

Best Ideas 2020 Preview: KVH Industries

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Needham Funds Investment Philosophy

The Needham Funds' mission is to create wealth for long-term investors. I believe that the market inefficiently values the prospects of some companies beyond a 1-2 year time frame. There is opportunity to generate alpha over a multi-year period by investing in small-cap equities that are going through investment periods. A new product or distribution strategy may have a significant impact on a small company, and it may require patience for the desired results to show in a company's financials. I look for companies that have continuing investment opportunities and may create wealth over the long-term.

The financial results of a small-cap company may not follow the orderly pattern that Wall Street prefers. Sometimes small-cap companies, like KVH Industries, Inc. (KVHI), can take several years to create value. In the end, if a company creates a product or service that major customers care about, it may also create value for shareholders.

Needham Funds' portfolios offer the opportunity to be a financial partner with great entrepreneurs. Our investments represent partial ownership of businesses that provide value to customers, invest in new products, employ people, and may generate cash for their shareholders.

Needham Funds Investment Criteria

I look to make investments in companies with great management teams, which to me, generally includes founders, family, or long-tenured managers. I also look for high return on capital, or the potential for a high return, and the opportunity for the company to grow 5-10 times larger.

I look for companies available at an attractive valuation that may be in an investment stage, operating near breakeven, and below potential operating margin. The company's investments may be in operating expenses or capital equipment to open a new office, expand capacity or bring a new product to market. The level of investment can be measured by looking at a company's potential operating margin and its current level, or by comparing capex spending with the historical level of depreciation and amortization.

When the Fund purchases a new investment, I believe that financial results could come as soon as 6-12 months. However, investment periods may last longer than expected while a company is making progress behind the scenes.

KVH Industries Investment Thesis

KVH strives to improve the life of the seafarer and improve vessel operations through better communications. KVH's Connectivity-as-a-Service offering, AgilePlans, provides everything necessary for a connected ship and tethers the seafarer to his or her life onshore. KVH is in the midst of a transition to a subscription business which has hurt revenue by \$10-20 million

over the last two years.

KVH also supplies assured navigation products for military and commercial customers on land and sea. Military vehicles and autonomous vehicles need to know where they are when GPS is not available or trustworthy. KVH has a market capitalization of approximately \$200 million, \$56 million of cash, no debt and annual revenue of \$160 million.

The Upside Opportunity

I believe KVH could earn \$1.50-2.00 per share or more, based on \$250 million of revenue, 45-50% gross margins and 15-20% operating margins. KVH could also have \$3-5 per share of cash. With a 15-20 multiple, I can see a \$25 to \$45 stock price. The stock closed at \$11.13 on December 31, 2019.

Can KVH be a much larger company?

KVH has approximately 1,500 customers on its subscription-based AgilePlans Connectivity-as-a-Service, with average annual revenue of \$15,000 to \$20,000 per customer. The VSAT (very small aperture antennae) market could grow to 65,000 in the next decade, up from 26,000 units today as communication prices decrease. These 65,000 VSAT are all candidates for AgilePlans. At 10,000-25,000 AgilePlan customers, KVH AgilePlans has the potential for \$150-500 million of annual, recurring revenue, up from an estimated \$25 million in 2020.

KVH's new Watch IoT offering will be used to monitor engines and other systems on ships at sea. It has revenue potential of \$400 per month per piece of equipment. Its revenue potential could be as large as AgilePlans. KVH also has the potential to have \$300-450 million of revenue from 2-3 million autonomous vehicles per year. KVH TACNAV could contribute an additional \$100 million of annual revenue.

Combining these opportunities could lead to much more than \$250 million of revenue. However, I've used \$250 million of revenue as a base for this upside plan. Of course, there is a risk that these new products and services might not be adopted in scale, and competitors could develop superior solutions. Revenue, earnings and stock price appreciation may not happen.

The Downside Risk

If KVH is not successful growing its business as described above, I believe the company could still be valued at \$13-14 per share, which is above the \$11.13 stock price. This scenario uses a sum-of the parts valuation model.

KVH's inertial navigation business, which includes fiber-optic gyroscopes (FOGs and TACNAV tactical navigation units, has annual revenue of \$30-35 million and might attract a low-end defense industry multiple of 1.5x revenue, or approximately \$50 million. Mobile connectivity service revenue of \$75 million could attract a low-end 1.0x multiple or \$75 million. KVH has another \$50-60 million of VSAT, TRACVISION TV antennae, video services and digital compass revenue which could be worth another \$50-60 million. This scenario assumes no value for KVH Watch, or large FOG or TACNAV orders. These elements total \$10-11 per share plus KVH has \$3.20 per share of cash.

One of KVH's satellite partners, SKY Perfect JSAT of Japan invested \$4.5 million at \$11.95 per share, which was a 10% premium to the market price in February 2018. In November 2019, KVH's Board of Directors authorized the repurchase of up to 1 million of the 18 million shares

outstanding. These suggest that a smart industry participant and the company's board believe KVH represents value at \$11-12 per share.

There is also an activist investor involved with KVH. Vintage Capital Management disclosed a 9.4% stake in 2017. Vintage is a "value-oriented, operations-focused private equity and public equity investor specializing in the defense, manufacturing ... sectors." Should KVH fail to execute on its business plan, we believe Vintage might push for sale of the company or structural changes to realize value.

When Might the Value in KVH Be Recognized?

A skeptic might say that in 37 years of business, KVH's management has grown the business, but not earned much money or created value for shareholders. Why should 2020 be any different?

With its transition to a subscription business and four years of flat or declining revenue and losses (which I view as investments), 2020 could be a year of revenue growth and near-GAAP profitability. Some of the positive developments in 2020 might include revenue growth and positive cash flow for AgilePlans; the service launch of KVH Watch with Kongsberg Engine as a partner; increased spending by the military and autonomous vehicle industries on KVH's new photonic-integrated chip FOG; and shipments for TACNAV inertial navigation units.

AgilePlans Connectivity-as-a-Service

The AgilePlans service combines KVH's VSAT antennas, voice and data communications service utilizing KVH's High Throughput Satellite (HTS) network, IP-MobileCast technology and entertainment, news, training and ship management content. KVH has been investing in these elements for over seven years and also sells these elements separately. In 2017, KVH introduced AgilePlans, sold as a monthly, all-inclusive, commitment-free subscription.

The maritime industry has ship owners, ship managers and short and long-term lessors. These are often different entities. An AgilePlan can be started or stopped should the stakeholders in a vessel change.

Today's seafarers have grown up with email, Netflix, mobile phones and high speed cable. They are a multinational group that is used to being connected 24/7.

"The AgilePlans program provides the highest flexibility for our fleet and we were also attracted to KVH's global coverage, CommBox network management solutions, fast data speed, and the great crew welfare services that are included." -Jacobus Varossieau, Nordic Hamburg

An AgilePlan all-inclusive subscription that costs \$1,599 per month includes KVH's TracPhone V7HTS 60cm Ku-band antenna, 10GB data with 10Mbps/3Mbps data speeds and 128kbps/64kbps of unlimited data, KVH exclusive Videotel Basic Training Package, news, sports and entertainment, CHARTlink maps and navigation data and FORECASTlink weather forecasts.

AgilePlans earn over a 70% gross margin and have under a one year payback on new sales. Churn has been minimal.

Inmarsat is KVH's leading competitor. It offers the declining L-band FleetBroadband service and has about 30,000 vessels using this max data rate 432kbps service. Inmarsat is migrating some of its customers to its own high-speed FleetXpress service, however they are losing market share to KVH. Inmarsat was taken private on December 3 for \$3.4 billion by a consortium including Apax Partners, Warburg Pincus and the Canada Pension Plan Investment Board. Apax also owns Marlink, which was previously owned by Airbus and has about 7,000 vessels for its communications service.

On a recent quarterly investor conference call, Rupert Pearce, the CEO of Inmarsat said, "...what (KVH) did was creative... they're an aggressive, imaginative organization...and have done a great job." He also has said Inmarsat's increased competition is coming "predominantly from KVH." Pearce attributed about half of Inmarsat's customer losses to KVH.

Watch IoT Connectivity-as-a-Service

Commercial vessels are complex systems running in the middle of the ocean. A small crew has limited ability to diagnose and repair failures. KVH Watch IoT Connectivity-as-a-Service is designed to monitor a ship's engine, propulsion, fuel pumps and other critical systems. KVH Watch utilizes the same satellite network, but a separate onboard VSAT antennae than used by AgilePlans. Kongsberg Engine is utilizing KVH Watch for a pilot program.

Each equipment service provider will pay KVH a monthly subscription. KVH sees revenue potential of \$400 per month per piece of equipment. KVH Watch will be a multi-tenant business model and will benefit if many of the over 30 equipment providers on a ship use Watch. Watch could generate its first revenue in late 2020 and has the potential to be as large a contributor as AgilePlans.

KVH's Inertial Navigation Product Line

KVH's inertial product line includes fiber-optic gyroscopes, or FOGs, which split light to travel in two paths around a circular coil. Based on which path arrives first (and the Coriolis effect of the Earth's gravity), the FOG can tell precisely how far something has moved relative to a reference point. KVH's strategy was to develop a FOG with close to high-end accuracy at a much lower price.

Self-driving cars use multiple sensors including cameras, FOGs, LIDAR and GPS. These sensors need to be able to work together for over 1,000 course corrections per second with an accuracy of 4cm. For two years, KVH has invested in a new photonic-integrated chip for use in its FOG-based inertial navigation products. The new, lower-cost FOG is designed for the self-driving car market, where it has the potential to be used in millions of cars at a \$150 average selling price.

CEO Martin Kits Van Heyningen has said that KVH is in 80-90 percent of all self-driving cars that are on the road. "There aren't that many on the road. ... but we're in major car companies, start-up companies, famous companies that say they're not in the business." KVH FOGs are used in May Mobility's shuttles in Providence, RI, Columbus, OH, and Detroit, MI.

KVH's TACNAV navigation product has the potential to be deployed on 150,000 U.S. Army vehicles as part of the Army's A-PNT (assured positioning and navigation) program. TACNAV currently sells for approximately \$10,000, but I believe pricing for this size of an Army program will be lower, resulting in a \$150 - \$750 million multi-year opportunity.

Profitability and Return on Capital

KVH has accumulated just \$23 million of retained earnings with paid-in capital of \$137 million. KVH's best year of GAAP gross margin was 44.6% in 2015 and the best year of GAAP operating margin was 4.9% in 2010. Throughout its history, KVH has been too small to absorb its G&A and sales & marketing expenses and earn a return. It has also invested in R&D which has led to industry-leading products and communications services.

AgilePlans earn gross margins of about 70%. Autonomous vehicle and military navigation products utilizing KVH's photonic IC could have above corporate average margins. With \$143 million of paid-in capital, KVH has \$87 million of capital, ex-net cash. At \$250 million of revenue, KVH could earn a 30% return on its capital, ex-cash. KVH's ability to earn an above market return on capital depends on its ability to grow revenue.

Management – Founder Motivated to Create A Great Company

In 1978, the France III America's Cup syndicate asked if Arent Kits van Heyningen, an engineer at Raytheon, could develop a digital compass for their 1980 America's Cup competition. KVH was started in 1982 in Arent's basement in Newport, Rhode Island. Arent's son Martin, who is now KVH's Chairman & CEO, wrote the business plan while still in college. Arent's other son Robert was the third co-founder.

KVH knows navigation, antennae design, sailing and the maritime industry. Martin Kits van Heyningen has served as president since 1982 and CEO since 1990. Chief Operating Officer Brent Bruun joined the company in 2008 and CFO Don Reilly in 2016. KVH has about 700 employees and has its headquarters in Middletown, Rhode Island, just outside Newport. Martin has an 86% approval rating, a high mark, on Glassdoor. He also owns approximately 5.4% of the company. I believe KVH is out to create a great place for employees to work, create high quality products and to build a business for the long-term.

I've known KVH since its IPO in 1996. At the time, I was a sell-side analyst at Needham & Company and our firm was a co-manager on the IPO. When the Needham Aggressive Growth Fund first invested in KVH in 2013, I viewed KVH as the combined Comcast and Netflix of the maritime industry.

Conclusion

KVH Industries has been in investment mode for a number of years while transitioning to a subscription model. The company has new offerings that could lead KVH to be a much larger company. The company is led by a founder with a vision to create a business for the long-term. I believe that in 2020, KVH could show growth in AgilePlans and progress with its KVH Watch and FOG-based inertial navigation products. These all address markets that might be much larger than KVH's current market. We own the stock in anticipation of KVH addressing these markets and growing to be a much larger company over the years ahead. Investments like KVH take patience.

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