

# **Seraphim Space**

# Derating offers an attractive entry point

So far in 2022 long-duration growth stocks have seen a significant derating due to a variety of reasons such as the war in Ukraine, supply chain issues and monetary contraction as interest rates have risen to counter soaring inflation. Seraphim Space Investment Trust's (SSIT's) share price has been hard hit given the relatively early-stage growth companies into which it invests. However, the long-term secular drivers of demand for the industries that space technology enables, such as defence and climate change mitigation, have, if anything, come into sharper focus in 2022 with the war in Ukraine and notable climate events such as flooding and prolonged heat waves. It is also important to separate the current market sentiment towards such companies and their operational performance and balance sheet strength. Average revenues across the top 10 portfolio positions (which accounted for 91% of the 31 March 2022 NAV) grew at 58% y-o-y to June 2022, while bookings increased by 77% over the same period. In addition, the majority of SSIT's portfolio is fully funded through June 2023, mitigating the need to raise additional finance in less favourable capital markets.

### Exhibit 1: SSIT: discount volatility in CY22



Source: Morningstar, Edison Investment Research

### Why consider SSIT now?

While the share price has declined substantially versus the 31 March 2022 NAV of 104.7p, the fundamental attractiveness of the addressable market and investment proposition has not diminished (read our <u>initiation note</u> on this unique investment fund). Arguably, the long-term drivers of the investment case have become even more relevant with the events surrounding the war in Ukraine and various environmental disasters experienced around the world in 2022. We would highlight to investors the improving operational performance of the underlying companies, the £57.7m of cash (23% of 31 March 2022 NAV) held within SSIT and the on average five quarters of cash runway within the top 10 portfolio positions, allowing these entities to ride out the volatility in markets. It is also worth noting that SSIT is not structurally geared. The NAV for the end of June 2022 will be published in October when we will provide investors with a further update.

# Investment trusts Growth capital

### 3 August 2022

Price 74.5p
Market cap £178m
Total assets £248.9m

 $NAV^*$  104.7p Share discount to NAV 28.8%

\*Including income. At 31 March 2022 NAV

N/A Shares in issue 239.4m Code SSIT/GB00BKPG0138 Primary exchange LSE **Growth Capital** AIC sector 52-week high/low\* 130.8p 48.0p NAV\* high/low 104.7p 98.9p \*Including income

#### Gearing

Net cash at 30 June 2022. 23%

### **Fund objective**

Seraphim Space Investment Trust's objective is to generate capital growth over the long term through investment in a diversified, international portfolio of predominantly early- and growth-stage unquoted space tech businesses with the potential to dominate globally. Space tech businesses are businesses that rely on space-based connectivity or precision, navigation and timing signals, addressing a broad range of key applications

### **Bull points**

- Addressing exponential risks to humanity.
- Experienced management.
- Sufficient cash reserves in place.

#### **Bear points**

- Early-stage growth out of favour with investors.
- Pre profit adds risk.
- Sensitivity to rising interest rates.

### **Analysts**

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## Defence spending, climate change and food security

A key theme within the portfolio has been on the building of digital infrastructure in space to allow the observation, measurement and communication of climate change events, food security and global defence issues. At 31 March 2022, the top 10 holdings in SSIT accounted for 68.3% of NAV (or 91% of invested NAV) with eight of the companies (46.3% of NAV) addressing climate/sustainability. Nine of the top 10 positions (accounting for 60.6% of NAV) map directly across to defence and security issues. Despite the highly relevant and concentrated nature of the defence and climate change end uses within the SSIT portfolio, its share price has been substantially weaker than indices focused on companies involved with the defence industry or mitigating climate change. This can largely be attributed to the early-stage nature of the SSIT portfolio with its nascent revenues versus the established and slower-growing industry incumbents within the indices.

20 10 0 -10 -20 -30 -40 -50 -60 Jun-22 Mar-22 Feb-22 SSIT - MSCI World Climate Change MSCI World Aero&Defense MSCI ACWI

Exhibit 2: Performance of SSIT (share price) versus broad-based defence, climate and world indices post the start of the war in Ukraine

Source: Morningstar. Note: Returns are in GBP.

The top three holdings of the MSCI World Aerospace & Defence Index (at the end of June 2022) are Raytheon Technologies, Lockheed Martin and Boeing. Raytheon has an intelligence and space segment to its business that accounts for around 20% of sales, Lockheed Martin derives around 17% of its sales from its space department, while Boeing earns around half of its sales from its defence, space and security arm. Many of these companies' sales and earnings are diluted via other areas such as commercial aerospace. The top three holdings of the MSCI World Climate Change Index (at the end of June 2022) are Microsoft, Apple and Tesla. For those investors seeking the building blocks for a portfolio that will have a positive impact on climate change, this index arguably is not a focused way of doing so, dominated as it is by big technology, consumer names and healthcare. SSIT is arguably a purer way to play the themes of the increase in defence spending and climate change mitigation than the mega cap companies that make up these indices.

Both defence spending and climate change mitigation are vast addressable markets. According to the International Institute for Strategic Studies and its 2022 Military Balance study, global spending on defence in 2021 reached \$1.92tn (3.4% higher than in 2020). With the ongoing war in Ukraine and increasing geopolitical tensions surrounding China/Taiwan, Iran and North Korea, the trajectory of global defence spending is likely to be increasing. As an example, Germany recently announced the creation of a €100bn fund to boost its military capability as well as increasing annual defence spending to above 2% of GDP. These trends are a substantial tailwind to a significant part of SSIT's portfolio, with the defence industry being the number one customer of space tech companies.

The SSIT portfolio has companies that can monitor in detail the effects of a whole range of climate change events such as deforestation, flooding or inefficient energy use. The end-users of this data



include scientists, governments, environmentalists, military, agriculture, finance and insurers. Never has it been so possible to measure in real time where severe weather or other natural events are occurring and the effects of these on populations, economies and commerce. According to the Climate Policy Initiative, total climate finance has increased over the past decade reaching \$632bn in 2019/20. Aon (the insurer) has estimated that 2021 was the sixth year when global natural disasters have cost more than \$100bn in economic damage (2021: \$343bn), with all six occurring subsequent to 2011.

Since the start of the year the manager has seen a significant acceleration in the way defence has embraced commercial space, with new entrants providing cutting-edge capability, real time insights, high resolution data and new ways via leveraging machine learning and artificial intelligence to glean trends and insights. Often, defence agencies are the first (and most important) customers for new, cutting-edge space-enabled technology as they need to assess the capability of emerging technology to stay ahead of adversaries in this sphere. Their initial support helps fund further technological development but as a business matures its customer base broadens to include additional end-users, diversifying away from a purely Defence client base into alternative commercial activities.

Space technology companies have been playing a key role in the war in Ukraine. Companies such as SpaceX and its Starlink constellation are providing internet connection to millions of people in Ukraine, helping people communicate and providing the world with images from the war. Similarly, pictures from Maxar Technologies are holding Russia to account, as they catalogue and audit actions on the ground in real time such as possible war crimes and the looting of grain and other materials. While SSIT does not hold SpaceX or Maxar, numerous holdings in the portfolio provide vital applications for the war in Ukraine and wider defence considerations.

Iceye, the largest holding in the portfolio (16.0% of NAV at 31 March 2022), and its high-resolution radar satellites (the largest of its kind in the world) are capable of providing high quality change detection day or night, regardless of weather conditions. Similarly, HawkEye 360 (8% of NAV at 31 March 2022) which operates the world's largest constellation of Radio Frequency intelligence satellites, has developed a space-based GPS interference detection capability that can be used to monitor activity where GPS jamming is used to obscure activity and disrupt critical location services. The US Department of Defence (DoD) and its international military partners account for the majority of Hawkeye's revenue. Other portfolio companies are supporting broader defence applications, such as enabling more secure and reliable communications for the military. Isotropic Systems (9.2% NAV at 31 March 2022), provides unique antennas that enable reliable connectivity to multiple communication satellites, which means that troops can interchange seamlessly between military satellites and commercial communication satellites. In February 2022 Isotropic successfully completed trials with the US DoD, NATO and the UK's Ministry of Defence (MoD). Likewise, Arqit (12.8% of NAV at 31 March 2022) announced contracts during the year with the US Airforce and the UK MoD to provide secure communications technology.

# The unlisted portfolio

Within the top 10 holdings the unlisted investments accounted for 54% of NAV at 31 March 2022. The NAV weighted (at 31 March 2022) average revenue of this group of companies increased by 34% in H122 versus H121; year-on-year to 30 June 2022 their revenue grew by 58%. Bookings increased by 144% in H122 versus H121 and by 77% y-o-y, indicating an element of resilience, transparency and maturing business models coming to fruition within the SSIT portfolio. At 30 June 2022, the company held £57.7m in cash (23% of the 31 March 2022 NAV), which the manager believes should be sufficient to meet the near-term financing needs of the portfolio companies through mid-2023. Within the top 10 positions there are three holdings that may require funding



before June 2023. Two of these are expected to close financing arrangements shortly, which would leave them sufficiently capitalised beyond June 2023, while Altitude Angel (1.5% of NAV at March 2022) will need to raise fresh capital before Q223. Altitude Angel is making good progress with its drone super highway and so, given its demonstrable success and commercial partnership with BT, further funding looks to be achievable.

### The listed portfolio

Within the top 10 investments, Arqit Quantum and Spire Global accounted for 14.3% of NAV at 31 March 2022. These are both in special purpose acquisition company (SPAC) vehicles and have seen substantial share price falls in the rotation out of long-duration growth assets. The value at 31 March 2022 of these holdings within SSIT in aggregate was £35.7m and at 30 June 2022 this had declined to £16.2m.

Arqit Quantum (ARQQ) listed on Nasdaq in September 2021, although SSIT first invested in March 2018. It develops encryption for the cloud era, using a constellation of satellites equipped with laser communication terminals that use quantum technology to distribute un-hackable encryption to any end device. In H122 the company generated operating income of \$12.3m and at 31 March 2022, had cash reserves of \$82.2m (30 September 2021: \$87.0m). Spire Global (SPIR) was founded in 2012 and listed on the New York Stock Exchange in 2021 via a SPAC. It operates a constellation of over 100 low-orbit multi-purpose nano-satellites that have extensive applications providing real-time data for the weather, aviation, maritime and intelligence agencies. For Q122 Spire Global reported \$18.1m in revenue (Q121: \$9.7m) and is guiding to annual revenue for FY22 of \$87.5m (FY21: \$43.4m). At 31 March 2022 the company had \$91.6m in cash (31 December 2021: \$109.3m).

The manager of SSIT remain confident that both examples can meet their commercial milestones and trade at prices more reflective of their current trading and long-term potential.

0 -10 -20 -30 -40 -50 -60 -70 -80 Jan-22 Jun-22 Feb-22 Mar-22 Apr-22 May-22 Jul-22 Spire Global Arqit Quantum MSCI ACWI

Exhibit 3: Weak share price performance of Argit Quantum and Spire Global CY22

Source: Morningstar. GBP.

### Q2 transactions and cash balances

At 31 March 2022 SSIT had net assets of £250m: investments were valued at £188m (75% of NAV) and cash at £62.3m (25% of NAV). Subsequent to the end of March 2022 and up to 30 June 2022, three new unlisted investments were made with two follow-on unlisted investments, which in aggregate cost £5.3m and at 30 June 2022 SSIT held cash of £57.7m. The manager of SSIT has carefully analysed the portfolio holdings funding requirements and mapped out the next 12–24 months of funding requirements. On a conservative basis, the manager anticipates allocating two-thirds of the remaining cash to support the portfolio's requirements through mid-2023, which leaves



a third of the remaining cash for new investments. The manager is confident that they have sufficient liquidity to continue with their schedule of investments and meet any financing obligations.

## Investor demand for private fund-raising continues

While wider market sentiment may be against early-stage growth companies, the volume of private funding does not seem to have abated. The manager of SSIT, Seraphim Space Manager LLP, publishes a quarterly report (Seraphim Space Index) detailing the amount of capital deployed in private markets within the space ecosystem. In the year to 30 June 2022, it amounted to \$12.2bn versus \$11.9bn invested in the year to June 2021. This demonstrates that investors remain positive and have appetite to support these ventures. In addition, the operational and financial performance of both the unquoted and quoted holdings within the portfolio has been encouraging, while the capital reserves at both the holding and fund level give confidence as to the robustness and continued resilience of SSIT as an investment entity.



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