – is therefore much, much higher than the cost of subsequent ships in the series. For this reason, companies that make the ship may miscalculate the costs involved and earn an inadequate profit or even lose money.

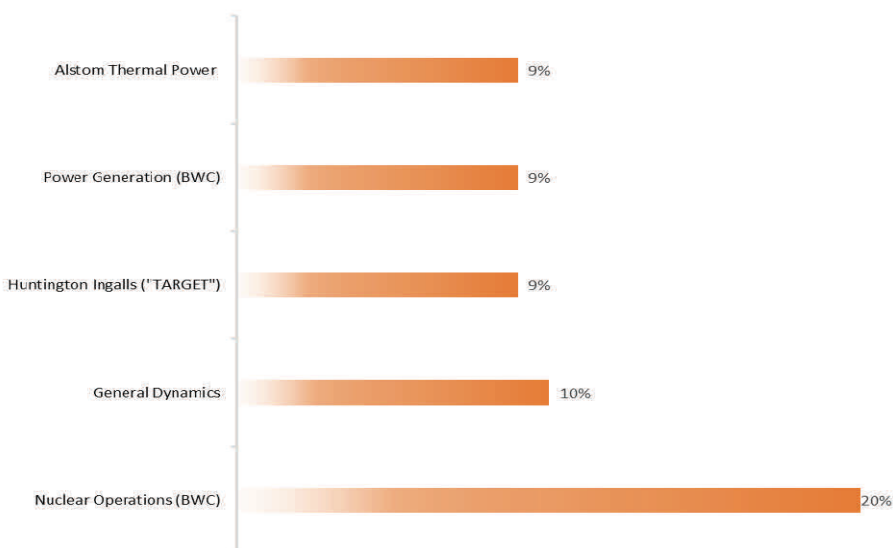
Huntington Ingalls experienced this problem while working on the LHD-8 (USS Makin Island – Wasp Class Amphibious Assault Ship) and the LHA-6 (USS America – America Class Amphibious Assault Ship). The America’s design was based on the Makin Island. But significant changes were made. Huntington Ingalls’s margin dipped when it mispriced contracts. The company’s CEO explained Huntington’s problem in 2011 by saying: “...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.”

The classes of ships that Babcock supplies are usually in serial production for many years. Right now, the Virginia class sub and the Ford class carrier is in serial production. The Ohio replacement class is new (the first Ohio replacement will be delivered in 2021).

Babcock has double the margin (20% vs. 10%) of General Dynamics and Huntington Ingalls, despite the fact that Babcock is supplying the same projects that General Dynamics and Huntington are building. There are several speculative reasons for why Babcock might get higher margins on the heavy nuclear components it supplies to submarines than the overall margins on those subs. One is simply that the nuclear components could be a smaller part of the overall cost of the sub and not the first area one would look for cost savings. The other is that Babcock is in a monopoly position while General Dynamics and Huntington Ingalls are in a duopoly position.

Negotiations between a sole supplier and sole buyer do not center on price. The CEO of Huntington Ingalls – which builds the Ford class carriers and Virginia class attack subs that Babcock contributes heavy nuclear equipment to – explained how a sole supplier negotiates with the U.S. Navy: “...when you’re the sole source supplier to a sole source buyer you may remember from business school it’s a monopoly/monopsony kind of negotiations...How do you do that? How do you go do that negotiation...And what you end up doing in the negotiation is not talk so much about price. You end up spending a lot more time talking about scope and risk....we know what the budget is. We know what’s in the checkbook. How are we going to go get the most value for what’s in the checkbook?”



Babcock's lowest quality business has the same EBIT margin (9%) as Alstom's Thermal Power unit

In the power generation business, Babcock's margin is similar to Alstom's margin in the same business. Babcock (and Alstom's) margin depends on its ability not to bid so aggressively that it earns poor margins. Babcock's CEO explained the problem in a 2013 earnings call: "In the power generation work, we're one of the market leaders, and we capture a large percentage of that marketplace. The question is – for (power generation), is how competitive is it, and what margins can we command, and how low can we drive our internal cost structure?"

Both of Babcock's most important businesses have low capital needs and therefore very high returns on capital. In the nuclear operations business, Babcock has a 20% pre-tax margin while General Dynamics and Huntington Ingalls have a 10% or lower margin. Babcock's corporate wide sales divided by net tangible assets is about 7 times. So, a 20% EBIT margin translates into something like a 140% pre-tax return on capital. The exact return on capital of nuclear operations depends on how much of the company's assets it ties up. However, the unit's return on capital is clearly extraordinarily high. The power generation business has an 8% to 10% EBIT margin which is similar to Alstom's Thermal Power EBIT margin. If this unit also turns its net tangible assets at about 7 times, the pre-tax return on capital would be in the 56% to 70% range. Again, the exact return on capital of this business unit depends on how much of the company's assets are devoted to this unit. But it is once again clear that the return on capital is more than adequate. Even just a 30% pre-tax return on capital would lead to about a 20% return on equity without the use of leverage. And many companies in the kinds of markets Babcock competes in actually do employ some debt. It is reasonable to believe that the return on equity of each business unit would be higher than 20% a year in most years. When Babcock separates into two different companies, each of those companies will have above average returns on equity. The nuclear operations unit – the one that serves the U.S. Navy – will have incredibly predictable results. Investors may award that business a much higher multiple. The power generation business is also a good business. It is equal in quality to Alstom's Thermal Power business. However, the results in that business will be lumpier. Investors may give that business the lower valuation in a spin-off. There is some sense in that. However, capital spending by coal power plants may actually be lower now and since the Great Recession than it would be in normal times. For that reason, the earning power of the power generation business may be higher than its results since 2008 suggest. Clearly, the

nuclear operations business is the predictable business. The power generation business is the contrarian stock. But both businesses will be high return on equity stocks.

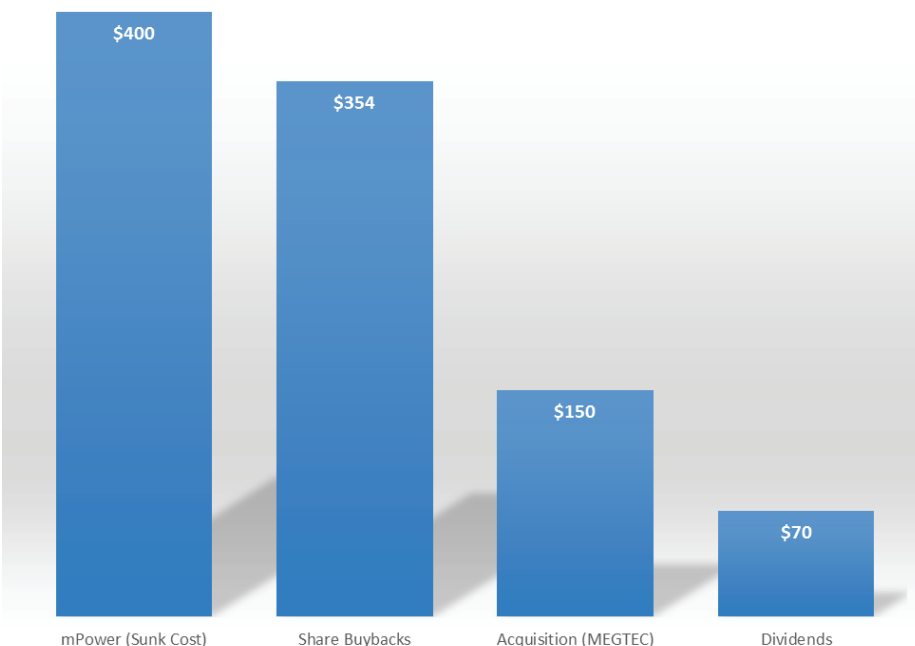
CAPITAL ALLOCATION

Babcock's CEO Thinks the Stock Market Undervalues His Company's "Franchise"

When James Ferland became Babcock & Wilcox's CEO in 2012, he realized the stock was undervalued: "...it appears to me that the market is undervaluing B&W as a franchise. If I may elaborate on this for a minute, I think there are a few reasons. First, are the obvious, normal market considerations like trading patterns in our peer groups, the price of natural gas in the U.S., and others. Then, there are things, frankly, which are more within our control such as the investment responsibility and related risk and upside opportunity at mPower which today resides largely with B&W and finding a means to address in a responsible and effective manner the high level of pension funding and expense that is currently running through our financial statement. Additionally, we'll look at other ways to drive shareholder returns including optimizing B&W's capital structure and allocation of capital within the company. I don't have any concrete answers to share with you today, but I'm committed to looking at these opportunities to unlock value."

That was Q1 of 2012. The company has offered concrete answers since then. Babcock and Wilcox froze its pension plan to new entrants back in 2006. The plan will finally be frozen permanently for all employees at the end of 2015. After that time, employees will no longer earn credit for additional service years or increases in their salary. Babcock has net debt of \$428 million. This is mainly due to its pension liabilities.

The modular nuclear reactor business – called "mPower" – has been nothing but a sunk cost for Babcock so far. Since 2009, Babcock invested a total of \$400 million in mPower. This was always a long-term investment. Babcock intended commercialization of the product to begin around 2020. That means the company was investing more than 10 years ahead of any hope of seeing revenue come in on the project. Interest in mPower has cooled. There are several possible reasons for this. The biggest is the decrease in optimism about new building of nuclear reactors in the U.S. Before the Fukushima Daiichi nuclear disaster in March of 2011, some analysts believed there would be a "nuclear renaissance" in the U.S. Nuclear power has low variable fuel costs and no carbon emissions. The cost of electricity from a nuclear plant is largely the upfront investment in the plant including the money that needs to be borrowed and the interest paid on that money spread out over the useful life of the plant. When fuel costs – especially coal and natural gas – are high and interest rates are low, the economics of building a new nuclear plant for electricity generation appear to make sense. However, a collapse in the output price (the price of electricity), or in the input cost for alternative power plants (coal and natural gas) can make the economics of a nuclear power plant look poor. These are theoretical issues. The main practical issue facing nuclear power in the U.S. is fear of a nuclear disaster. The market for nuclear reactors in the U.S. dried up completely after the Three Mile Island disaster. At the time of the Three Mile Island disaster, there were 129 nuclear power plants planned for construction. Less than half of those – 53 – were actually completed. In the 35 years following the Three Mile Island nuclear disaster, no nuclear power plant was authorized to begin construction in the U.S. The Fukushima Daiichi nuclear disaster in Japan was worse than the U.S. disaster at Three Mile Island. After Fukushima, Japan shut down its entire nuclear generating capacity. Germany accelerated its plans to end the use of nuclear power. The worldwide response was similar to how the U.S. responded in 1979 to Three Mile Island and the rest of the world responded to Chernobyl in 1986. Three Mile Island, Chernobyl, and Fukushima Daiichi are the 3 worst civilian nuclear disasters in history and the public response to each has always been to cancel plans to build new nuclear power plants, to increase regulation, to add



Since 2009, Babcock spent more on mPower (\$400 million) than on buying its own stock (\$354 million)

safety requirements that increase the time and expense of building a new nuclear plant, and especially an increase in political pressure – especially local political pressure – to keep nuclear plants away from the places where voters live. The idea of a very small – 70 foot long by 10 foot wide – nuclear reactor that can be delivered by railroad where it is needed is unlikely to be popular with the public in any country. It is especially unlikely to be popular in developed countries. Those are the countries where Babcock is strongest. Babcock decided to sell mPower. The company hoped to keep 20% or less of the business and the right to manufacture the nuclear module and the fuel. However, no company was interested in buying mPower at a price that was acceptable to Babcock. As a result, Babcock has cut spending on mPower to just \$15 million a year. This obviously means that commercialization will take longer. It is questionable whether commercialization of mPower will ever be achieved. In 2013, Babcock's CEO explained the difficulty in finding a buyer for mPower: "It's been relatively challenging to find investors that are interested...we've been essentially unable to find a single investor to step up that wants to take a majority position. And the number of investors that want to take even minority positions are hard to find...mPower has always been a bit of a challenge from a return on investment perspective because it takes so long to go through the design process and the licensing process (to) get the first couple of units built. We were, even at the heyday of the market, 2 or 3 years ago, it was the mid-2020s before we had a significant step-up in mPower orders. The upside opportunity, however, was so large that it justified \$1 billion in upfront spending. The market has shifted out a good 3 to 5 years and that has a material impact on the investment profile. The technology is still good. The concept is still valid, but it's hard to make the numbers work when the market pushes out."

Babcock now says it will spend no more than \$15 million a year on mPower. Throughout this issue, we assume that mPower is worthless. There is an argument to be made that mPower might be worse than worthless. If Babcock spends \$15 million a year on mPower for each of the next 10 years, the company will eventually spend \$150 million on mPower. Theoretically, it is possible Babcock will spend \$15 million a year for as long as 10 years without being able to sell mPower and without slowing down its rate of spending. If that happens, mPower should have a negative value to shareholders equal to the net present value of a \$15 million a year loss for each of the next 15 years. This amount would be somewhat less than \$150 million in negative value, because Babcock will eventually stop spending on mPower if the business can never be commercialized. Also, Babcock might receive some money from an investor that wants a minority or majority stake in mPower. Finally, mPower could be successfully commercialized at some point and provide billions of dollars in revenue for Babcock. Obviously, if Babcock's original plans for mPower justified a \$1 billion investment and a more than 10 year waiting period before any return on that investment – the imagined eventual return in the later years was huge. It is probably best to consider mPower a failed experiment. Babcock has limited its investment in the project. This shows management is focused on return on investment rather than long-term growth. Babcock also reduced costs in its power generation group. It now targets a 9% to 12% EBIT margin instead of the 7% to 10% margin it targeted before the current CEO took over.

The most important capital allocation decision Babcock's board made is not strictly speaking an allocation of capital at all. The board decided to split the stock in two parts. This shows the company is focused on shareholder returns – or at least a higher stock price – rather than empire building. Since 2010, Babcock has also paid \$70 million in dividends and spent \$354 million buying back stock. The company also bought MEGTEC for \$150 million. MEGTEC is closely related to Babcock. The company's revenue split of 57% U.S. business and 43% international business with 50% environmental and 33% after-market is quite close to Babcock's. It is a small, complimentary investment. Babcock paid 8.8 times EBITDA for MEGTEC. That is not an especially high price. However, it is hard to tell whether spending \$150 million on MEGTEC is actually a better investment than simply spending that \$150 million on buying back Babcock's own shares in the stock market.

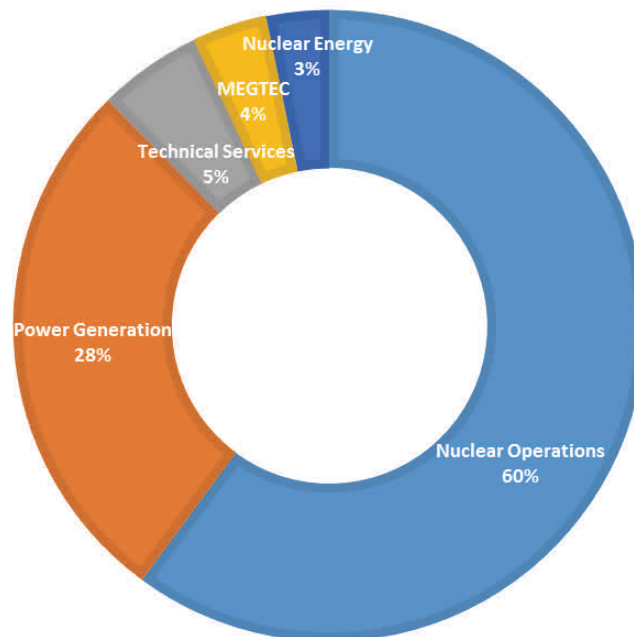
VALUE

The Whole of Babcock and Wilcox is Worth the Sum of its Five Money Making Parts

Babcock and Wilcox can be valued as the sum of 6 different parts: 1) Nuclear Operations 2) Power Generation 3) Technical Services 4) MEGTEC 5) Nuclear Energy and 6) mPower. Babcock's most valuable business is its nuclear operations business. Most of this unit's earnings comes from heavy nuclear components for U.S. Navy submarines and aircraft carriers. Babcock is the sole supplier of these parts. The U.S. Navy is the sole buyer. The companies that build these ships are: Huntington Ingalls and General Dynamics. Both companies are publicly traded. They are good peers for Babcock's nuclear operations group. However, Babcock's nuclear operations business is more durable than the actual building of submarines and carriers, because Babcock is the only company in the U.S. that provides heavy nuclear components for these ships. It is unclear which company – General Dynamics or Huntington Ingalls – will get the Ohio replacement class contract. It is not unclear who will supply the heavy nuclear components. Regardless of whether the construction of the Ohio replacement class is awarded to General Dynamics or Huntington Ingalls, Babcock will be the company that provides the heavy nuclear components. In this way, Huntington Ingalls and General Dynamics are sole

suppliers once they win a contract but operate as a competing duopoly for the contracts. Babcock is in a monopoly position at all times. This makes Babcock's nuclear operations business more predictably durable than the carrier and submarine business at Huntington Ingalls. About 61% of Huntington Ingalls's sales come from carriers and submarines. These are the same projects on which Babcock supplies the heavy nuclear components. The other 39% of Huntington Ingalls's business is for destroyers, amphibious assault ships, and other navy programs. These are lower priority programs for the Navy than carriers and submarines. For these reasons, Huntington Ingalls's entire range of business with the U.S. Navy is less attractive than Babcock's business of supplying heavy nuclear components. Assuming a 9% EBIT margin – which is reasonable now that Huntington Ingalls is working on projects in serial production – Huntington Ingalls trades at an enterprise value that is 12.7 times its normal earning power. Babcock and Wilcox's nuclear operations are relatively more attractive than Huntington Ingalls as a whole. Therefore, Babcock and Wilcox's nuclear operations should be worth more than 12.7 times EBIT or Huntington Ingalls should be worth less. General Dynamics is another possible peer of Babcock's nuclear operations business. General Dynamics is not as direct a peer as Huntington Ingalls. However, General Dynamics is one of only two producers of nuclear powered ships for the U.S. Navy. General Dynamics trades at 12.8 times EBIT. These two companies – Huntington Ingalls and General Dynamics – which trade at 12.7 and 12.8 times EBIT are the closest comparable companies to Babcock's nuclear operations unit. Their market values suggest Babcock's nuclear operations unit should trade at about 13 times EBIT.

There is no good peer for Babcock's power generation business. Quanta



About 88% of Babcock's value comes from its Nuclear Operations and Power Generation units

Services is a public company that also does capital expenditure work for utilities. Babcock and Quanta have similar customers. Both companies depend on capital spending by utilities. Quanta focuses on transmission assets. Babcock focuses on steam related generation assets. Babcock will do worse than Quanta if coal continues to decline as a percent of total U.S. electricity generation. Earnings at Quanta and Babcock could be understated if the low demand for electricity during The Great Recession caused an abnormal cut back in capital spending by utilities. Also, Babcock's earnings may be more understated than Quanta's, because coal power plant cap-ex has declined faster than other types of cap-ex due to environmental regulations and the low price of natural gas. Overall, Quanta's business is more predictably durable than Babcock's power generation business. However, Babcock's power generation earnings may be more cyclically understated. Babcock should not trade above the valuation put on Quanta. It is possible Babcock should trade below the price the market puts on Quanta. However, this depends on the future of coal power plants and how quickly they decline in the U.S. Quanta has an enterprise value of 12.6 times EBIT. This means Babcock's power generation business should be worth less than 12.6 times EBIT. The other possible peer for Babcock's power generation unit is Alstom. In June 2014, GE agreed to buy Alstom's gas turbine operations. GE also created joint ventures with Alstom in steam turbines, renewable energy, and electrical transmission. Alstom's thermal energy business is similar to Babcock's power generation business. However, Alstom is more exposed to capital spending at gas power plants. Babcock is more exposed to capital spending at coal power plants. The range of Babcock's business is also narrower than Alstom's. Babcock is more focused on the U.S. Overall, the margins at the two businesses are similar. GE paid about 7.9 times EBITDA in cash for Alstom. Using these two companies – Quanta and Alstom – as peers for Babcock's power generation business a multiple of no less than 8 times EBITDA and no more than 12 times EBIT would make sense. A valuation of about 10 times EBIT would be most in line with these two peers. A valuation of 8 times EBIT would be a conservative appraisal to put on the power generation business.

Babcock's technical services business – which runs nuclear related sites for the U.S. government – has no good peers. The closest publicly traded peer is U.S. Ecology which deals with hazardous materials. That is a growth company. U.S. Ecology trades at 27 times EBIT. That would be an absurd valuation for Babcock's technical services business. A normal P/E ratio for a U.S. stock – historically – has been around 15. At today's corporate tax rate, an EV/EBIT ratio of 10 translates into a P/E of 15 if a company uses no debt. Babcock's technical services business has long-term contracts for very special work. Barriers to entry in this industry are extremely high. A handful of companies work together in consortiums in this business. Babcock's technical services business is certainly equal to or higher in quality than the average American company. It can also carry at least some debt. As a result, it should certainly be worth at least 10 times EBIT. So, 10 times EBIT is a conservative valuation for the technical services business. There is one company that was a better peer of Babcock's technical services business. That company is URS. Aecom acquired URS at a price of 10.2 times EBIT. About 34% of URS's business is with the U.S. government. Much of that business is from projects on which Babcock and URS work as partners to serve the U.S. government. Using URS as a peer, Babcock's technical services business should be worth 10 times EBIT.

Babcock's smallest money making business is the recently acquired MEGTEC. The closest peer to MEGTEC is Fuel Tech. Fuel Tech gets 70% of its revenue from air pollution control. The company makes environmental systems like scrubbers – which makes Fuel Tech a direct competitor of Babcock generally and Babcock's MEGTEC unit specifically. The other 30% of Fuel Tech's business comes from selling chemicals for use in boilers, furnaces, and other combustion units. This business is also closely related to what Babcock does and serves the same customers. Fuel

Tech trades at 19.5 times its most recent EBIT figure. However, like Babcock's number, this is a cyclically unreliable result. The 2013 EBIT number is more indicative of a normal year. Fuel Tech trades at 9.7 times its 2013 EBIT. MEGTEC is of comparable quality to Fuel Tech. Therefore, a good – but not necessarily conservative – appraisal of MEGTEC would use 10 times EBIT as the value for Babcock's MEGTEC unit.

Babcock's mPower business loses \$15 million a year. Babcock sunk \$400 million into the project. There is still more than \$650 million in needed investment to bring small modular nuclear reactors to market sometime in the 2020 decade. Babcock originally thought mPower would justify an investment of more than \$1 billion. Now, management is unsure of future investment could earn a decent return on investment. Babcock is seeking a partner to buy a majority or minority stake in the business. Babcock may continue to lose money at the rate of \$15 million a year, mPower might eventually be commercialized by someone else with Babcock holding a stake and having the right to manufacture key parts, or someone might pay Babcock to take mPower off Babcock's hands. The end result for this business is speculative. A valuation of zero dollars – neither positive nor negative – seems reasonable at this point.

Babcock's nuclear operations business deserves an enterprise value of 13 times EBIT. This would value the unit at \$2.82 billion. The power generation business deserves a valuation no less than 8 times EBIT. That values the unit – perhaps too conservatively – at \$1.29 billion. Management expects MEGTEC to have a 10% margin on \$200 million of sales next year. A more conservative approach is to use last year's result. At 10 times EBIT, MEGTEC is worth \$180 million. Babcock's technical services unit lost a key contract that accounted for over half of revenue. Removing this contract from previous years gives an estimated EBIT of at least \$25 million for future years. Technical services is worth at least 10 times EBIT, so that puts a value of \$250 million on the unit. Babcock's nuclear energy unit – which has no good peer – should make \$15 to \$20 million a year in EBIT mainly from its Canadian business. The unit is worth 10 times EBIT or \$150 million. Babcock has about \$26 million in corporate expenses that are not allocated to any business. The capitalized value of these ongoing and unavoidable expenses is negative \$260 million. Taken together, Babcock's 5 money making units plus mPower and accounting for corporate expenses – gives a sum of the parts value of about \$4.7 billion. The company has just under \$450 million in net debt plus pension obligations. This leaves about \$4.2 billion in value for shareholders. Babcock has 107.5 million shares outstanding. As a result, intrinsic value is \$39 per share.

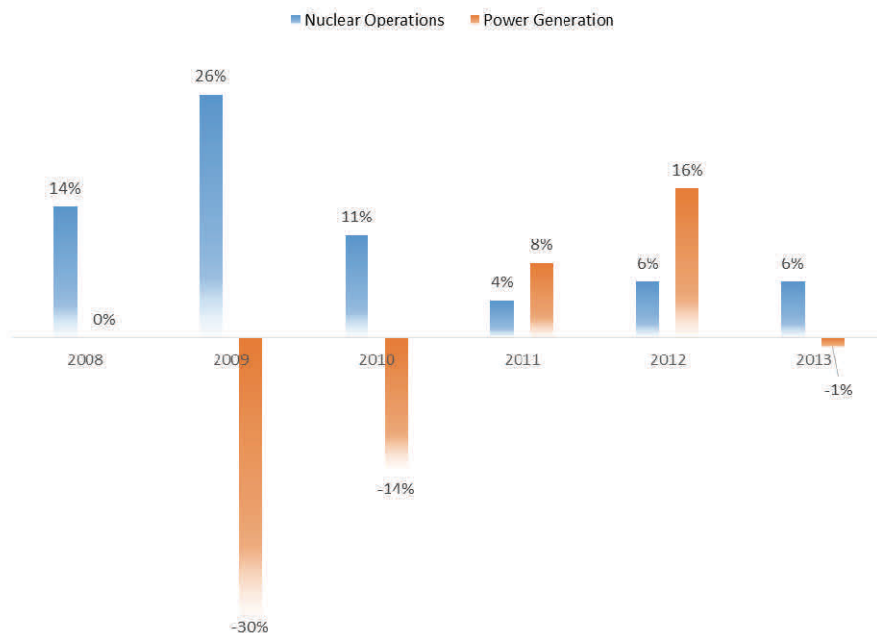
GROWTH

Babcock's Nuclear Operations Will Grow 5% a Year While Power Generation May Not Grow At All

The long-term growth potential of Babcock's two most important businesses – Nuclear Operations and Power Generation – is very different. Power Generation may not grow in the future. Babcock gets about 25% of its power generation revenue from new build steam. There is very little new build steam – boilers at coal power plants, for example – being built in the U.S. today. As Babcock's then CEO explained in 2012, new build steam is mostly in China and India: "I believe that anywhere from, depending on any given year in the future, 70% to 90% of the new coal-fired market is going to be found in the Asian market, predominantly in China and India." Babcock has been part of a joint venture in China for over 25 years. Babcock does not report the revenue from this joint venture. It only reports its share of the joint venture's earnings. Babcock formed the 50/50 joint venture in 1986. It has relatively low market share. And the venture's market share has

neither increased nor decreased in recent years. Babcock has a much, much lower share of the installed base of boilers in China than it does in the U.S. The company set up a joint venture in India in 2010. It took that new venture until 2013 before it got its first contract. The Indian joint venture got a \$180 million contract in 2013. Babcock has gotten some other international new build contracts. For example, Babcock is building two 360 Megawatt boilers in the Dominican Republic, it got a \$60 million contract (180 Megawatt boiler and related equipment) in Colombia, and a large – two 600 Megawatt boiler or \$300 million contract – in Vietnam.

The Vietnam contract gives some idea of the difficulties Babcock faces in countries that are building new power plants. The Vietnamese end customer is the state owned utility company. Corruption is pervasive in Vietnam generally and in this state owned utility specifically. The Vietnamese state utility chose a Korean construction company for the job. The Korean company chose Babcock & Wilcox for the boilers. It is very likely the Korean company's efforts to win the overall construction job for the power plant included bribery. It is unclear how the Korean company chose Babcock for the project. The Korean company could have chosen from one of a handful of companies – like Alstom – that builds boilers around the world. Alstom – despite being based in France – recently plead guilty to charges under the United States's Foreign Corrupt Practices Act. As part of the plea, Alstom paid a \$772 million fine. Alstom admitted that its power unit paid bribes to state owned entities in: Indonesia, Egypt, Saudi Arabia, Taiwan, and the Bahamas. In Indonesia, Alstom paid bribes to a member of the Indonesian Parliament and to the state owned Indonesian electric utility. The U.S. Justice Department claims that Alstom paid more than \$75 million in bribes to secure more than \$4 billion in government projects at a profit to the company of \$300 million. As the Alstom



Babcock's nuclear operations grew 11% a year from 2008 through 2013 while power generation shrank

case makes obvious – where \$75 million in bribes brought in more than \$300 million in profits – bribery has a high return on investment in corrupt countries. Many of the developing countries – such as China, India, and Vietnam – that will account for a large part of the new boilers built in the world are corrupt countries with very heavy state involvement in power generation. It is likely that many of the future contracts won to build power plants in these countries will be contingent on the payment of many, many millions of dollars in bribes. Companies like Babcock that do most of their business in the U.S. – a low corruption country – for private sector (non-government controlled) utility customers may be at a disadvantage in winning business in higher corruption and more centrally controlled economies. Alstom had historically won a lot more business in high corruption countries and in countries where work was being done for state owned utilities than Babcock did. And Alstom is a French company with major operations headquartered in the U.S. Both France and the United States are OECD members who have signed important anti-corruption treaties. In addition, the United States's Foreign Corrupt Practices Act can be used against companies that are not headquartered in the U.S. as long as they meet certain other requirements – as Alstom did – that give the U.S. jurisdiction over their corrupt actions. It is likely that companies based in China, India, Korea, etc. are not as concerned about the negative publicity, criminal charges, and huge fines that countries like the U.S. can impose on companies like Babcock.

This creates two problems for Babcock. One, Babcock may be at a disadvantage in situations where they are competing against companies that are more willing to use bribes than Babcock is. Two, Babcock itself may be tempted to engage in bribery. This can have serious financial consequences for a U.S. company in American courts, the media, and the U.S. Congress. In addition to the importance of bribery in winning major power plant construction projects in countries like China, India, and Vietnam – there is the issue of government assistance. Governments support investment in foreign countries and exports to foreign countries through programs like the United States' Export-Import Bank. Some

countries may be more aggressive than the United States in furthering the interests of their corporations in winning business in countries around the world. It is also possible that foreign policy issues may influence decisions by state owned entities. As an example, some of the factors that can come into play in a situation like the Vietnam boilers Babcock is building are: a Korean construction company, Babcock as the boiler builder, the Vietnamese state owned utility company, export assistance from countries like South Korea and the United States, and relations between Vietnam, South Korea, and the United States. At the time Babcock won the Vietnam project, the U.S. and Vietnamese governments were trying to improve relations. At other times and in other countries, the reverse may be true. For these reasons, it is important to remember that Babcock's huge success in the U.S. during the period in which that country was building a lot of coal power plants may not translate into similarly strong market share in new build power plants in countries like China, India, and Vietnam. Babcock serves different kinds of customers – private-sector power companies – in a different kind of business culture (much lower corruption) in the U.S. than in these other countries. Most countries around the world make decisions about new power plants differently than the U.S. does because the importance of the state and the role of bribery is greater in these countries.

Babcock can be in a better position to win new build non-coal steam projects. These are “renewable” type projects. They are more likely to be in countries with low corruption. Renewables often depend on government subsidies to promote environmentalism. Examples of Babcock's renewable projects include a 280 Megawatt (\$80 million) biomass boiler system in Denmark, a \$100 million waste-to-energy power plant in the U.K., a \$170 million waste-to-energy boiler in Denmark, and a (huge) \$900 million waste-to-energy

contract for Palm Beach, Florida. Babcock's potential for gaining market share is better on projects – and in countries – like these.

There is one trend – the decline of coal power plants – that will cause a contraction in Babcock's power generation business. About 25% of Babcock's power generation revenue is from new build contracts. These were low during The Great Recession and Babcock has some opportunity to win new build in countries like China, India, and Vietnam. Another 25% of Babcock's power generation revenue comes from environmental new build. Regulations in the U.S. and elsewhere can provide good opportunities to make existing coal power plants cleaner. Babcock can win much of this business. And Babcock may eventually be able to win environmental contracts – in part through MEGTEC – as developing world countries implement regulations on their coal power plants to meet requirements under treaties they sign. Unfortunately, 50% of Babcock's power generation revenue comes from after-market revenue. As old coal power plants are retired in the U.S. and not replaced with equivalent generating capacity, the installed base of Babcock boilers in U.S. coal power plants will decline. This installed base is what provides the after-market revenue as customers go back to the company that built their boiler when that boiler and related equipment needs work as the plant ages. Given projections of coal's declining importance in the U.S. – it is reasonable to assume a roughly 20% permanent decline in Babcock's after-market revenue. Because after-market is only 50% of Babcock's power generation revenue – the power generation unit would see only a 10% permanent decline. Babcock will need to offset this decline with new wins in renewable boilers, environmental equipment, and in new build coal power plants in China, India, and Vietnam to keep its power generation business from shrinking. This is possible given Babcock's long experience in boilers and the limited number of competitors with similar capabilities that can bid for such work. However, the decline in Babcock's installed base of boilers in the U.S. means the power generation group will have a tough time growing its top line overall.

Babcock's nuclear operations unit – which does business for the U.S. Navy – will have no such problem. The Navy's announced plans for the next 10 years point to a 3% to 4% real increase in heavy nuclear components per year. This is because the U.S. Navy will be building more nuclear powered ships over the next 10 years than it did over the last 10 years. The exact math is somewhat complicated as the new subs the Navy is ordering are bigger and require more work from Babcock. The end result is a fairly predictable – if the Navy sticks to its plan – annual increase of 3% to 4% a year in Babcock's nuclear operations unit before inflation. The Navy budgets for its long-term plans in real dollars. As a result, inflation simply passes through the carrier and submarine projects and on to the bottom line of the companies that supply components. Assuming the bottom end of 3% a year in real growth and low 2% a year inflation in the U.S. over the next 10 years, Babcock's earnings from its nuclear operations group should grow 5% a year. In other words, when this unit is split off, it should be capable of growing earnings per share by 5% a year for the next 10 years while paying out most of its earnings in dividends. Earnings per share will grow faster to the extent the spun-off nuclear unit chooses to buy back stock instead of paying dividends. Regardless, a 5% annual gain in earnings at this unit through 2025 seems very likely.

MISJUDGMENT

The Case for Babcock Relies on the U.S. Navy's 30-Year Plan and Babcock's Own Pension Estimates

The biggest risk of misjudging Babcock and Wilcox is in the nuclear operations business. This business supplies heavy nuclear components to U.S. Navy carriers and subs. This is a monopoly-monopsony business. There is only one seller (Babcock) and only one buyer (the U.S. Navy). The benefits of serial production, of having continuous demand for such components year in and year out, and of relying on the company with the most experience in this area means that having just one buyer – the U.S. Navy – limits the market to just one seller (Babcock). If more countries – like China – eventually develop into builders of nuclear powered aircraft carriers and nuclear powered submarines, the market could support new entrants. However, even in that case, it seems unlikely that the same seller could serve different buyers. For example, neither China nor the United States would rely on a company headquartered in the other's territory for their sole source of a critical military component. The lack of diversity among buyers and sellers in the heavy nuclear component market for ships can lead us to extend the certainty of what competition will look like in the industry to certainty about other future conditions that are not as well founded. For example, while it is certain that the U.S. Navy will need a supply of heavy nuclear components for its carriers and subs and it is certain that Babcock will be the one to supply those components, it is not certain what the price will be. Babcock has much higher margins than either General Dynamics or Huntington Ingalls. For example, Huntington Ingalls – which gets 61% of its revenue from projects on which Babcock supplies the heavy nuclear components – had an EBIT margin of 4% in 2010, 6% in 2011, 7% in 2012, and 8% in 2013. Babcock's nuclear operations group – which was

supplying many of the exact same ships Huntington was building – never recorded an EBIT margin of less than 17% during that time. In fact, Babcock's operating margin advantage over Huntington Ingalls was 17% versus 4% in 2010, 19% versus 6% in 2011, 21% versus 7% in 2012, and 20% versus 8% in 2013. Huntington does not even target an operating margin above 10% in its – hopeful – projections of the future. Meanwhile, Babcock has twice – in the last two years – achieved an EBIT margin of 20% in its U.S. Navy business. Once General Dynamics or Huntington Ingalls is awarded a contract for a class of submarines, that company is the sole supplier. In the case of carriers, Huntington Ingalls – just like Babcock – is the sole supplier. Yet, Babcock's margins are higher on its contribution to carriers than Huntington's margins are on its contribution to the same project.

Most markets operate in something closer to the economic concept of perfect competition than Babcock does. It can be difficult to understand what price is the economically correct price in a monopoly-monopsony market. Furthermore, Babcock is a public for profit company. The U.S. Navy operates with a budget provided by Congress. Although the Navy has some incentive to bargain with suppliers like Huntington and Babcock – its incentive is not the same as a for profit company. For example, the Navy may want to use the same budget to buy 11 carriers of the same class instead of 10 carriers of the same class. In this way, it may be in the Navy's interest to bargain for a 10% reduction in the price of each of the first 10 carriers it buys so it can afford an 11th carrier under the same budget. This can lead the Navy to award all of a contract to one supplier, to order a big block of the same kind of class of ship at once, to space out delivery times to best allow its suppliers to be in a state of continuous serial production, and even to award all of its similar needs – for example, both attack and missile subs – to the same supplier. In these ways, it is often in the Navy's interest to get more bang for its buck. This means the Navy may prefer the profit per ship to be lower for Huntington and Babcock rather than higher. However, that does not mean it is in the Navy's interest to reduce the profit earned per year. The Navy is not really in a position of pure opposition to a company like Babcock on how much profit Babcock should earn supplying carriers and subs with heavy nuclear components over the next decade. More likely, Babcock prefers an outcome where it earns the highest cumulative profit over those 10 years – regardless of how many ships it supplies or what kind of ships they are – while the Navy prefers an outcome where it gets the most ships of its highest priority classes given the budget Congress will allow. In fact, it may be against the Navy's long-term interest to spend less on certain classes of ships overall. It is probably easier to argue for a higher future budget for carriers and subs when you are already spending a large amount on those types of ships today.

Congress is not a for profit company. It does not take a zero-based budgeting approach. Most public discussions of budgets for U.S. departments start from the point of how much is being spent now and how much the future increase or decrease will be. While it is possible to sketch out a sort of game theory approach to a single for profit publicly traded seller like Babcock bargaining with a single not-for-profit government buyer like the U.S. Navy, it is difficult to predict exactly how high Babcock's profit margin should be. It makes sense that Babcock has a higher profit margin than Huntington Ingalls and General Dynamics. But, the truth is that Babcock sells components for which there is no market price. The market for heavy nuclear components in the U.S. is simply the coordinated result of whatever Babcock is willing to charge and whatever the U.S. Navy is willing to pay. Babcock earns a 20% margin now. The company's management has said that the nuclear operations business should earn a high teens margin in normal years – not a 20% margin. So, the margin should decline slightly in the future.

It is easy to predict the future growth of Babcock's nuclear operations business if the Navy sticks to its 30-year plan. Under that plan, Babcock's real sales growth rate will be between 3% and 4% a year for the next 10 years. Nominal sales growth will simply be real sales growth plus inflation. This is because the Navy plans in real dollars. As a result, Babcock's nuclear operations should grow nominal sales by 5% to 8% a year over the next 10 years depending on whether inflation in the U.S. is closer to 2% or 4%. Historically, the projects Babcock works on have inflated at a rate of about 3.8% a year. However, inflation expectations are now lower in the U.S. than they were in the past. There is very little risk that Babcock's U.S. Navy sales and earnings will fail to increase at 5% to 8% a year over the next 10 years. The one risk is a change to the Navy's plans. This is impossible to predict ahead of time. Given the positions of the two political parties in the U.S., the current majority in Congress, likely candidates for President, the history of U.S. Navy planning, and the usual behavior of the Congressional committees – there is currently no reason to suspect the U.S. Navy will reduce its actual buys for carriers and subs below the level planned for the next 30 years. However, there is nothing that makes it impossible for the Navy to do so if Congress passes certain legislation to allow it to reduce those purchases. So, we could misjudge the likelihood of a future Congress passing laws that eat into the U.S. Navy's budget. However, it is also possible – especially in the long-run – that we may misjudge the U.S. Navy's need to increase its buys of carriers and subs above its current 30-year plan. Specifically, we did not really consider the possibility that an increase in China's submarine fleet over the next 30 years would result in a Cold War style ramping up of the United States' submarine fleet. That would be a likely response. But it is very difficult to predict Chinese military policy and even more difficult to speculate on possible U.S. reactions to hypothetical Chinese actions.



Babcock's pension plan is underfunded by \$390 million

Any misjudgment of the nuclear operations group's future position is likely to have caused us to overestimate its value. The opposite is true of Babcock's power generation business. Since The Great Recession, U.S. electricity demand has declined. It is now projected to increase – slowly – by just 0.6% to 0.7% a year through 2040. The price of natural gas is abnormally low in the U.S. right now. It was abnormally low for the last few years. If the U.S. allows the free market to decide on the global price of gas by exporting gas from the U.S. to countries like Japan that have much, much higher gas prices – the price of natural gas would probably rise more than 30% in the United States. The U.S. plans to allow natural gas exports in 2017. In all likelihood, the price of natural gas in the U.S. will be higher after 2017 than it was since The Great Recession. This means more coal plants will be being fully utilized as more gas power plants shut down. Babcock's after-market revenue on its installed base of boilers is higher when more of those boilers are put to greater use. It is very likely that the combination of low demand for electricity and low natural gas prices created an unusually poor environment for Babcock's coal power plant business in the U.S. This is the power generation unit's most important market. So, it is likely that if we have misjudged the value of Babcock's power generation unit it is because we have undervalued it.

The last risk of misjudgment at Babcock and Wilcox is the risk of misjudging the company's pension liability. Babcock has a \$400 million pension liability on its balance sheet. This is the net result of \$2.57 billion in pension obligations against \$2.18 billion in pension assets. A 10% change in Babcock's pension obligation could result in a 60% change in its pension liability. For every 10% Babcock has underestimated its pension obligation, we would have misjudged the value of Babcock's stock by 6%. It is also possible that Babcock's pension plan assets may decline in value. The risk of this happening is similar to the risk of investing in a broad index of stocks and bonds. Babcock assumes future benefit payments of between \$160 million and \$175 million a year. The company has \$2.18 billion in plan assets. So, the return on plan assets needs to be 8% to maintain its current level of funding and make all benefit payments. This is an unrealistically high return on plan assets. A mix of stocks and bonds is unlikely to return more than 6% a year given today's high prices for both stocks and bonds. A more conservative estimate is a 5% annual return on plan assets. This would leave a \$66 million hole in annual

funding. If this occurs, Babcock can allow the plan to fall into a worse funding position or Babcock can contribute more to the plan while borrowing money. Babcock's overall net debt position – including its pension liability – is solid. Even if Babcock has underestimated its future obligations and overestimated its expected return on plan assets, the company should have no problem staying solvent. The biggest risk to Babcock shareholders from the pension obligation is that it may require Babcock to forego some future dividends or stock buybacks or to borrow more money. While misjudging the pension obligation risk is certainly possible, the damage from such a misjudgment would not be catastrophic to the investment case for Babcock. At no point have we assumed Babcock will increase its leverage in the future despite higher leverage being in line with behavior by peers and companies with similarly predictable businesses. The most likely result of misjudging the pension situation at Babcock would be an eventual downgrade of the company's credit rating. Babcock will be splitting into two different companies this year. It will be impossible to know the risks the pension fund presents until it is known exactly what the financial position of the two separated companies will be with regard to the way the company's cash, debt, pension obligations, and pension assets are divided among the two companies.

CONCLUSION

Investors Should Buy Babcock Ahead of the Spin-Off and Keep Both Halves as Investments – Not Trades

Most of Babcock and Wilcox's earnings come from two sources: nuclear operations and power generation. The power generation business builds boilers and related environmental equipment for power plants that use steam. This business is an oligopoly. Babcock has 20% to 40% market share

in the U.S. for much of the power generating equipment it sells. This business unit's competitive position is similar to Alstom's thermal energy unit. Babcock's power generation business has a moat. However, that moat is narrower than Babcock's most important unit: its nuclear operations business. Most of the earnings of the nuclear operations business come from supplying heavy nuclear components to the U.S. Navy's submarines and aircraft carriers. This business has by far the widest moat of any company that has ever been featured in Singular Diligence. Babcock's nuclear operations business is a monopoly. It is difficult for any other company to gain experience because the work that would provide that experience is done only for the U.S. Navy. This single supplier and single buyer relationship favors maintaining the competitive status quo. The future of the nuclear operations business is also highly certain. In addition to being a monopoly, Babcock's nuclear operations serve one customer – the U.S. Navy – that outlines its plans up to 30 years in advance. The Navy contracts for work on ships in advance of the construction of those ships. And Babcock works on each ship for several years. Therefore, the visibility of Babcock's reported revenue and earnings is very high. For example, last year the nuclear operations unit had a backlog – work ordered but not yet performed – of \$2.37 billion. During that same year – 2013 – Babcock's nuclear operations unit reported total revenue of just \$1.17 billion. In other words, Babcock's backlog of contracts already in progress but not yet reported in sales or profit is often 2 full years of work. The Navy's planning goes far beyond the backlog that appears in Babcock's SEC filings. This planning is not certain – the Navy has no obligation to Babcock to pay for components it plans to order, it only has an obligation to pay for components it has ordered. Nevertheless, Babcock's sole customer plans far in advance of the customers of most businesses. And it publishes those plans openly. This allows much greater visibility into the likely long-term future of the nuclear operation unit's sales and earnings. For these reasons, the nuclear operations unit deserves a higher multiple of EBIT than most businesses. The nuclear operations unit's two closest peers are Huntington Ingalls and General Dynamics. They both trade at an enterprise value of between 12 and 13 times EBIT. Babcock's future is more certain than the future of either Huntington Ingalls or General Dynamics. The company's competitive position – as the sole supplier of heavy nuclear components to U.S. Navy ships – is also stronger. The nuclear operations group deserves as high an EBIT multiple – or higher an EBIT multiple – than any company featured in Singular Diligence. A valuation of 13 times EBIT is not unreasonable, despite the fact that is equivalent to an unleveraged P/E ratio of 20. A P/E ratio of 20 is not low. A stock with a P/E of 20 is certainly not a value stock. But if any business deserves a P/E ratio of 20, it is Babcock's nuclear operations business. The business is a monopoly, with clear visibility into future demand for its product, a very high likelihood of 3% to 4% real growth per year, and the ability to pass inflation on to its customer (because the Navy plans in real dollars).

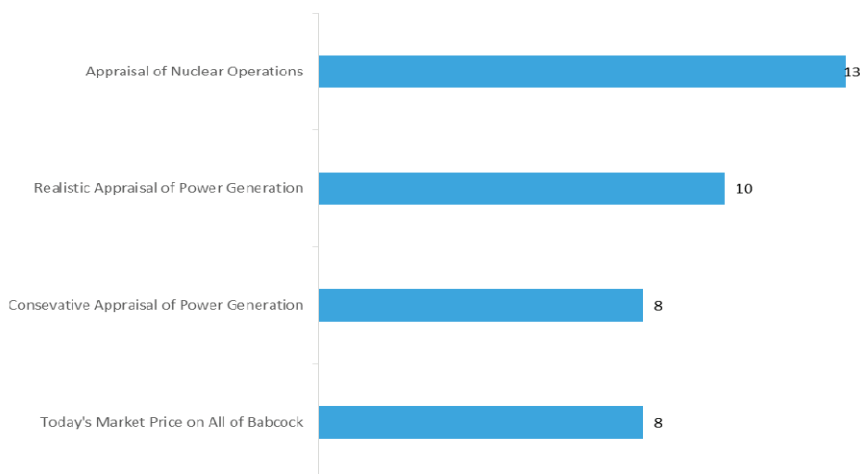
The future of the power generation business is less certain. If the power generation business is valued like its peers, it should trade at about 10 times EBIT. That is also the number – 10 times EBIT translates into an unleveraged P/E of 15 – that a normal quality company with normal growth prospects would trade for in the U.S. Babcock's power generation business is higher quality than most public companies in America. It may be able to achieve returns on capital of 50% or more. Certainly, the power generation business should be capable of an unleveraged return of equity of more than 20% in most years. This suggests the unit deserves an above average earnings multiple. However, the power generation unit's growth prospects may be below average. Babcock's installed base of boilers in U.S. coal power plants will shrink over time as coal power accounts for a smaller and smaller percent of total U.S. electricity generation. Babcock may have opportunities for growth in developing Asian countries like China, India, and Vietnam. Babcock is now doing

work in all 3 of those countries. Babcock may also win renewable business in the U.S. and other developed countries. Such growth opportunities are speculative. The possibility of growing the company's environmental equipment business is more certain. Babcock has a strong position in U.S. coal power plants. These plants will be required to be cleaner and cleaner over time. The same will likely be true of coal power plants in other countries where Babcock does business. Increased environmental regulations and aging coal power plants can provide Babcock an opportunity to sell more environmental equipment to the same sorts of power plants it already does work for. A no growth future for Babcock's power generation business might warrant an EBIT multiple as low as 8.

As the company currently exists today – it will, of course, split into two stocks later this year – Babcock's normal earning power is about \$410 million before interest and taxes. At a price of \$27 a share, Babcock's enterprise value is \$3.34 billion. That means the market currently values Babcock at about 8 times EBIT. Once the two companies separate, a reasonable appraisal would be anywhere from 8 to 10 times EBIT for the power generation business and 13 times EBIT for the nuclear operations. Right now, Babcock's overall EBIT multiple is as low as the low end – most conservative – estimate of what the worst of its two spun-off parts should trade for. The market is not correctly valuing the nuclear operations business. And the market is not optimistically valuing the power generation business.

Once Babcock is splits off into two companies, it should not be worth any less than the sum of its nuclear operations EBIT times 13 (an unleveraged P/E of 20) and its power generation EBIT times 8 (an unleveraged P/E of 12.3). A more reasonable appraisal of the two split off parts would probably be an enterprise

EBIT Multiples



Babcock trades at 8 times EBIT

value of 13 times EBIT for the nuclear operations and 10 times EBIT for the power generation business. This would mean the nuclear operations stock should have a P/E of about 20 and the power generation stock should have a P/E of about 15. In today's market, a P/E of 15 is normal. A P/E of 20 would be a premium over the average stock in the U.S. market.

The cyclical nature of Babcock's power generation business complicates this analysis. The average U.S. company is now experiencing unusually good results. Returns on equity are higher than they have been historically for most U.S. stocks. Operating margins are especially wide. This far into an expansion phase in the economy, the average American public company is doing quite well. It is a good part of the cycle for American business. This can lead investors to overvalue the average stock by assuming today's – perhaps abnormally good – results are an accurate gauge of what earnings will be in a normal year in the future. Last year – and most years since 2007 – have not been especially good years for Babcock's power generation business. It is possible that the unit's record since The Great Recession understates its normal future earning power. For this reason, there is a risk that applying an 8 to 10 times EBIT multiple to the unit's recent earnings may actually be the functional equivalent of applying something like a 6 to 8 times multiple on "normal" EBIT. It is impossible to say what normal future EBIT will be. However, it is quite possible that once Babcock splits into two stocks analysts will more carefully attempt to understand and adjust for the cyclical nature of the power generation business. It is very likely that analysts who cover the nuclear operations stock will highlight the company's extremely high earnings predictability. Once the nuclear operations unit is split from the power generation business, it will suddenly be seen as one of the most predictable stocks around.

Investors interested in Babcock and Wilcox should buy the stock now and hold both stocks after the spin-off. It would be a mistake to try to pick a favorite from among the two split off companies and double down on that one. The nuclear operations business has the more certain future. But, the power generation business may be the more undervalued stock at the time of the split. Investors should buy Babcock shares today and hold them through the spin off. Although the spin off provides an obvious catalyst, both halves of Babcock should be considered long-term investments. The surer way to outperform the market is to hold both stocks for more like 6 years from the time of the spin-off than 6 months.

Babcock & Wilcox (NYSE: BWC)

Appraisal: \$37.15

Margin of Safety: 20%

Owner Earnings	(in millions)
Nuclear Operations' Normal EBIT	
Revenue	\$1,168.0
* Normal EBIT margin	18.6%
= EBIT	\$217.2
Power Generation Normal EBIT	
Revenue	\$1,400.0
* Normal EBIT margin	10.0%
= EBIT	\$140.0
+ Equity Income of Investee	\$21.0
= Power Generation's Normal EBIT	\$161.00
Technical Services Normal EBIT	
5-year Average EBIT	\$56.0
- Adjustment for Loss of Y-12/ Pantex	\$31.0
= EBIT	\$25.0
MEGTEC Normal EBIT	
Revenue	\$173.0
* Normal EBIT margin	10.0%
= EBIT	\$17.3
Nuclear Energy Normal EBIT	
Revenue	\$150.0
* Normal EBIT margin	10.0%
= EBIT	\$15.0
Owner Earnings	
Nuclear Operations' Normal EBIT	\$217.2
+ Power Generation's Normal EBIT	\$161.0
+ Technical Services' Normal EBIT	\$25.0
+ MEGTEC's Normal EBIT	\$17.3
+ Nuclear Energy's Normal EBIT	\$15.0
- Corporate Expenses	\$26.0
= Pre-tax Owner Earnings	\$409.5

Nuclear Operations Business Value

The Nuclear Operations business is worth \$2,821 million.

- Normal EBIT is \$217 million
- The business deserves 13x EBIT
- The same valuation as Huntington Ingalls and General Dynamics
- The business is very predictable
- 5% long-term growth
- \$217 million * 13 = \$2,821 million

Power Generation Business Value

The Power Generation business is worth \$1,288 million.

- Conservative EBIT is \$161 million
- The business deserves 8x EBIT
- 8x EBIT provides margin of safety for uncertainty of coal power's future
- \$161 million * 8 = \$1,288 million

Other Business Value

The other businesses are worth \$580 million.

- The total EBIT of other businesses is \$58 million
- Other businesses are better than above average
- Definitely deserve more than 10x EBIT
- \$58 million * 10 = \$580 million

Corporate value

Corporate costs subtract \$260 million in value

- Corporate expenses are \$26 million a year
- \$26 million * 10 = \$260 million

Sum-of-the-parts Value

Sum-of-the-parts value is

- \$2,821 million + \$1,288 million + \$580 million - \$260 million = \$4,429 million

Share value

BWC's stock is worth \$37.15 per share

- Sum-of-the-parts value is \$4,429 million
- Net debt is \$435 million
- Equity value is \$3,994 million
- \$4,429 million - \$435 million = \$3,994 million
- Equity Value = \$37.15/share
- 107.5 million outstanding shares
- \$3,994 million / 107.5 million = \$37.15

Margin of Safety

BWC stock has a 20% margin of safety.

- Sum-of-the-parts value = \$4,429 million
- Enterprise Value = \$3,552 million
- Discount = \$877 million (\$4,429 million - \$3,552 million)
- Margin of Safety = 20% (\$877 million / \$4,429 million)

	EV/Sales	EV/Gross Profit	EV/EBITDA	EV/EBIT	EV/owner earnings
Fuel Tech	0.71	1.66	7.14	9.73	19.47
Quanta Services	1.08	6.68	8.78	13.39	12.64
Huntington Ingalls	1.16	6.39	10.70	15.43	12.74
General Dynamics	1.54	8.33	11.26	13.04	12.85
US Ecology	7.69	19.57	23.08	29.17	26.93
Minimum	0.71	1.66	7.14	9.73	12.64
Maximum	7.69	19.57	23.08	29.17	26.93
Median	1.16	6.68	10.70	13.39	12.85
Mean	2.44	8.53	12.19	16.15	16.93
Standard Deviation	2.95	6.65	6.30	7.56	6.31
Variation	121%	78%	52%	47%	37%
Babcock & Wilcox (Market Price)	1.09	3.67	8.36	10.02	8.66
Babcock & Wilcox (Appraisal Price)	1.36	4.58	10.42	12.49	10.80

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.



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