

THE CASE FOR HACK

BetaShares Global Cybersecurity ETF (ASX: HACK)



July 2018

The spectacular growth in online activity and information technology in recent years has, unfortunately, also seen equally strong growth in cybercrime.

Governments, companies and households across the globe are fighting an ever intensifying battle with cyber criminals to prevent abuse of their online information and disruption to their IT related activities. The ongoing health of the global economy – and its ever-growing interconnectivity via online networks – vitally depends on cybersecurity systems keeping one step ahead of those with malicious intent.

Accordingly, global demand for cybersecurity services has grown rapidly in recent years, and strong growth seems assured for the foreseeable future. Given this positive outlook, the BetaShares Global Cybersecurity ETF (ASX Code: HACK) provides investors an easy and transparent way to gain diversified exposure to some of the world's leading cybersecurity companies.

Why invest in Cybersecurity firms?

Due to the rising number of internet-connected devices across the globe, and the associated rapidly escalating cost of cybercrime, cybersecurity services can be considered a growth sector. According to Gartner Research, global spending on cybersecurity has increased at an annual rate of around 8% since 2011, forecast to reach \$US96 billion by the end of 2018. As seen in the chart below, the number of software security vulnerabilities is at an all-time high, with some 11,150 security risks being registered worldwide in 2017.

SOFTWARE SECURITY RISKS: NUMBER OF REGISTERED SECURITY VULNERABILITIES IN COMPUTER SOFTWARE WORLDWIDE



Source: Hasso-Plattner-Institute (HPI), Statista

Most major public and private organisations have significantly boosted their cybersecurity budgets in recent years. In the United States, for example, the US Government announced at the start of 2018 plans to boost its spending on cybersecurity by over 4% for FY19 to \$US14.98 billion. In another example, US investment bank, JP Morgan, allocated \$US600 million to cybersecurity spending in its 2016 annual budget. It also announced plans to work together with seven other major banks to fight financial-services cybercrime.

According to the 2018 Gartner Chief Information Officer Agenda Survey, 95% of CIOs expected cybersecurity threats to increase and impact their organisations.

BETASHARES THE CASE FOR HACK



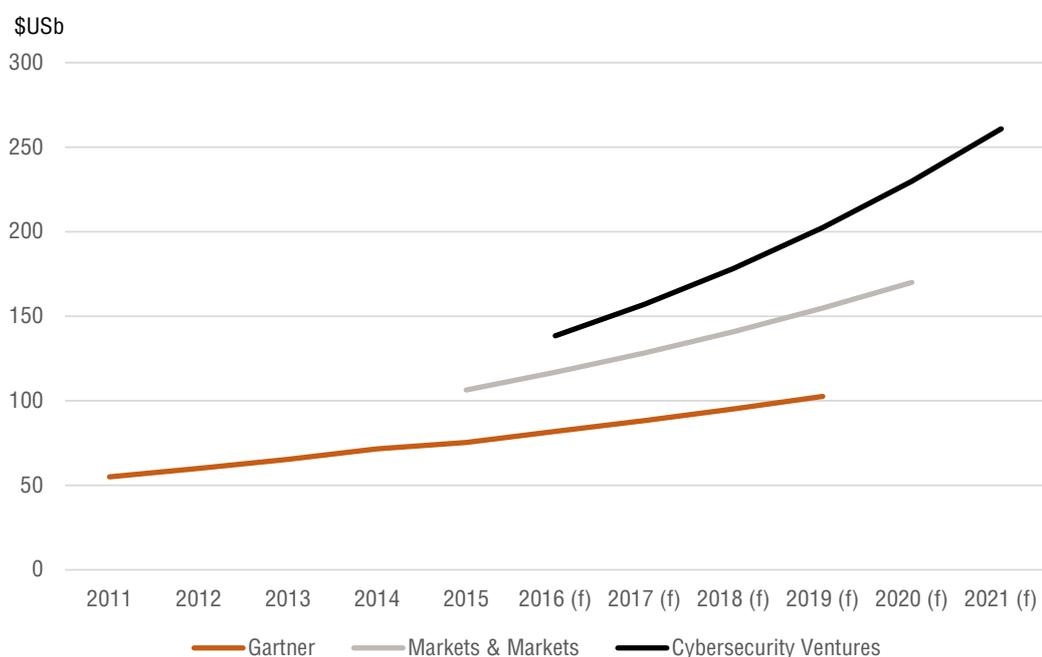
Earlier this year it was reported by McAfee that the global cost of cybercrime has now reached \$US600 billion – or about 0.8% of global GDP. Worryingly, this figure is up 34.5% from 2014 figures. In fact, during the 2017 Berkshire Hathaway annual shareholders meeting, investment guru Warren Buffett cited cyber attacks as a bigger threat to humanity over nuclear weapons.

These costs are only likely to escalate further.

In the next two years to 2020, for example, Microsoft estimates the number of people connected to the internet globally will double, from 2 billion to 4 billion. And by that time, internet data volumes will be 50 times greater than today, with more than 50 billion devices – from everyday household appliances to complex business machinery – connected to the internet. Astonishingly, Microsoft itself continues to spend over \$US1 billion on cybersecurity annually.

Several other leading research groups predict even stronger growth. Cybersecurity Ventures, for example, estimates cybersecurity spending will be closer to \$US1 trillion for the five year period between 2020 and 2025.

ACTUAL AND PROJECTED GLOBAL SPENDING ON CYBERSECURITY: 2011-2019 (US\$B)



Source: Gartner, Cybersecurity Ventures, Market & markets

Irrespective of the particular projections used, one feature is apparent: the cybersecurity sector is likely to enjoy continued strong “secular” growth in demand for some years to come.

The BetaShares Global Cybersecurity ETF (ASX Code: HACK)

Australian investors currently have few local options for gaining exposure to the positive outlook for the cybersecurity sector. Indeed, at the time of writing there are very few pure-play cybersecurity firms listed on the Australian equity market, and the overall technology sector accounts for less than 2% of Australian equity market capitalisation.

With these challenges in mind, the BetaShares Global Cybersecurity ETF (ASX Code: HACK) has been developed to provide investors, within a single investment, diversified exposure to leading global cybersecurity firms. The Fund is also structured to reduce the tax and administrative burdens that can be associated with certain international investments. HACK invests in around 30 of the world’s largest global cybersecurity firms outside of Australia, which at end-June 2018 had an average market capitalisation of \$A21 billion.

BETASHARES THE CASE FOR HACK



BetaShares
Exchange Traded Funds

TOP 10 HOLDINGS OF BETASHARES GLOBAL CYBERSECURITY ETF'S UNDERLYING INDEX - 30 JUNE 2018

Top 10 Exposures	Country	Weighting
VMware Inc	United States	6.40%
Cisco Systems Inc	United States	6.10%
Symantec Corp	United States	6.00%
Palo Alto Networks Inc	United States	5.90%
Splunk Inc	United States	5.40%
Qualys Inc	United States	3.30%
VeriSign Inc	United States	3.20%
Ittron Inc	United States	3.20%
CyberArk Software Ltd	Israel	3.10%
Juniper Networks Inc	United States	3.10%

Source: Bloomberg.

Among the major companies held by the Fund, for example, Symantec Corporation is one of the world's leading providers of virus protection and intrusion detection systems. Cisco Systems, moreover, is the world's leading supplier of computer networking equipment, with extensive experience in developing associated security systems. Many of the other companies held by the Fund are leaders in their respective fields.

SUB-INDUSTRY ALLOCATIONS OF THE BETASHARES GLOBAL CYBERSECURITY ETF'S UNDERLYING INDEX – 30 JUNE 2018

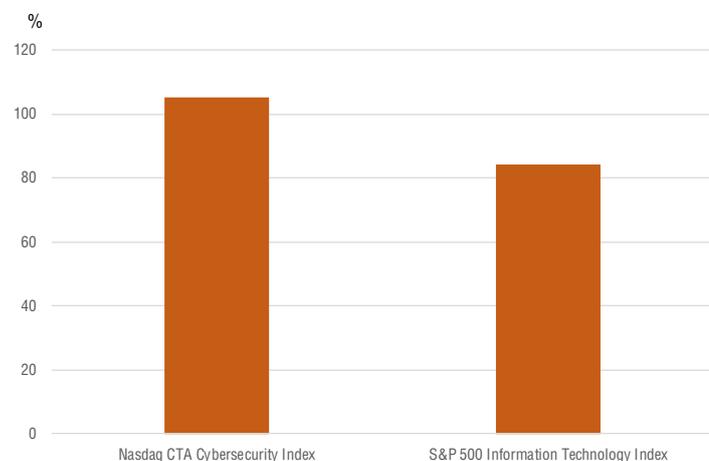
Industry allocations	Weighting
Systems Software	45.40%
Communications Equipment	18.70%
IT Consulting & Other Services	8.40%
Internet Software & Services	8.00%
Application Software	7.90%
Aerospace & Defense	5.40%
Electronic Equipment & Instruments	3.20%
Research & Consulting Services	3.00%

Source: BetaShares.

By investing in a fund that provides diversified exposure to a portfolio of leading cybersecurity companies across several countries outside of Australia, investors in HACK are able to gain exposure to the strong overall outlook for the global cybersecurity sector without taking undue stock specific risk.

Indeed, as should be evident from the already explosive growth in spending on cybersecurity across the globe, top-line revenue growth by companies within the Index that HACK aims to track has been particularly impressive over recent years – in the five years to end-June 2018, annualised revenue growth has been around 105% p.a., over 20% greater than that of companies in the S&P 500 information technology sector.

NASDAQ CONSUMER TECHNOLOGY ASSOCIATION CYBERSECURITY INDEX, 5-YEAR ANNUALISED GROWTH IN REVENUE: JUNE 2013 - JUNE 2018



Source: NASDAQ, Bloomberg. Past performance is not indicative of future results.

BETASHARES THE CASE FOR HACK



BetaShares
Exchange Traded Funds

The Index which HACK aims to track has enjoyed solid annualised growth of 13.70% p.a. since inception in September 2010 to June 2018.

**NASDAQ CONSUMER TECHNOLOGY ASSOCIATION CYBERSECURITY INDEX, TOTAL RETURN PERFORMANCE
IN AUD: 16 SEPTEMBER 2010 TO 30 JUNE 2018**



Source: NASDAQ, Bloomberg. The Index which HACK aims to track is the Nasdaq Consumer Technology Association Cybersecurity Index. You cannot invest directly in an index. Performance excludes the impact of ETF fees and expenses. Past performance is not an indication of future performance of the Index or the ETF.

Reduced administrative and international tax obligations

Like all BetaShares Funds, HACK is an Australian domiciled fund. Therefore, investors in HACK do not need to fill out U.S. W-8 BEN forms, or risk any potential U.S. estate tax issues. These issues do arise, for example, where investments are made in "cross listed" U.S. investment funds.

Conclusion

Due to the growing online interconnectivity of the global economy, governments, businesses and households the world over will need to remain vigilant against the ever growing scourge of cyber-attack. Spending on cybersecurity is likely to rise even more strongly in coming years than the already strong growth in IT spending more broadly. This demand for cybersecurity, moreover, is likely to be relatively impervious to economic cycles.

Until now, Australia's relatively small listed technology sector, and the dearth of cybersecurity firms, has meant Australian investors have had few readily available opportunities to gain exposure to this secular growth investment opportunity. The BetaShares Global Cybersecurity ETF (HACK) aims to fill this gap, offering Australian investors an easy and transparent way to gain exposure to the world's leading cybersecurity firms without taking undue stock-specific risk, and while also avoiding the added tax and administrative burdens that can otherwise arise from certain international investments.

For more information, visit the HACK product page.

Trading Information

BetaShares ETFs can be bought or sold during the trading day on the ASX, and trade like shares.

EXCHANGE	ASX
ASX CODE	HACK
CURRENCY	AUD
TRADING	10:00-16:00 (AEST)
BLOOMBERG CODE	HACK AU
IRESS CODE	HACK.AXW

Index Information

INDEX	Nasdaq Consumer Technology Association Cybersecurity Index
BLOOMBERG INDEX CODE	NQCYBRT INDEX

Fund Information

ISSUER	BetaShares Capital Ltd
ADMINISTRATOR	RBC Investor Services
CUSTODIAN	RBC Investor Services
REGISTRAR	Link Market Services
AUDITOR	KPMG
DISTRIBUTIONS	Semi-Annual
MANAGEMENT FEE	0.57% p.a
EXPENSES	estimated at 0.10% p.a
FUND INCEPTION	30 August 2016

Available at betashares.com.au

- Net asset value
- Product disclosure statement
- Portfolio holdings
- Distribution details

There are risks associated with an investment in the Fund, including market risk, cybersecurity companies risk, concentration risk and currency risk. For more information on risks and other features of the Fund please see the Product Disclosure Statement.

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