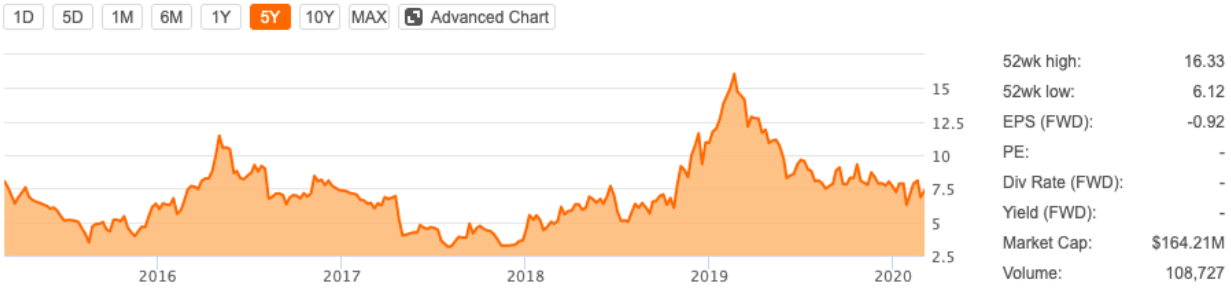
Elle Investments Research Report: AMSC

Company: American Superconductor Corporation
Symbol: **AMSC**
Analysis Date: 3/2/20
Analysis Price: $7.33
Price Target (PT): $18.49
Upside: **158%**
Dividend: NA
Recommendation: **Strong Buy**

AMSC: 5-Year Chart



Source: Seeking Alpha

INVESTMENT THESIS:

After years of testing, new Grid products Resilient Electric Grid ("REG") and Ship Protection System ("SPS") are ready to move decisively from the R&D phase to the commercial phase. Initial orders from an electric utility and the US Navy validate the sizable opportunity of each respective market. The balance sheet is adequate, and the current liquidity position should be enough to get AMSC to profitability as REG and SPS sales ramp up. We think AMSC is a Strong Buy.

LIQUIDITY POSITION: Adequate

The guidance provided for 4QFY19 is for the balance of cash, cash equivalents, marketable securities and restricted cash as of March 31, 2020 to be no less than $61M. Operating cash flow is expected to be a usage of $2M to $4M. With minimal capex spending (only $3M for the entire 9 months which ended December 31, 2019), we expect the cash usage per quarter to be around $5M for the near future. This provides for adequate liquidity as sales from the Grid segment ramp up, so we think the risk of dilution is low. (Note: Just as a reminder, the cash balance came largely from the old matter of the Sinovel settlement. Sinovel is the Chinese wind turbine company that was AMSC's largest customer a decade ago before they abruptly stopped accepting components from AMSC and began using stolen IP (from AMSC) to manufacture

their own wind turbine components. The settlement of $58M was much less than AMSC had asked for given the huge hit to revenues they suffered. But for new investors, this sad chapter in the company's Wind segment is in the past, and what matters is that the settlement payment should be enough to get them to profitability as sales of the Grid segment ramp up.)

COMMERCIAL PROSPECTS: Excellent

AMSC's reportable operating segments are:

Wind

AMSC's Wind segment offers an array of advanced power electronics and software-based electrical control system ("ECS") products that are used in production of wind turbines. They also license their advanced wind turbine designs, as well as provide customer support services to wind turbine manufacturers.

Back in FY2010 and FY2011, Wind segment revenues were over $200M. However, since the loss of Sinovel, this segment has simply been unable to recover the huge hit it took. Through the first 9 months of FY19, Wind revenue was only $9M. We are not optimistic that it will meaningfully increase from this level, and this segment is simply not material to our bullish thesis.

Grid

AMSC's Grid segment caters to the needs of large customers such as electric utilities, industrial facilities, and renewable energy project developers (i.e. solar and wind farms). Their products assist these customers to connect, transmit, and distribute power across the electric grid. The Grid segment also sells SPS products to the U.S. Navy. While Grid products D-VAR and D-VAR VVO are innovative and could contribute meaningfully to sales in the future, they face intense competition in their target markets. Our focus will be on the two where we see the most potential: REG and SPS.

AMSC's area of expertise is in the implementation of high-temperature superconductors (HTS) into real-world applications. A superconducting material is one that permits electric current to pass through it without encountering any resistance. This lack of resistance greatly improves the efficiency of superconductors relative to traditional conducting materials such as copper. Certain variations of AMSC's Amperium HTS wire, for instance, can carry up to 200 times the current of an equivalently sized copper wire. This improvement in carrying capacity can lead to substantial reductions in both the amount of material, space, and cost required for legacy electrical installations.

Two areas that AMSC has identified as being ripe for potential disruption by HTS are electric grid power transmission and mine countermeasures used aboard Naval ships.

REG

As the electric grid developed over the course of the last century, it was prohibitively expensive to connect urban substations to each other given the cost and size of traditional copper bundles. Because of this lack of interconnectivity, when a substation loses power in one area of a city (due to an extreme weather event, a malfunction, etc.), the neighborhood that relies on that substation for power will be left without it until a maintenance crew arrives to perform the repairs. This can sometimes take several days and is very disruptive to the economic and social life of those residents and businesses that are affected. With the advent of the smaller and more efficient HTS cable that AMSC has developed, substations can now be connected to each other so that when one substation loses power, another can begin to feed in electricity right away, resulting in an immediate recovery from power outages.

After years of testing in the city of Chicago with the cooperation of utility Commonwealth Edison Company (ComEd), AMSC received its first commercial order for a REG installation. The order was small, with AMSC expected to recognize only about $10M over a 2-year period. But talks are underway for a second REG project which would be 4 to 6 times larger than the first. In the past, management has talked about the opportunity for REG installations being on the order of $20M to $400M each. A quick mental calculation shows the sizable opportunity if the largest 15 to 20 metro areas in the US adopted REG technology as permanent parts of their grid.

One of our concerns with REG has always been that utilities would be reluctant to make the large capital investment from their own operating budgets. But this concern has been significantly de-risked. In 2019, the Federal Energy Regulatory Commission (FERC) granted ComEd's request to recoup the entire amount of its costs associated with REG through transmission rates. This is expected to be about $67M, and covers both the current project and the proposed second project. This amount represents 47% of the total cost of the projects, with the Department of Homeland Security (DHS) covering the majority of the remaining portion. Essentially, FERC has now set a precedent which shows that it is willing to allow utilities considering REG installations to have about half of the cost of the installation recovered through transmission rates. This is a very important development and is a major reason why we are very bullish on the commercial REG opportunity.

SPS

Since WWII, US and Allied Naval vessels have effectively used a copper bundle wiring system installed around the hull of the ship to disguise the ship's electromagnetic signature. This electromagnetic signature can be detected by deadly sea mines, which the Germans used to wreak havoc on the Allied Navy until scientists figured out a solution to avoid detection.

While effective, this legacy copper wiring system is heavy, inefficient, and expensive. AMSC's HTS degaussing cables, which have been developed for over 10 years in partnership with the US Navy, offer a much lighter and power efficient alternative. AMSC has said that SPS can be retrofitted onto existing ships, but the "sticky" opportunity comes from having SPS worked into

the baseline design of an entire class of ships. This way, all new ships built of that class will have SPS deployed onboard.

After years of testing, AMSC announced its first-ever baseline design win in late 2018, when the Navy decided to incorporate SPS into the baseline design of the USS San Antonio-class amphibious assault vessels. Over the next several years, as a few ships each year roll off the production line, AMSC will receive $10M per ship. In the past, management has discussed the revenue opportunity per ship, with small ships expected to generate about $3M to $5M each, medium ships expected to generate $5M to $15M each, and large ships expected to generate $20M to $25M each. The Navy has over 250 ships and is expected to grow in the future, so the revenue opportunity here is also quite large.

Additional revenue could come from ancillary uses of SPS (such as for propulsion or advanced weapons systems) as the Navy moves towards an "all-electric" fleet, as well as from sales to members of the Allied Navy. We remain very bullish on the prospects of SPS and think the first-ever design win (with the Navy soon to announce a second class of ship that will deploy SPS) serves to validate the market opportunity.

CONCLUSION:

AMSC traded sideways for the past 10 years as the Wind segment was simply never able to recover from the major loss of Sinovel. Now that the Sinovel settlement has been reached, that sad chapter of the company's history is fully behind us. We think the Grid segment has two very exciting and innovative products in REG and SPS, and that the initial commercial orders from late 2018 (as well as the stock's upward reaction) serve to validate the commercial opportunity. Market fatigue has caused the stock to drift back down even though there has been no material change in the story. We think AMSC is a Strong Buy.

GLOSSARY:

ComEd: Commonwealth Edison Company
DHS: Department of Homeland Security
D-VAR: Dynamic Volt-Amp Reactive
FERC: Federal Energy Regulatory Commission
HTS: high-temperature superconductors
VVO: Volt Var Optimization
ECS: electrical control system
IP: intellectual property
REG: Resilient Electric Grid
SPS: Ship Protection System
WWII: World War II

Note: Additional commentary from Elle Investments can be found at http://elle-investments.com. We welcome your feedback. Additionally, we are thinking of launching a subscription service that would offer early access to our research, along with some other features that investors might find useful (i.e. general portfolio management strategies, live blog updates highlighting our reaction to breaking news, etc.). If you would be interested in subscribing to such a service, please let us know.

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