



Agenzia Spaziale Italiana

TRACCE PROVA COLLOQUIO

Bando n. 9/2023– Selezione pubblica, per titoli ed esami, per la copertura di n. 2 posti a tempo pieno e indeterminato nell’Agenzia Spaziale Italiana, nel profilo di Tecnologo, III livello professionale, 1^ fascia stipendiale – Area Affari Internazionali. Codice profilo T1.

PROVA N.2

1. Il Candidato esponga le attività e le esperienze professionali svolte, con particolare riferimento a quelle connesse all’oggetto della selezione.
2. Il candidato descriva le attività principali di analisi per monitorare lo stato di avanzamento degli obiettivi e degli investimenti italiani concordati alle riunioni del Consiglio dell’ESA al livello Ministeriale.
3. Gli Stati Membri monitorano la gestione finanziaria dell’ESA e formulano - ove necessario - anche le opportune raccomandazioni: il candidato esponga le principali modalità.
4. Il Candidato descriva sommariamente il reato di concussione.

Prova inglese:

Il candidato legga, traduca e commenti il seguente testo:

1.1.3 Low Interest Rates and Investments (2010-2019)

The rise of QE marked a transformative era in global financial markets, triggering unprecedented outcomes. **Low returns on traditional fixed-income investments, like bonds, due to low interest rates, prompted investors to seek higher returns in alternative, non-traditional investments.** This shift influenced traditional capital allocators, such as pension funds and endowments, to allocate more to higher-risk asset classes like private equity and venture capital, fostering their growth.

Private equity involves investing in late-stage private companies or taking public companies private with the aim of improving their operations and selling them at a profit. Low-interest rates

European Space Policy Institute (ESPI)

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made it cheaper for private equity firms to borrow capital for acquisitions, leading to a surge in "leveraged buyouts", meaning that the companies were bought with debt at a low interest rate.

Venture capital funds financed the companies that were too early and too risky for private equity to invest in: startups and early-stage companies with high growth potential. Low interest rates fuelled the growth of venture capital by making it more attractive for investors to allocate capital to these high-risk, high-reward investments.

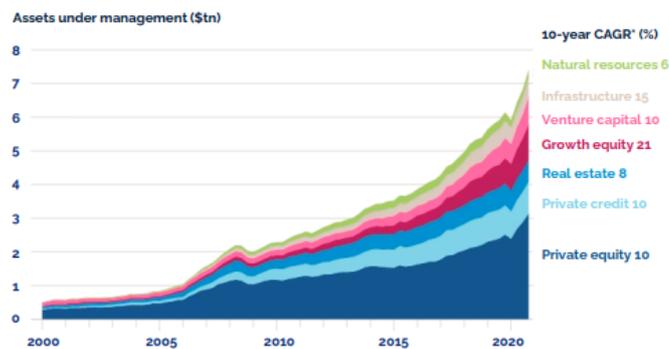


Figure 3. Growing power of private capital (Credit, Financial Times)

Prova di informatica:

Il candidato crei un documento Word contenente una tabella contenente dei collegamenti ipertestuali ai siti web dell'ASI e/o dell'ESA e delle descrizioni a piacere dei relativi contenuti. Il candidato salvi il file con il proprio cognome nella cartella del desktop "Bando 9_2023".

PROVA N.3

1. Il Candidato esponga le attività e le esperienze professionali svolte, con particolare riferimento a quelle connesse all'oggetto della selezione.
2. Il candidato descriva sommariamente le attività di monitoraggio e analisi delle sottoscrizioni italiane alle riunioni del Consiglio dell'ESA a livello ministeriale con i relativi adempimenti economici previsti.

3. Il Candidato descriva i principali meccanismi di cooperazione spaziale dell'ESA con le istituzioni dell'Unione Europea, anche con riferimento al Financial Framework Partnership Agreement (FFPA) entrato in vigore nel 2021.
4. Il Candidato descriva il ruolo del Presidente dell'ASI.

Prova inglese:

Il candidato legga, traduca e commenti il seguente testo:

The flight of capital to higher-risk industries had positive consequences, evident in a technological and innovation post-crisis boom. Sectors like technology, biotech, renewable energy, and the space industry thrived as low interest rates facilitated accessible funding. Two significant investment types in the space industry emerged: private equity, focusing on late-stage companies, and venture capital, financing startups with high growth potential. While low interest rates increased economic deal activity in the space sector, it also raised concerns about excessive leverage and reliance on cheap debt.

Unlike risks in the "public" markets, the global economic risk exposure to "private" markets which lay home to private equity and venture capital is less well known; **private equity and venture capital investments often lack the transparency and regulatory oversight associated with public markets.**

Most importantly, **macroeconomic risk and the impact of a failing private equity and venture capital market on global innovation and local economies are not well understood.** Governments and the private sector outsourcing innovation investment to private venture capital raise **concerns about the potential impact on urgently needed global innovation in high-tech areas if the venture capital industry slows.**

Prova di informatica:

Il candidato crei un documento Excel inserendo un breve elenco di nominativi e relative organizzazioni di appartenenza. Il candidato ordini quindi l'elenco in ordine alfabetico. Il candidato salvi il file con il proprio cognome nella cartella del desktop "Bando 9_2023".

PROVA N.4

1. Il Candidato esponga le attività e le esperienze professionali svolte, con particolare riferimento a quelle connesse all'oggetto della selezione.
2. Il candidato illustri le modalità da adottare per monitorare la gestione operativa del budget ESA e dei relativi pagamenti, fornendo relativi esempi.
3. Il Candidato descriva il ruolo, le finalità e le funzioni dell'Agenzia Spaziale Europea.
4. Il Candidato descriva la natura giuridica dell'ASI, con riferimento allo Statuto.

Prova inglese:

Il candidato legga, traduca e commenti il seguente testo:

1.1.4 Space Economy Trends (2009-Present)

After the financial crisis, low interest rates facilitated large capital flows into high-risk, high-return industries; the Space industry was one such beneficiary. This period of emerging capital coincided with SpaceX's first Falcong launch (2010) and NASA's retirement of the Space Shuttle (2011). The Commercial Orbital Transportation Services (COTS) model, announced in 2006, aimed at expanding the delivery of cargo to the ISS by private companies, and represented a new way forward for a new cooperation between NASA and U.S. industry, and as such the eventual commercialisation of the Space industry.



The period also witnessed the rise of private space companies like SpaceX, Blue Origin, and Virgin Galactic, backed by substantial venture capital and family office investments. This era transformed the space industry from government-dominated to a dynamic, competitive sector, attracting private market allocations.¹ In Europe, a similar, albeit

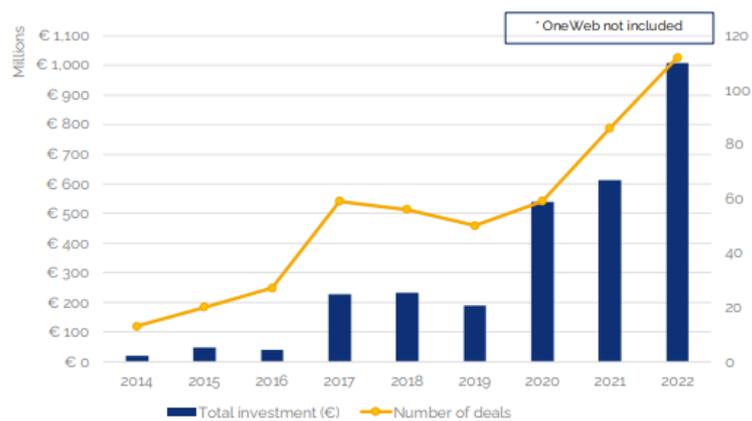


Figure 4: Investment value and number of deals in Europe since 2014

less prominent trend has emerged with some delay. Nevertheless, private capital enabled the emergence of some nascent champions in the satellite manufacturing and services sectors, notably also in countries outside the established industry epicentres, for example, ICEYE (Finland), NanoAvionics (Lithuania), and EnduroSat (Bulgaria). In the launch and space transportation segment, the activity of companies with private backing remains in established environments (Germany, France, Italy, Spain).

Private investment success narratives in the space industry are further complemented by increased government investments, notably in the U.S., acting as co-investors, "offramp" or "anchor" customers for commercial actors, exemplified by programmes like NASA's Artemis (e.g. Lunar Lander) and increasingly the U.S. Space Force (e.g. Starshield, BlueHalo). While civil expenditures have historically been higher than defence, the gap between the two is decreasing and is expected to reach parity by 2031 according to projections.²

Prova di informatica:

Il candidato crei un documento Word contenente un breve testo a piacere, inserendo delle revisioni in modalità "track change" e dei commenti.

Il candidato salvi il file con il proprio cognome nella cartella del desktop "Bando 9_2023".

PROVA N.6

1. Il Candidato esponga le attività e le esperienze professionali svolte, con particolare riferimento a quelle connesse all'oggetto della selezione.
2. Il candidato fornisca degli esempi di strumenti efficaci alle attività di elaborazione dei dati economici con particolare riferimento all'analisi dei contratti ESA affidati ad operatori economici nazionali.
3. Il Candidato descriva brevemente i processi di definizione e implementazione dei programmi dell'Agenzia Spaziale Europea (ESA) fornendo degli esempi a specifici programmi che vedono coinvolti gli operatori economici italiani.
4. Il Candidato descriva il campo di applicazione del CCNL e la struttura del contratto (art.1).

Prova inglese:

Il candidato legga, traduca e commenti il seguente testo:

Increasing interest rates have prompted a shift of high-risk, high-reward capital to "safer" financial instruments amid fears of a global recession. As venture capital and private equity see capital outflows, investors are becoming more cautious about investments, particularly in high-tech industries like biotechnology, infrastructure innovation, and the space sector. **High asset price valuations, resulting from a decade of low interest rates, are now under reassessment. Space companies born in the NewSpace era are undergoing market corrections (Figure 5) with investors re-evaluating valuations based on revenue and commercial expectations.**

These changes in the wider venture capital and private equity landscape, beyond the space industry, are evidenced by insights from the **European Investment Fund's VC Survey 2023**, the **Boston Consulting Group's Global Asset Management Report 2023**, and the **State of European Tech Report 2023**.³

These reports collectively indicate that the **VC and private equity sectors are at a challenging juncture**, influenced by a confluence of macroeconomic conditions and market uncertainties. The EIF VC Survey 2023 reveals a downturn in market sentiment and activity in the European VC ecosystem, attributable to factors such as the economic fallout, geopolitical tensions, energy price shocks, and notably a period of high inflation and interest rates. This environment has led to difficulties in fundraising and exits, making access to equity finance more challenging for portfolio companies.

Moreover, the survey points out the **challenges in finding co-investors and the decrease in valuations of portfolio companies**. Other sources confirm this, citing that, as public markets have deteriorated, these investors have been quick to withdraw, focusing on stabilising their public portfolios. As public market conditions have worsened, investors in funds called limited partners, or LPs, have also pulled back, making it more difficult for VCs looking to close their own funding

³ European Investment Fund. 2023. "EIF VC Survey 2023." *European Investment Fund* (Link); Boston Consulting Group. 2023. "BCG Global Asset Management Report May 2023." *Boston Consulting Group* (Link); Atomico, Orrick. 2023. "State of European Tech Report 2023." *State of European Tech* (Link).



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rounds. More than 50% of VCs surveyed have a negative outlook on raising over the next 12 months in light of high interest rates and economic uncertainty noting that VC fundraising "could be on track to drop to levels not seen since 2017."⁴



Figure 6: VCs perception of their current fundraising environment (Credit: EIB)

Prova di informatica:

Il candidato crei un documento power point contenente una prima slide con un titolo, un autore e una data, una seconda slide con un esempio di agenda di riunione. Si apra il file in modalità “presentazione”. Il candidato salvi il documento con il proprio cognome nella cartella del desktop “Bando 9_2023”.

PROVA N.7

1. Il Candidato esponga le attività e le esperienze professionali svolte, con particolare riferimento a quelle connesse all’oggetto della selezione.
2. Il candidato descriva i principali elementi economico-programmatici in ambito del coordinamento e degli accordi ESA-UE (FFPA 2021), con particolare riferimento ai ruoli di ESA, EUSPA e Commissione Europea.
3. Il candidato descriva le modalità di applicazione della distribuzione geografica dei contratti (cosiddetto geo-ritorno) dell’Agenzia Spaziale Europea (ESA) nei suoi programmi opzionali e obbligatori.
4. Il Candidato descriva la missione e gli obiettivi dell’ASI, con riferimento allo Statuto.

Prova inglese:

Il candidato legga, traduca e commenti il seguente testo:

For the space industry, this highlights the need for novel approaches and partnerships, including through the involvement of public actors. Companies in the space sector might need to explore joint ventures or consolidation, thereby making their ventures more appealing to VCs who are increasingly cautious and seeking to mitigate risks. Additionally, the current environment may provide more realistic and grounded valuations, leading to more sustainable investment strategies for long-term growth in the space sector.

Similarly, the BCG Global Asset Management Report 2023 highlights a turning point for asset managers, driven by higher interest rates and the end of a long-standing bull market. These conditions have led to a **significant decrease in global assets under management and net flow rates**, underscoring the need for the industry to pivot towards more innovative and personalised products and services, and to **explore opportunities in high-growth private markets**. This pivot towards

private markets and personalised investment products could mean a greater emphasis on direct private investments by family offices and pension funds, where there's a potential for tailored funding that aligns with the specific needs, timelines and ambitions of strategic space projects. Such capital might offer the patience and substantial funding injections that are essential for the growth of space ventures. For example, across 365 global pension funds, the allocation to private equity is

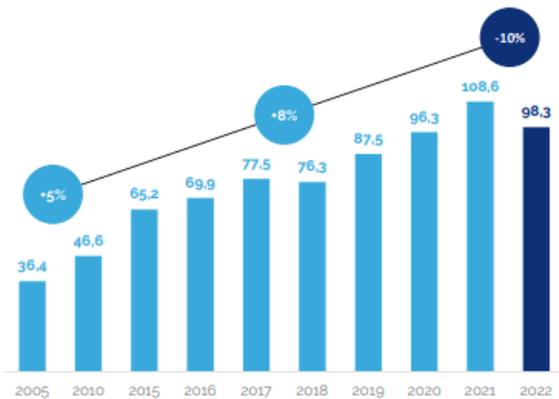


Figure 7: Global AUM in USD Trillion (Credit: BCG)

⁴ J. Scott. 2023. "PitchBook analysts say 2023 VC funding is "pretty much shot," long-term recovery appears likely." *Betakit* (Link).



under target in 2023. An indicator reflecting the current environment is that in Q1 2023, 30 funds with a size greater than USD 100M were launched, compared to 450 during the same period in 2022.⁵

Prova di informatica:

Il candidato crei un documento power point contenente una prima slide con il titolo "Riunione del Comitato ESA AFC n. 200", un autore e una data, inserisca una tabella in una seconda slide, contenente dei nominativi e le relative organizzazioni di appartenenza. Il candidato apra il documento in modalità "presentazione". Il candidato salvi il documento con il proprio cognome nella cartella del desktop "Bando 9_2023".