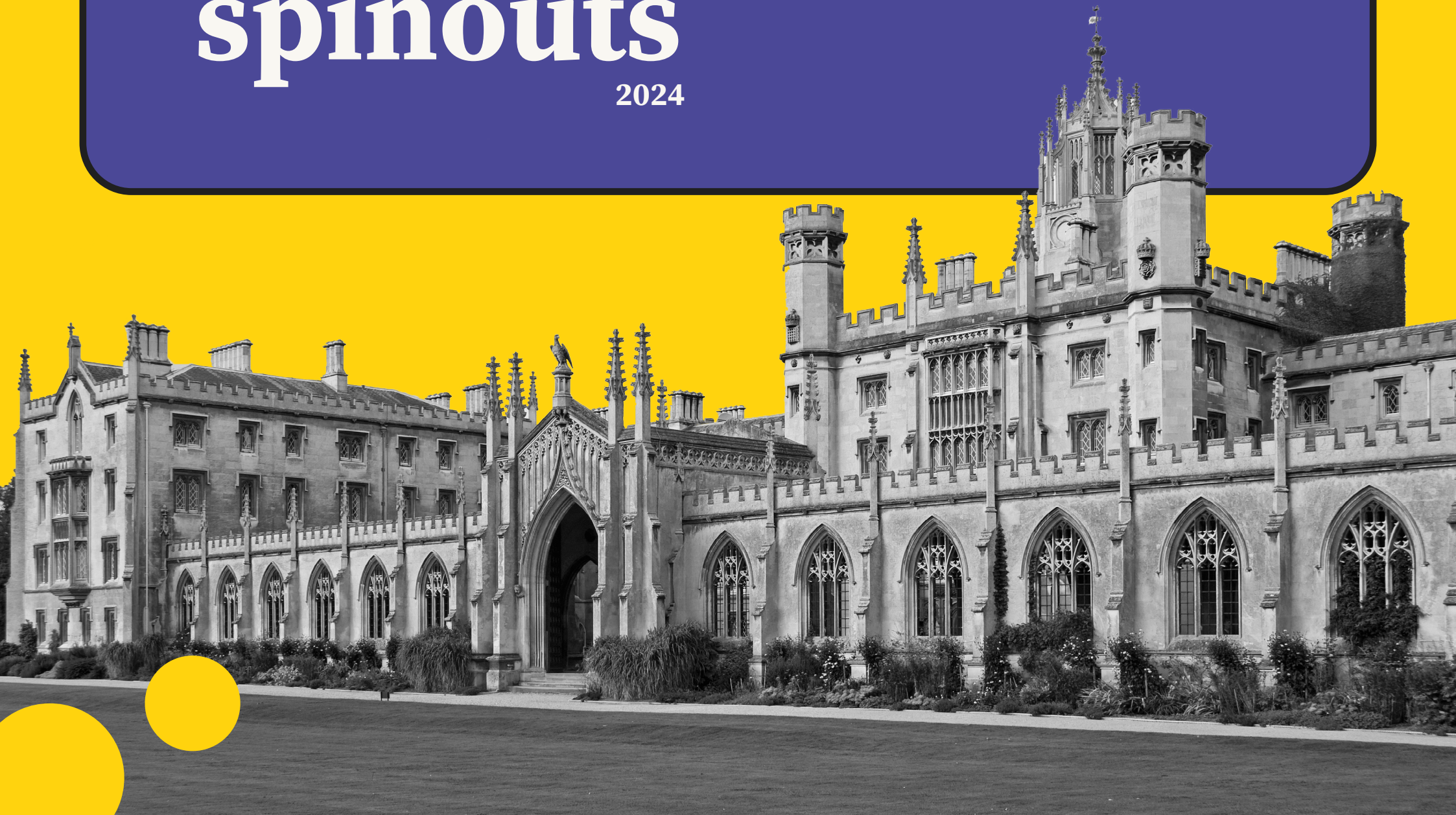


Equity investment into spinouts

2024

Parkwalk
Investing in Innovation

Beauhurst



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Foreword

Moray Wright

Chief Executive Officer, Parkwalk

From artificial intelligence (AI) to quantum computing and life sciences, we are now beyond the brink of scientific breakthroughs that will radically transform the economy and society. Our collective conviction to seize the opportunities of novel innovation now matters more than ever.

Spinouts will increasingly define much of the UK's economic standing in the world, our levels of productivity, advancements in public services and the innovation that can help curb climate change.

The case for uncovering, nurturing and backing spinouts could not be stronger. Encouragingly, this report reveals that the green shoots of an investment recovery in spinouts has taken root after challenging times in 2023. Recent years have undoubtedly been dominated by sizeable political shifts at home and abroad, widespread macro-economic volatility and the growing cost of capital. The impact: total equity investment in UK spinouts has been falling since the record high of £2.73b in 2021. It was down to £2.38b in 2022 and a concerning low of £1.75b in 2023. However, spinouts attracted £1bn in the first six months of 2024 alone, and if that trajectory holds, total investment will now surpass 2023 levels.

Where there is cause for concern is in first time equity deals as they continue trending downwards. 67 deals were completed in 2023, almost half the number from 2021 when 120 were done. In the immediate future, there is the threat of lost opportunities for the UK with transformative ideas failing to leave the lab. But the foundations are in place. Taking a longer-term view, the UK has successfully established a culture of commercialisation across its university base. In around a decade, yearly funding has almost quadrupled to reach an expected £2.3b in 2024, up from just £514m back in 2014. Yet, this means we need an urgent resurgence in investor appetite at the earliest stages to create the pipeline of companies that go on to scale.

Across all stages of investment, the total number of equity deals has encouragingly remained stable from 2020 to H1 2024. This equates to a resilient funding ecosystem in Britain that can support research-intensive companies through to later stages.

We also now see UK university spinouts attracting the allure of global investors. A decade ago, our research-intensive companies were almost exclusively funded by domestic investors. Fast forward to 2023 and 23% of equity deals represented a UK-foreign co-investment. It's vital that UK spinouts and investors are accessing larger pools of growth capital, whilst the Mansion House

reforms take effect and unlock vast domestic sources of patient capital. There are also verticals the UK is clearly excelling in. Life Sciences, inclusive of seven related industries such as pharmaceuticals and biotechnology, accounted for 210 deals from H2 2023 to H1 2024. Over the same period, spinouts in AI secured 53 deals. These are specialisms that the UK has a recognised competitive advantage internationally, and has the potential to generate major societal and economic gains from.

In 2023, Parkwalk remained the UK's leading investor in spinouts, participating in 29 deals across life sciences, AI, CleanTech and more – these deals had a combined value of £304m. We also launched our third Enterprise Fund with Imperial College London, and successfully closed our 6th University of Oxford Innovation Fund and 9th University of Cambridge Enterprise Fund.

Parkwalk also launched its third Knowledge Intensive EIS Fund, supporting some of the country's leading science-based businesses and deploying capital through attractive tax relief. We welcomed the Labour government's decision to extend the Enterprise Investment Scheme to 2035 and will continue investing in more spinouts to solve the challenges of today and tomorrow.



Executive summary

Henry Whorwood

Managing Director, Research and Consultancy at Beauhurst



Academic spinouts play a pivotal role in enhancing the UK's global competitiveness by bringing groundbreaking innovations to market. Equity investment is crucial in driving the growth and success of companies and reflects the confidence and interest in these ventures.

The investment landscape for UK spinouts in 2023 has demonstrated both resilience and adaptability amidst a more challenging economic climate. Equity investment in spinouts fell to £2.34b, down from the pandemic-related peaks in 2021 and 2022. Despite this decline, the number of deals has remained consistent between 2020 and 2023, with between 420 and 426 deals occurring each year.

This stability is encouraging, particularly when compared to the broader equity-backed sector, where deal numbers fell by over 10% in 2023.

The first half of 2024 suggests a positive trajectory, with total investment already nearing £1.00b, on track to surpass the 2023 figure. However, the 15.3% decline in first-time equity deals highlights a potential bottleneck in early-stage funding — a critical component for nurturing the next wave of high-growth spinouts.

Despite these challenges, key sectors such as application software, AI, life sciences, and CleanTech continue to attract significant investment, underscoring the UK's strength in these cutting-edge industries.

The global allure of the UK's spinout ecosystem has continued to strengthen, with increasing participation from foreign investors since 2021. While domestic investment remains a cornerstone, the growing trend of co-investment between UK

and international investors highlights the rising global interest in UK spinouts. The US remains a dominant player, with American funds frequently participating in key deals, alongside significant contributions from investors in the Netherlands and France.

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The investment landscape for UK spinouts in 2023 has demonstrated both resilience and adaptability amidst a more challenging economic climate.

These developments reaffirm the UK's commitment to ensuring that local spinouts not only thrive but lead the way in shaping the future of global innovation and delivering real-world impact.



Spinout investment

3,658

equity deals secured by
spinouts (2014 - 2023)

205


equity deals secured
by spinouts (H1 2024)

£14.6b

equity investment value
secured by spinouts
(2014 - 2023)

£995m

equity investment value
secured by spinouts
(H1 2024)

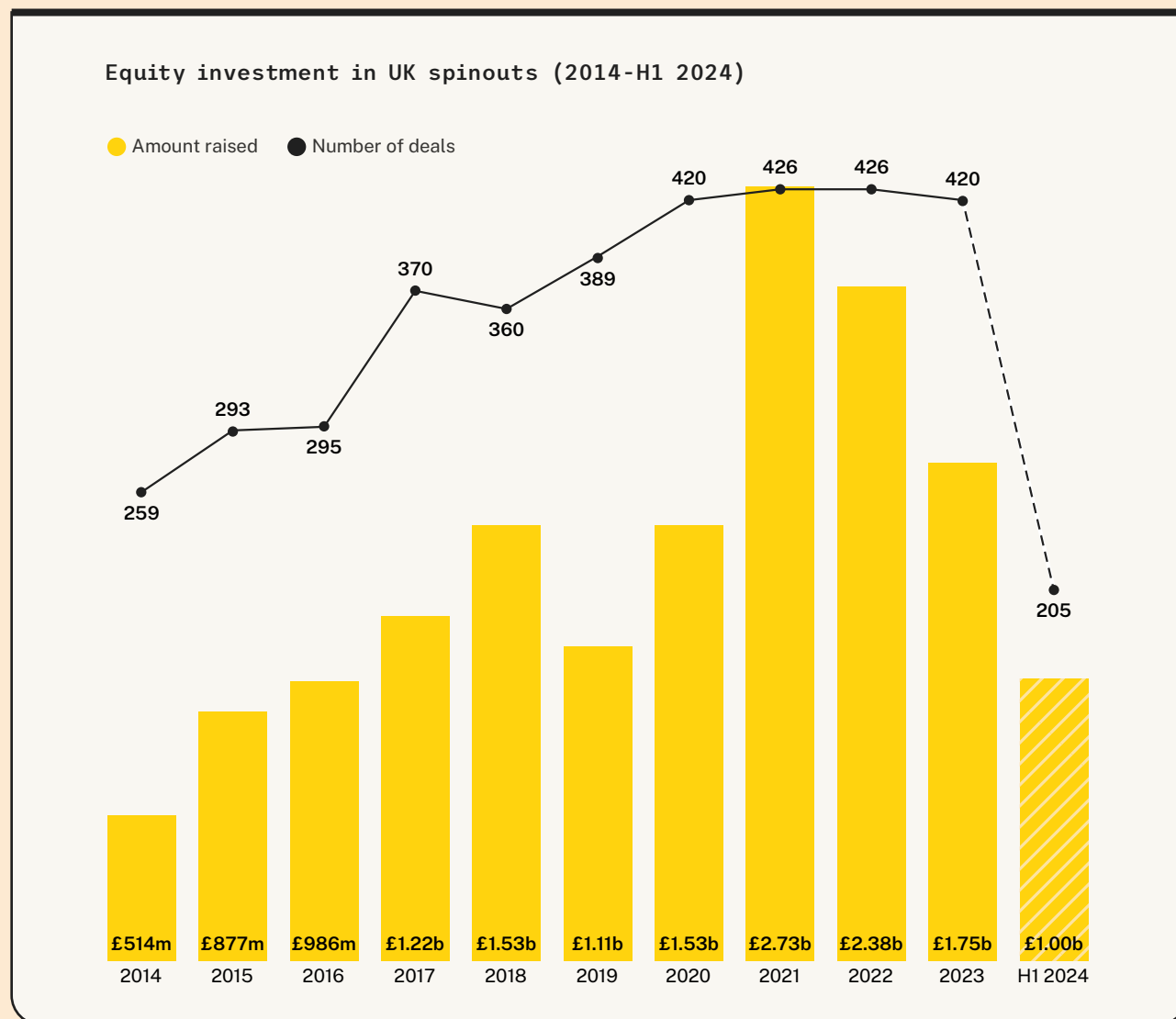


Spinout investment

Spinouts attracted £1.75b of equity investment in 2023. This figure is markedly less compared to the pandemic-stimulus highs of £2.73b and £2.38b in 2021 and 2022, respectively.

However, the consistent number of deals is encouraging, indicating that the decline in total investment does not equate to a failure in securing funding, even in a more challenging fundraising environment. Notably, spinouts have shown greater resilience than the broader equity-backed sector, where the number of deals fell by more than 10% in 2023 compared to the previous year.

With £1.00b, the H1 2024 figures are promising, putting the annual total on track to surpass that of 2023, while the number of deals is likely to remain consistent with recent years. Despite heightened investor caution over the past 18 months, capital remains accessible for companies with robust intellectual property at their core.



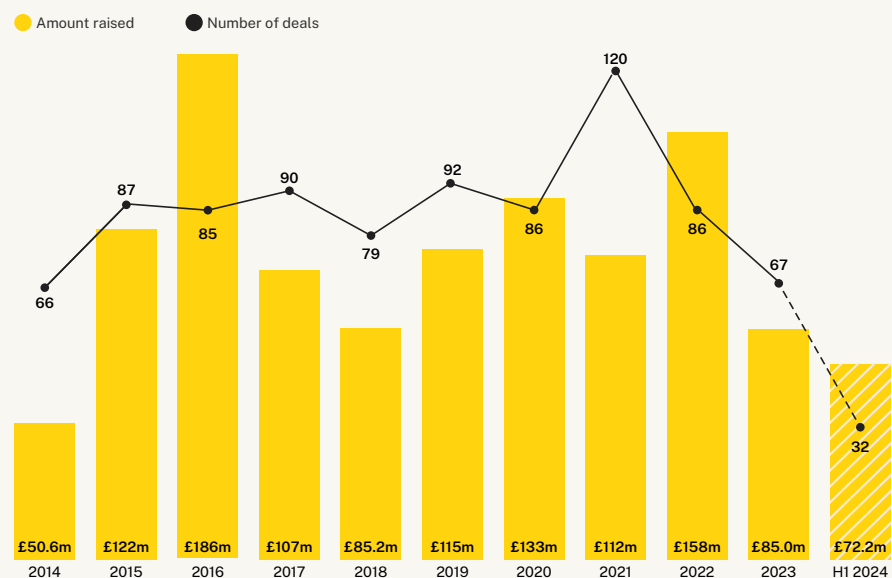
Equity deals by number and stage

While the overall number of deals has remained stable in recent years, the decline in first-time deals secured by spinouts in 2023 is concerning. This could be the result of fewer investible spinouts at the earliest stages, or investors might be less inclined to support companies at this nascent phase – or perhaps both. These initial rounds of funding are crucial for early-stage development as they help form the pipeline of IP-rich growth companies.

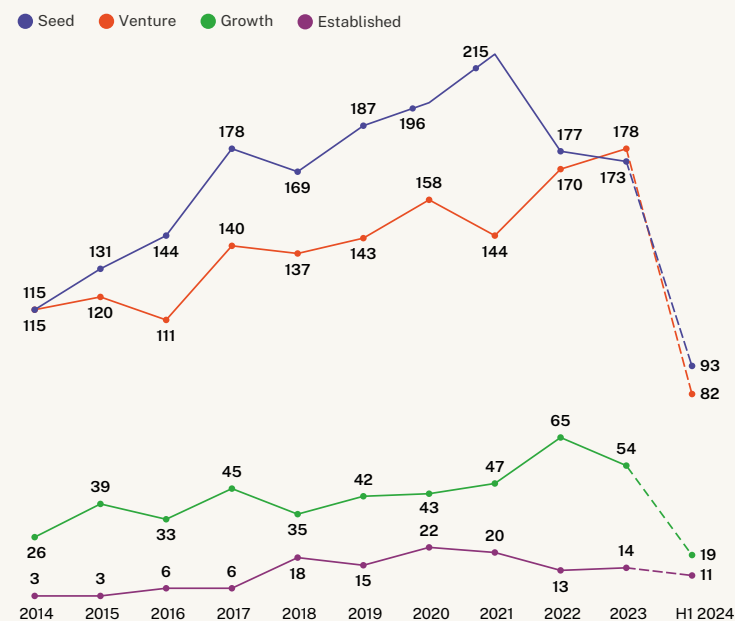
A breakdown by stage reveals that deals beyond the initial funding round are occurring at similar proportions to 2022, with only a slight decline in growth-stage deals. There has been a multi-year decline in seed-stage deals from the peaks of 2021. This pattern suggests that while securing follow-on funding is relatively straightforward for established companies, businesses seeking capital for the first time face greater challenges.

In terms of deal numbers, the H1 2024 figures suggest this trend will persist. Although, the total value raised so far is promising having nearly reached 2023 levels, due to several eight-figure deals.

First-time equity deals in spinouts by year (2014-H1 2024)



Equity investment deals in spinouts by stage of evolution at deal date (2014-H1 2024)



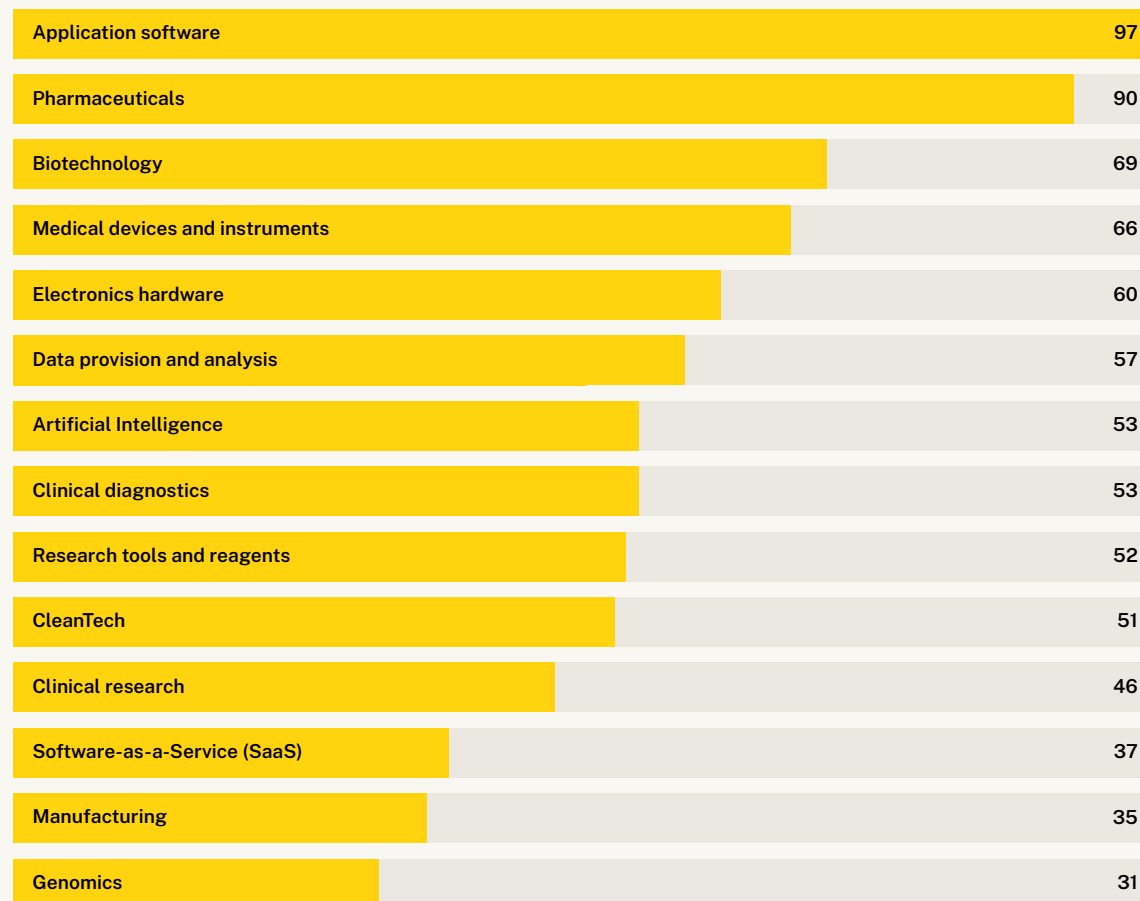
Top industries for investment

Application software emerges as the frontrunner, with spinouts in this sector securing the highest number of equity deals (97), underscoring the strength of the UK's digital economy. The substantial activity in AI (53) further highlights the sector's growing importance, driven by recent advancements and global enthusiasm for its potential. This dual focus on software and AI reflects a broader global trend, where AI integration is increasingly central to the software development landscape.

The life sciences sector, with seven related industries sitting under it including pharmaceuticals and biotechnology, accounted for a total of 210 equity deals. This reflects the distribution of the overall population of spinouts.

CleanTech, with 51 equity deals, emphasises the sector's growing importance in the UK's shift toward sustainability. It is encouraging to see academic institutions driving innovation and creating valuable spinouts that contribute to this goal, aligning with the UK's commitment to achieving net-zero emissions. Notably, this includes a £52.7m round raised by Tokamak Energy in December 2023, a spinout from the Culham Centre for Fusion Energy developing fusion-based energy technology.

Top industries by number of equity deals in spinouts (H2 2023-H1 2024)



Top equity deals

While no spinout deals exceeded £100m in 2023, compared to two in 2022, companies in the life sciences, quantum, and AI industries raised significant amounts to support R&D and commercialisation.

Oxford Quantum Circuits secured the largest single round, raising £78.7m in November 2023 from investors, including Oxford Science Enterprises and Japan's SBI Investment. The University of Oxford spinout offers quantum computing as a service from its base in Oxford.

The second largest deal was secured by Synthesia, which has developed software to create videos featuring custom AI avatars. In June 2023, the University College London spinout secured £71.4m from investors, including Accel, Google Ventures, and MMC Ventures. This funding is intended to further develop Synthesia's platform, aiming to enhance its speed and improve the range of expressions displayed by the avatars.

Equity deals in spinouts by investment value (2023)

Oxford Quantum Circuits	£78.7m		Institution: University of Oxford Headquarters: Reading Incorporation year: 2017 Activity: Quantum computing
Synthesia	£71.4m		Institution: University College London Headquarters: London Incorporation year: 2017 Activity: AI-powered video creation
Complement Therapeutics	£63.6m		Institution: University of Manchester Headquarters: London Incorporation year: 2020 Activity: Pharmaceutical
Tenpoint Therapeutics	£53.9m		Institution: University College London Headquarters: London Incorporation year: 2020 Activity: Stem cell technology
Tokamak Energy	£52.7m		Institution: Culham Centre for Fusion Energy Headquarters: Milton Incorporation year: 2009 Activity: Fusion energy
T-Therapeutics	£48.0m		Institution: University of Cambridge Headquarters: Cambridge Incorporation year: 2022 Activity: Pharmaceutical
Perspectum	£45.6m		Institution: University of Oxford Headquarters: Oxford Incorporation year: 2012 Activity: Medical imaging

Top investors

Parkwalk Advisors remained the leading investor in 2023, participating in the most equity deals (29) alongside Scottish Enterprise. Notably, Parkwalk's deals include participation in a £21.5m round with AccelerComm alongside international investors such as Swisscom Ventures. AccelerComm, which develops semiconductor technology for wireless communication, has secured £30.3m in equity investment across five funding rounds since spinning out from the University of Southampton in 2017. Parkwalk, in partnership with its parent company, IP Group, consistently ranks at the top of the investor charts for spinouts, with a diverse portfolio spanning priority sectors like quantum, semiconductors, and life sciences.

Scottish Enterprise, Scotland's national economic development agency, was also the equal top investor in spinouts last year, participating in 29 deals. The agency focuses on supporting innovative businesses within Scotland, leading to significant investments in academic spinouts. A notable deal in 2023 was its participation in a £34.5m investment in ENOUGH, a mycoprotein developer spun out from the University of Strathclyde.

Mercia Ventures also emerged as a key investor in spinouts in 2023, participating in 24 deals. The firm provides early-stage and growth capital through multiple funds, including the Mercia EIS fund, which targets critical sectors such as deeptech and CleanTech.

Top investors in spinouts by number of equity deals (2023)

Parkwalk Advisors	29
Scottish Enterprise	29
Mercia Asset Management PLC	24
British Business Bank	16
Cambridge Enterprise	12
Cambridge Angels	12
IP Group	11
Future Planet Capital	10
BGF	10
SyndicateRoom	9
Oxford Science Enterprises	9
SFC Capital	8
Par Equity	8
Northern Gritstone	8
Foresight Group	8
Deepbridge Capital	8

Top universities by equity deals

The top three institutions — Oxford, Cambridge, and Imperial College London — maintain their leading position in the ranking of spinout equity deals in 2023. However, spinouts from both Oxford and Cambridge secured fewer deals in 2023 compared to 2022. Meanwhile, third-place Imperial College London saw a modest increase, with deals rising

from 26 to 28. Regional analysis continues to highlight the dominance of the “golden triangle”, a global science, technology, and innovation cluster made up of London, Oxford, and Cambridge. In the Midlands, the University of Sheffield (17) emerged as a notable contender, securing a place in the top five for the first time this year.

Scottish universities, particularly the University of Edinburgh (17) and the University of Strathclyde (14), also maintained a strong presence, reflecting a robust spinout ecosystem in Scotland.

Top academic institutions by number of equity deals secured by their spinouts (2023)

University of Oxford	62	University of Leeds	11
University of Cambridge	45	University of Warwick	10
Imperial College London	28	King's College London	10
University of Bristol	26	Queen's University Belfast	9
University of Sheffield	17	University of Nottingham	7
University of Edinburgh	17	University of Glasgow	7
University College London	15	University of Birmingham	7
Royal College of Art	15	Swansea University	7
Newcastle University	15	Loughborough University	7
University of Strathclyde	14	University of Surrey	5
University of Southampton	14	Heriot-Watt University	5
University of Exeter	13	City University	5
University of Manchester	12		

Top universities by equity volume

Spinouts from the University of Oxford and the University of Cambridge continued to lead in equity investment value in 2023. However, reflecting the broader contraction in the equity-backed ecosystem, Oxford saw its investment halve, while Cambridge experienced a 32.9% decline when compared to last year. University College London (UCL) made

a significant leap, surpassing Imperial College London to claim third place. This surge was driven by UCL securing three of the top 10 equity deals in 2023, catapulting its total investment eightfold to £243m. A notable example is the £42.0m secured by Quantum Motion, backed by investors including Parkwalk Advisors and Porsche Ventures. Outside

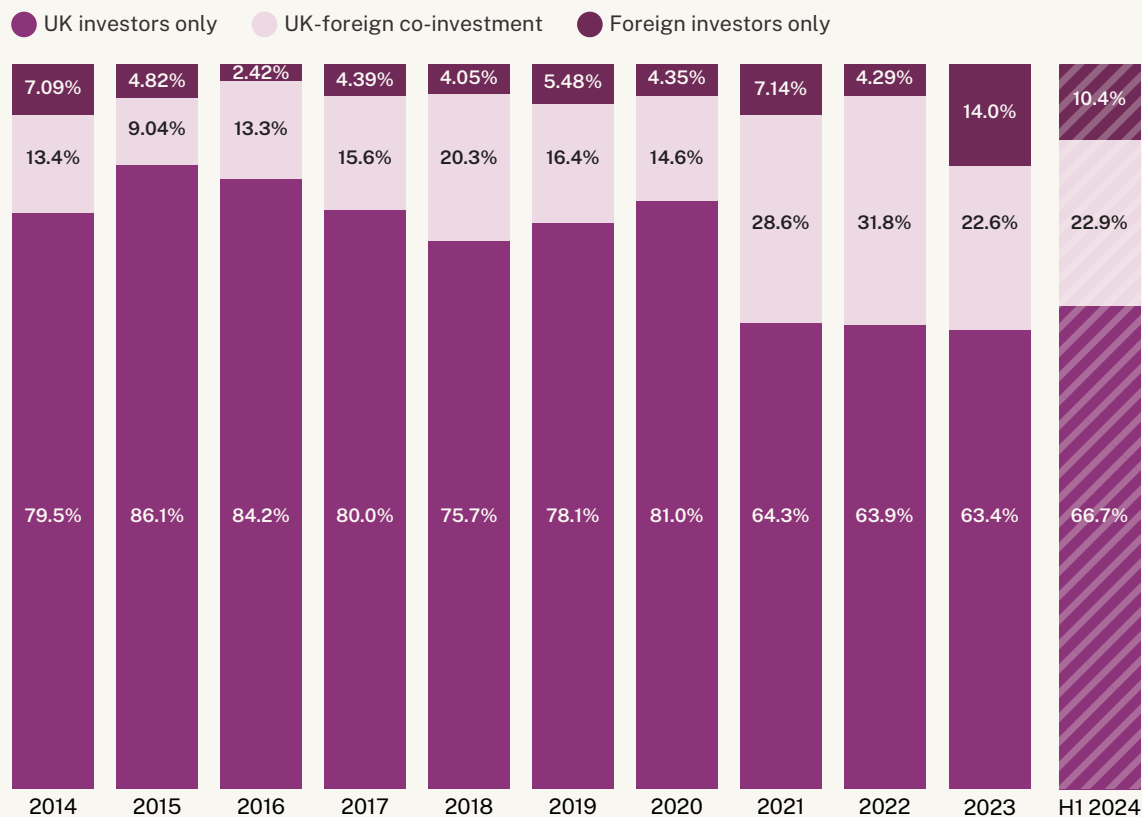
the “golden triangle,” the University of Manchester ranked fifth, with its spinouts raising £95.3m. This impressive total is largely attributed to a major deal in April 2023, where Complement Therapeutics secured £63.6m to develop treatments for illnesses caused by dysregulation of the complement system.

Top academic institutions by equity volume secured by their spinouts (2023)

University of Oxford	£406m	University of Edinburgh	£35.0m
University of Cambridge	£248m	University of Birmingham	£30.6m
University College London	£243m	University of Leeds	£25.3m
Imperial College London	£139m	Babraham Institute	£25.0m
University of Manchester	£95.3m	University of Sheffield	£22.9m
King's College London	£72.2m	Royal College of Art	£20.8m
University of Bristol	£59.4m	Queen's University Belfast	£17.5m
University of Strathclyde	£55.5m	Cardiff University	£12.4m
University of Glasgow	£54.9m	Cranfield University	£12.3m
Culham Centre for Fusion Energy	£52.7m	University of Exeter	£11.0m
University of Warwick	£51.6m	University of St Andrews	£10.1m
University of Southampton	£48.5m	University of East Anglia	£10.1m
Newcastle University	£39.1m	Swansea University	£9.72m

UK and foreign investment

UK and foreign investor participation by proportion of equity deals into spinout (2014-H1 2024)



Between 2014 and 2020, most equity deals involving UK spinouts were backed solely by domestic investors, while the proportion of foreign investor-only deals and UK-foreign co-investment deals remained relatively stable. This reliance on domestic funding sources highlighted the strong commitment of a diverse range of UK-based investors, including government agencies, university commercialisation arms, and institutional investors, in supporting the nation's spinouts.

Since 2021, however, the composition of investors in spinout fundraising rounds has shifted. While domestic investment remains dominant, the proportion of UK-foreign co-investment deals has increased. This reflects before growing international interest in UK spinouts and opportunities for “value-arbitrage” between the UK and other global deeptech hubs. The pronounced increase in foreign co-investment in 2021 and 2022 can be partly attributed to central bank stimulus measures worldwide. These were introduced to mitigate the pandemic's impact, which directed substantial capital into riskier asset classes such as venture capital.

Investor nationality

Over the past decade, UK academic spinouts have attracted foreign investment from funds based in 48 countries. Among these overseas investors, the US stands out, with the highest number of participations in UK spinout equity deals, totalling 526.

In 2023 alone, 62 US funds were involved in 39 deals, five of which ranked among the top 10 largest deals by value that year.

Dutch investors continue to hold the second position, with 62 participations, while French funds have shown the most significant increase, participating in 53 deals – up from 40 the previous year. Notably, this includes a round led by French investor Sofinnova Capital into T-Therapeutics in November 2023. The University of Cambridge spinout, which develops pharmaceutical treatments for autoimmune diseases and cancers, secured funding to advance its R&D in T-cell receptor therapies for cancer.

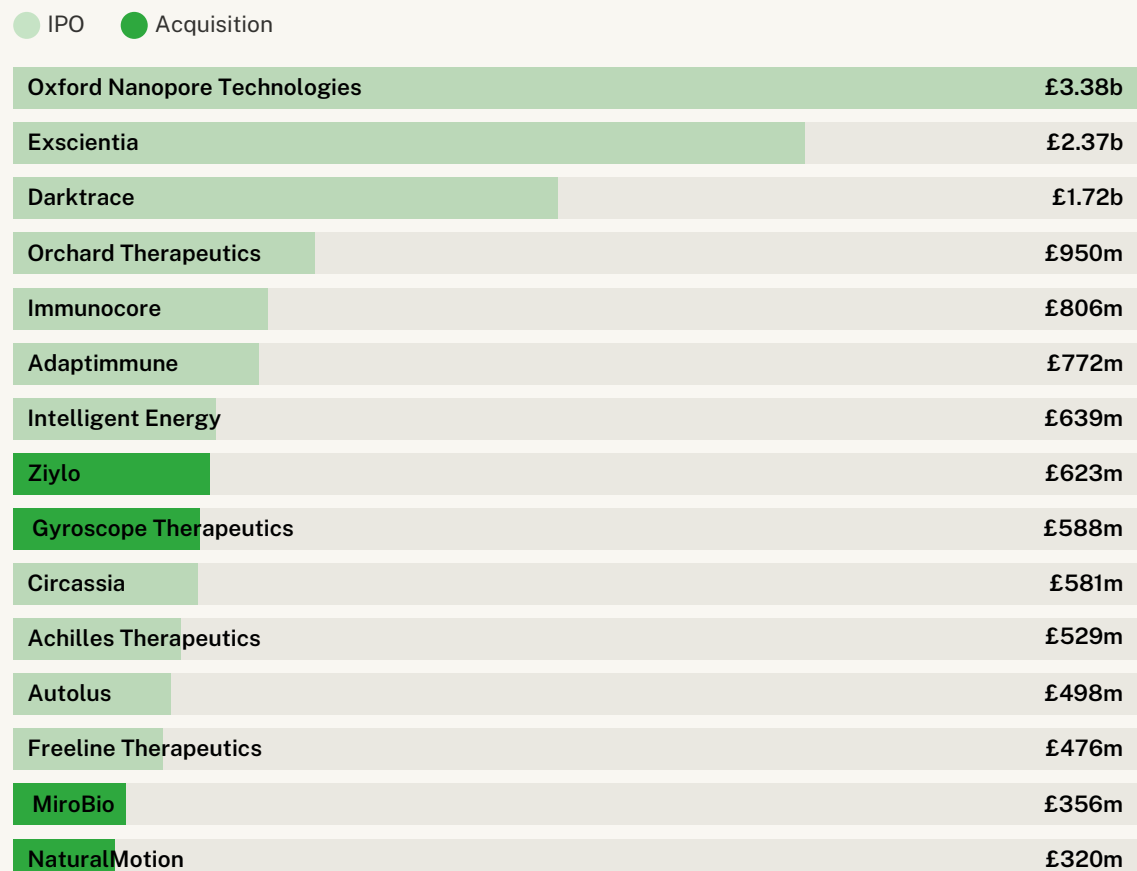
Among Asian investors, Hong Kong's Horizon Ventures has been the most active, participating in nine UK spinout deals. The deals include its most recent £5.50m round into Xampla, a University of Cambridge spinout that develops biomaterials from plants. The funding will support Xampla in furthering the development of new applications for its innovative biomaterials.

Top nationalities of funds by number of equity deals participation into spinouts, excluding UK (2014-H1 2024)

	United States	526
	Netherlands	62
	Germany	55
	France	53
	China	42
	Switzerland	35
	Australia	29
	Japan	25
	Ireland	24
	Singapore	20
	Hong Kong	20
	Denmark	17
	South Korea	17
	Spain	16
	Belgium	16

Exit by valuation

Exits by spinout valuation (2014-H1 2024)



Since 2014, UK academic spinouts have seen 204 exits, including 32 IPOs and 172 acquisitions. Among the top 15 exits, only three are outside the life sciences sector. One of these is Darktrace, which listed on the NASDAQ in April 2021 with a market capitalisation of £1.72b. The University of Cambridge spinout specialises in cybersecurity software that uses AI to detect behavioural anomalies and respond to cyber threats in real time. Between its founding in 2013 and its IPO in 2021, Darktrace raised £173m across seven rounds of equity funding.

Another non-life sciences exit is Intelligent Energy, which went public in July 2014 on the London Stock Exchange with a market capitalisation of £639m. The University of Loughborough spinout develops low-carbon fuel cell systems for the automotive, consumer electronics, and stationary power sectors. Between its incorporation in 2004 and its listing in 2014, Intelligent Energy raised £137m via seven rounds of equity investment.

The third company is NaturalMotion, a University of Oxford spinout that develops and publishes online social games and provides animation technology used by game developers and visual effects companies. Between its founding in 2001 and its acquisition by Zynga in 2014, NaturalMotion raised £7.14m.

Exit by location

UK spinouts have demonstrated a strong preference for domestic listings, with most opting to trade on the Alternative Investment Market (AIM) and the London Stock Exchange (LSE). This confidence in the UK market is evident from the 14 spinouts choosing AIM and five selecting the LSE. However, the allure of international markets is also apparent, with 11 spinouts choosing to list on NASDAQ in the US, attracted by the potential for higher valuations, broader capital access, and increased visibility. Notably, this includes Orchard Therapeutics, which completed a £177m IPO on NASDAQ in October 2018.

Since 2014, 153 UK spinouts have been acquired by buyers from 20 different countries. The US leads the way with 59 acquisitions, followed by the UK with 48. Within Europe, the UK is the clear frontrunner, with Germany ranking a distant second, accounting for just five acquisitions.

Stock exchange by number of spinouts listed (2014-H1 2024)

Alternative Investment Market	14
NASDAQ Stock Market	11
London Stock Exchange	5
NEX Exchange	1

Top nationalities of acquirers of UK spinouts by number of acquisitions (2014-H1 2024)

United States	59
United Kingdom	48
Japan	11
Germany	5
Switzerland	4
Canada	4
Australia	4
Netherlands	3
Israel	2
France	2
China	2

Methodology

Beauhurst tracks all spinouts deemed to have spun out on or after 1 January 2011. Spinning out from an academic institution is one of our eight triggers (outlined on the right of this page) that we believe suggest a company has high-growth potential. More detail on Beauhurst's tracking triggers is available via our website. Companies that spun out of an academic institution prior to 1 January 2011 may still be included in this report if they met one of the other seven triggers after 1 January 2011 and then were subsequently determined to be a spinout.

Equity investment

To be included in our analysis, any investment must be:

- Secured by an academic spinout (as defined previously)
- Some form of equity investment
- Secured by a non-listed UK company
- Issued between 1 January 2014 and 30 June 2024

What is an academic spinout?

We define an academic spinout as a company that meets condition 1 and at least one condition out of 2-4:

1. The company was set up to exploit intellectual property developed by a recognised UK university or research institution (This is broadly in line with the Higher Education Statistics Agency's (HESA) definition of a spin-off).
2. The institution owns IP that it has licensed to the company.
3. The institution owns shares in the company.
4. The institution has the right (via an options or warrants contract) to purchase shares in the company at a later date.

High-growth tracking triggers



Equity investment



Scaleups



Accelerator attendances



MBOs/MBIs



Academic spinouts



High-growth lists



Major grant recipients



Venture debt

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Beauhurst is the ultimate source of UK private company data.

Through our data platform, we provide data on every UK private company — from investments and hiring status to patents and trade data — identifying hidden growth, innovation, risks and ESG signals across UK companies.

Our Research and Consultancy team can provide powerful insights, thought leadership, and data-led reports. Please get in touch if you would like to talk about a project.

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Parkwalk is the largest growth EIS fund manager, backing world-changing technologies emerging from the UK's leading universities and research institutions. With £500m of assets under management, it has invested in over 160 companies across its Parkwalk Opportunities and Knowledge Intensive EIS Funds, as well as the award-winning enterprise and innovation funds Parkwalk manages for the Universities of Cambridge, Oxford, Bristol and Imperial College.

Parkwalk invests in businesses creating solutions to real-world challenges, with IP-protected innovations, across a range of sectors including life sciences, AI, quantum computing, advanced materials, genomics, cleantech, future of mobility, medtech and big data.



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