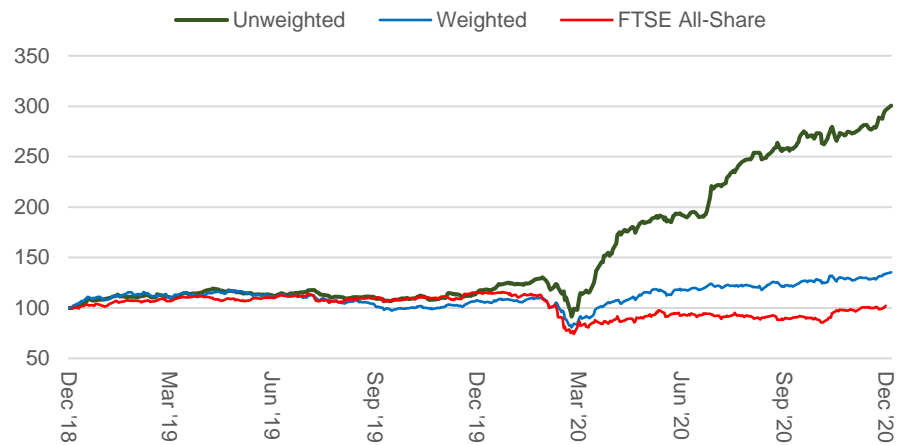




Radnor Broad UK Listed Biotech Index - 2 Year Chart



Source: FactSet, Radnor

2020 has been an extraordinary year across the market but there is no doubt that the UK listed biotech sector has been in the front line in more ways than one. Investors have clearly responded to both the efforts made by the sector to combat the pandemic, but also the structural growth opportunity within biotech that the pandemic has brought into sharper focus.

Not only have we seen headline share price underperformance reverse sharply through the course of 2020, but critically, the pace and scale of sector fundraising activity has stepped up materially. Perhaps most importantly, the number of investors active in the sector (institutional, private wealth, individual and overseas) have expanded. This feature alone has gone a long way towards addressing one of the key issues facing the sector.

The BioIndustry Association is a research client of Radnor Capital Partners Ltd.

MIFID II – this research is deemed to be a minor, non-monetary benefit.

11th January 2021

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- **Sector Outperformance.** 2020 has been the strongest period of price outperformance over the last 10 years. Interestingly, this outperformance has been delivered across all the sub-indices making up the Broad Biotech index; although performance levels have varied somewhat. This outperformance has also been much more pronounced than looking at the sector on an equal weighted basis (ie, not adjusting for market value) as the charge has been led by smaller companies predominantly.
- **Capital Raising.** In line with the rest of the market, 2020 has been especially strong with c.£1,140m of fresh equity being raised across 51 individual companies (the highest number for four years). Not only has this fresh wave of new equity funding secured development pipelines it has also bought a large number of new investors into the sector.
- **Investor Participation.** Not only have we seen a large number of new investors enter the sector as a result of heightened capital raising activity, but we have also seen significant new buying interest in the secondary market across the sector from new investors. There are more investors now exposed to the sector than at any point in the last two years.

1 – Price Performance: Outperformance across the board

Below we show the 1 Year and 5 Year performance charts for the Broad UK Biotech Index. The constituents of this index, and of the sub-indices that make up this master index are detailed in Appendix A at the end of this document. The index classifications and the constituents have been curated by Radnor, in partnership with the BIA.

These indices are calculated and maintained via the FactSet custom index methodology on both an Unweighted basis and a Market Cap Weighted basis. In all cases we show both indices to provide the fullest picture of performance. The UK listed biotech sector is highly polarised in market cap terms with a relatively small number of companies dominating the aggregated market cap of the sector:

- The overall market cap of the Broad Biotech index is **£31.0bn** and is made up of **87** constituents.
- The ten largest stocks have a combined market cap of **£18.8bn**, representing **61%** of the sector by value.

Figure 1: Broad Biotech Index – 1 Year

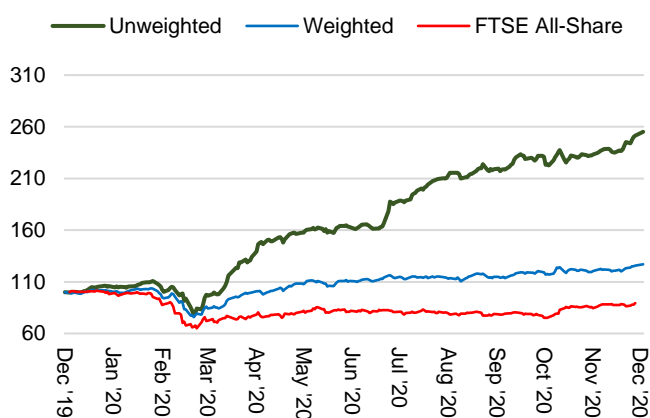
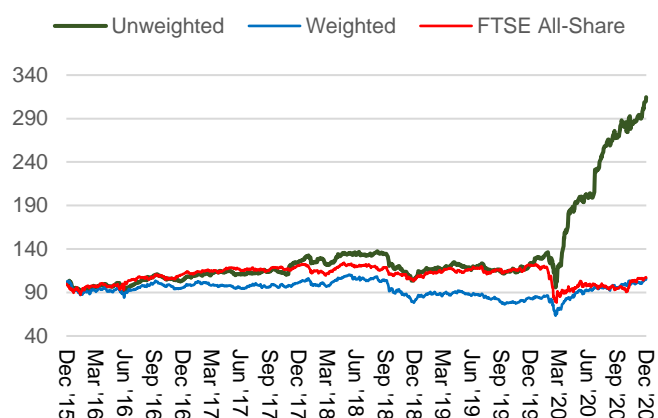


Figure 2: Broad Biotech Index – 5 Year



Source: FactSet, Radnor

- Both the charts above show the extent to which the Broad Biotech index has materially outperformed the FTSE All Share on both an **unweighted** and **weighted** market cap basis since March 2020. Given the preponderance of smaller cap companies making up this index, and the extent of some of the price moves we have witnessed, this outperformance is especially marked on the unweighted basis. This is a common feature across all the sub-indices that follow.
- We would also note that **even prior** to the onset of the Covid-19 pandemic, which has clearly been the catalytic event dominating the sector during 2020, the Broad Biotech index had been outperforming the broader market throughout Q1 2020.
- In fact, over the last five years, on an **unweighted** basis, the Broad Biotech Index had been performing **broadly in line** with the FTSE All Share.

In the charts that follow, we break the Broad Biotech index down into its main sub-components.

Small Molecule & Biologic Therapeutics

Figure 3: Small Molecule – 1 Year

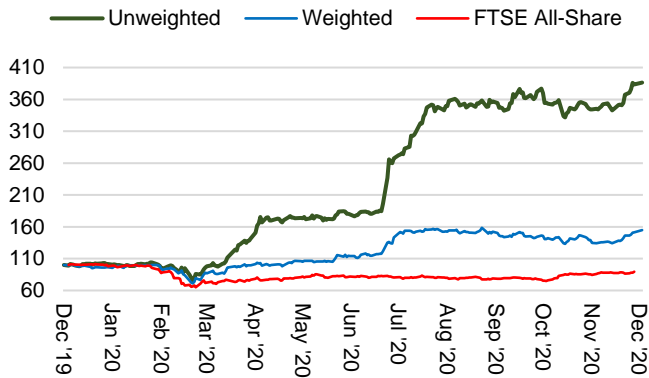
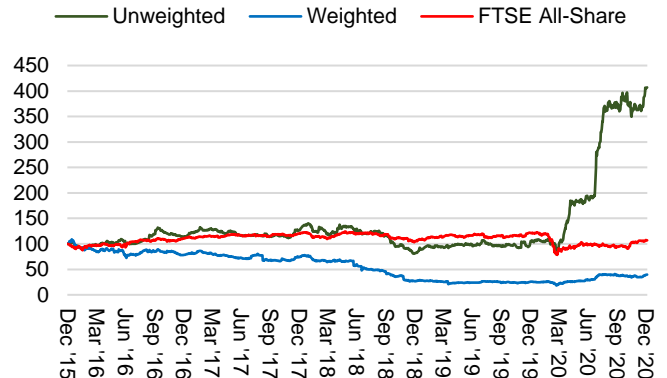


Figure 4: Small Molecule - 5 Year



Source: FactSet, Radnor

Cell & Gene Therapies

Figure 5: Cell & Gene Therapies- 1 Year

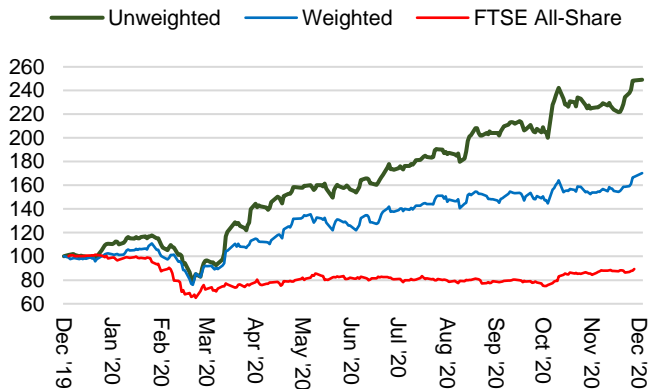
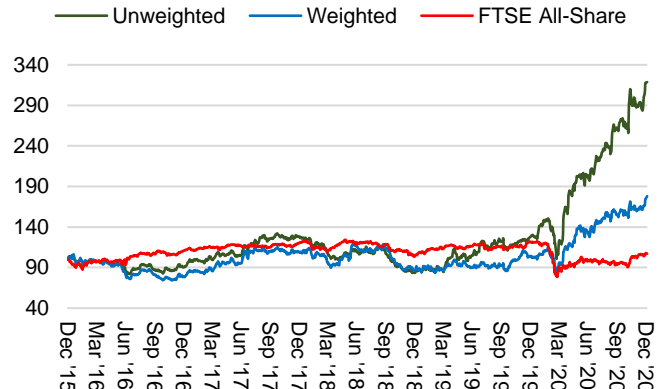


Figure 6: Cell & Gene Therapies- 5 Year



Source: FactSet, Radnor

Research Tools & Data

Figure 7: Research Tools- 1 Year

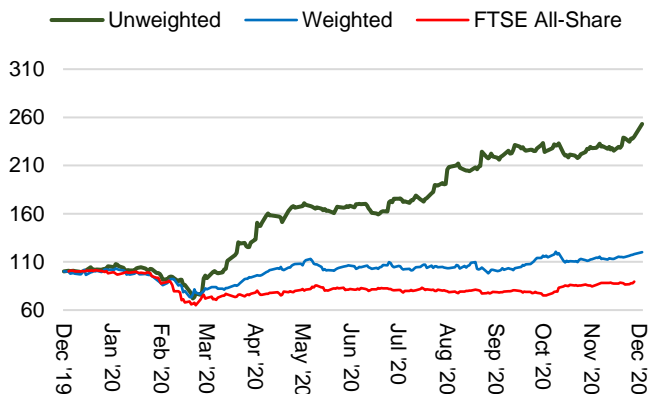
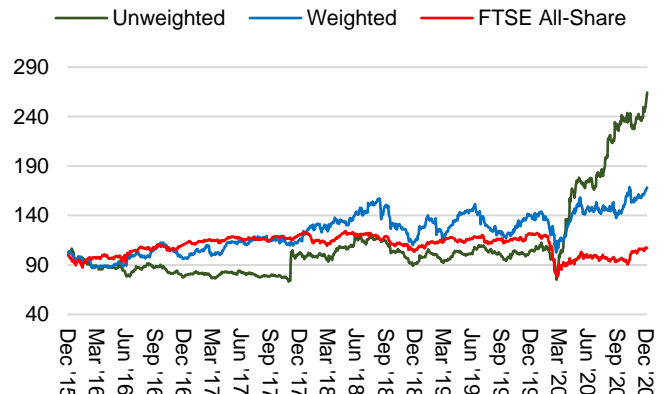


Figure 8: Research Tools- 5 Year



Source: FactSet, Radnor

Diagnostics

Figure 9: Diagnostics- 1 Year

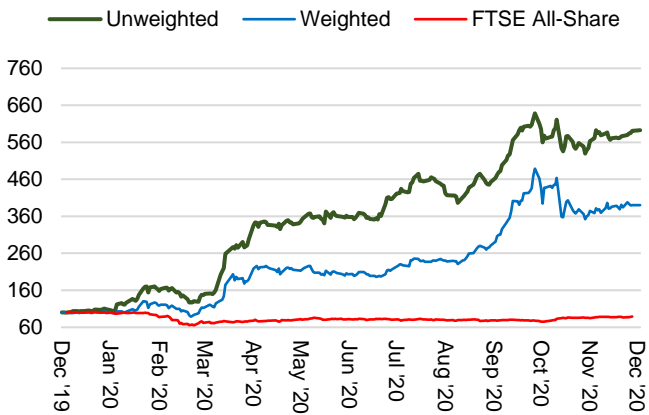
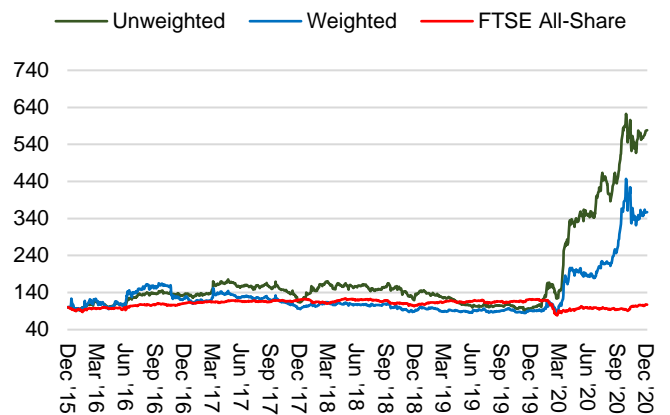


Figure 10: Diagnostics- 5 Year



Source: FactSet, Radnor

Medical Devices

Figure 11: Medical Devices- 1 Year

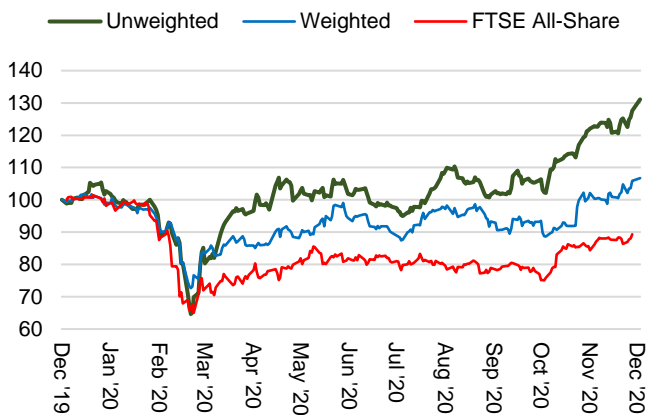
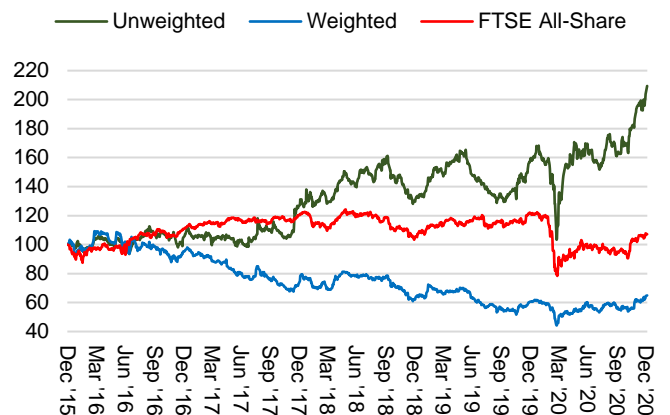


Figure 12: Medical Devices- 5 Year



Source: FactSet, Radnor

Commercialisation & Investment Vehicles

Figure 13: Investment Vehicles- 1 Year

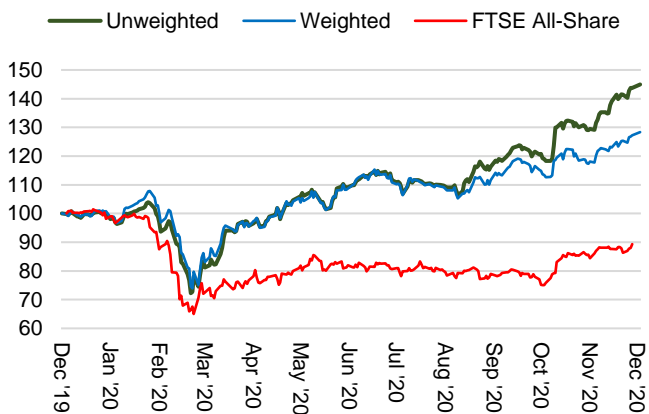
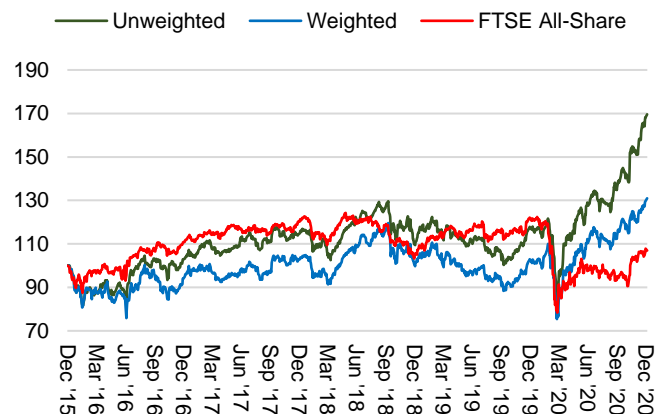


Figure 14: Investment Vehicles- 5 Year



Source: FactSet, Radnor

COVID-19 Specific “Composite”

Figure 15: COVID-19 Specific - 1 Year

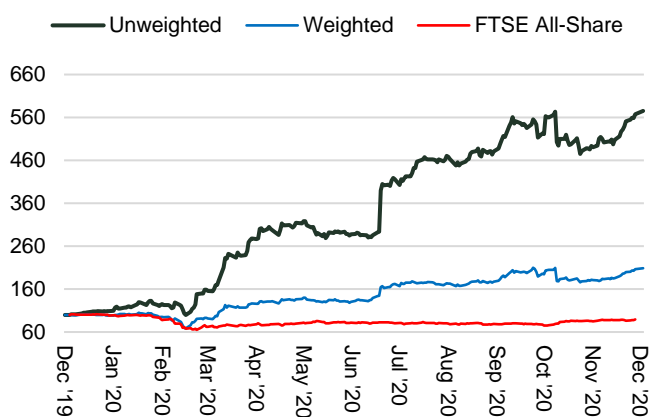
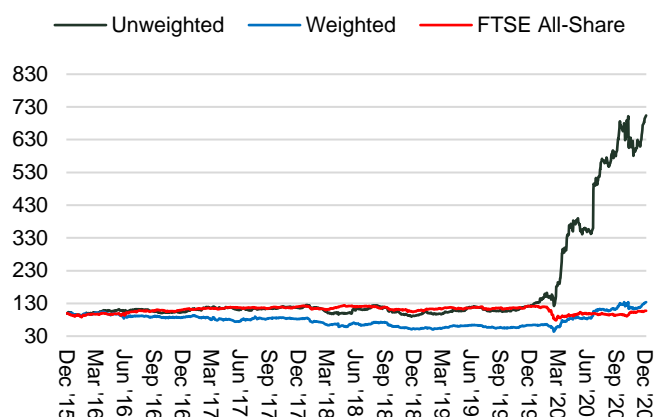


Figure 16: COVID-19 Specific - 5 Year



Source: FactSet, Radnor

Non Human Life Sciences

Figure 17: Non Human Life Sciences - 1 Year

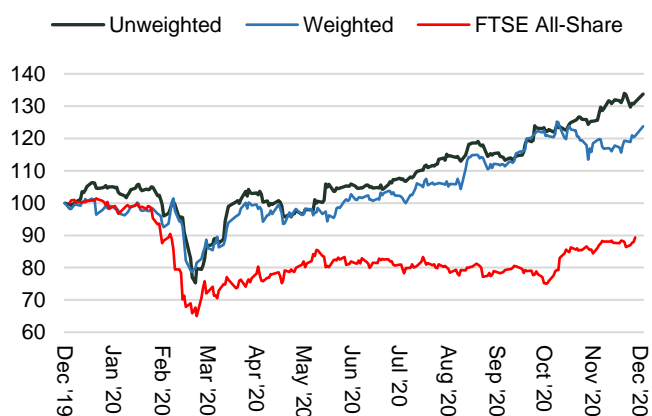
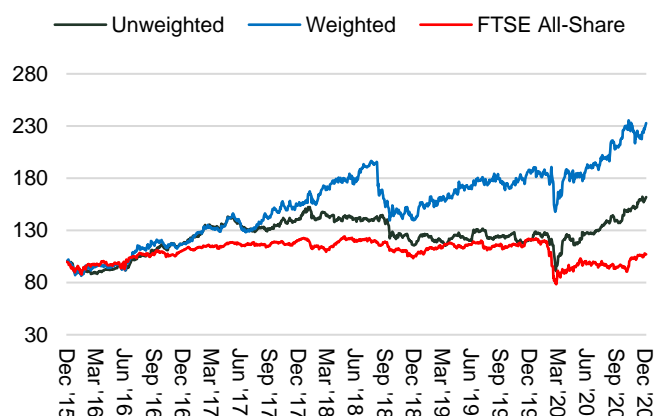


Figure 18: Non Human Life Sciences - 5 Year



Source: FactSet, Radnor

In Figure 15 and 16 above, we show the performance of the COVID-19 specific peer group. This is a “composite” sub index, whose constituents are drawn from each of the former sub-indices. Each of these companies have announced trials or product development specifically aimed at testing or treating Covid-19, or where their existing IP has direct relevance in dealing with the pandemic.

Given the prominence of the pandemic over the last year, it is not surprising to see that this “composite” sub index sits near the top of the 1 year price return comparative charts below (Figures 19 and 20), although pipped by the pure Diagnostics sub index.

Overall 1 Year Sub Index Performance

Figure 19: All Sub Indices - Unweighted

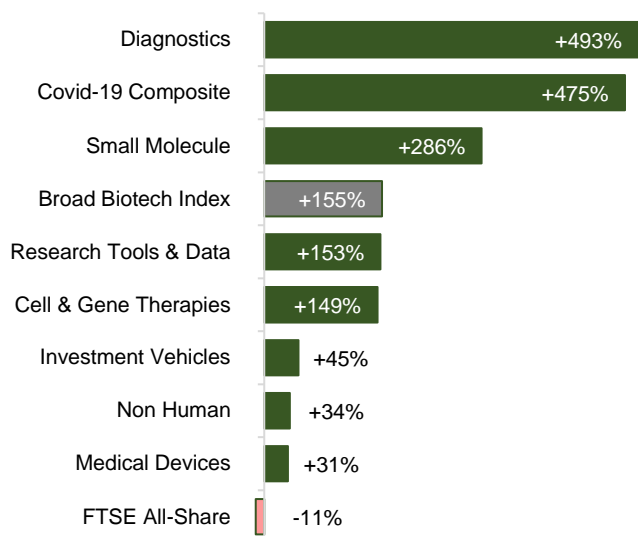
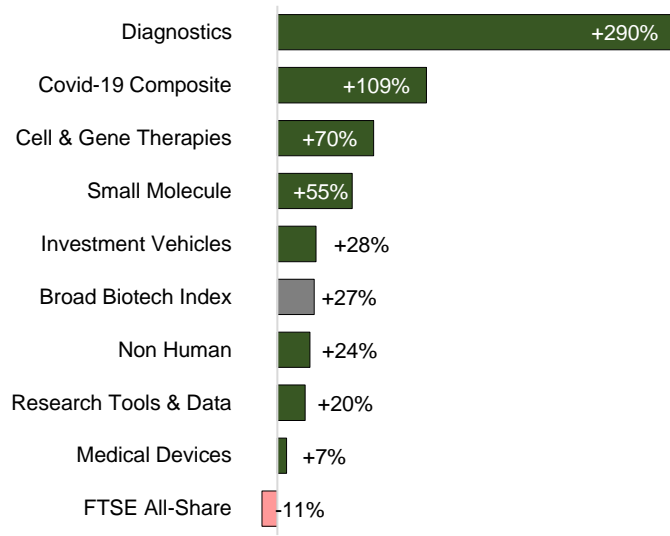


Figure 20: All Sub Indices – Market Cap weighted



Source: FactSet, Radnor

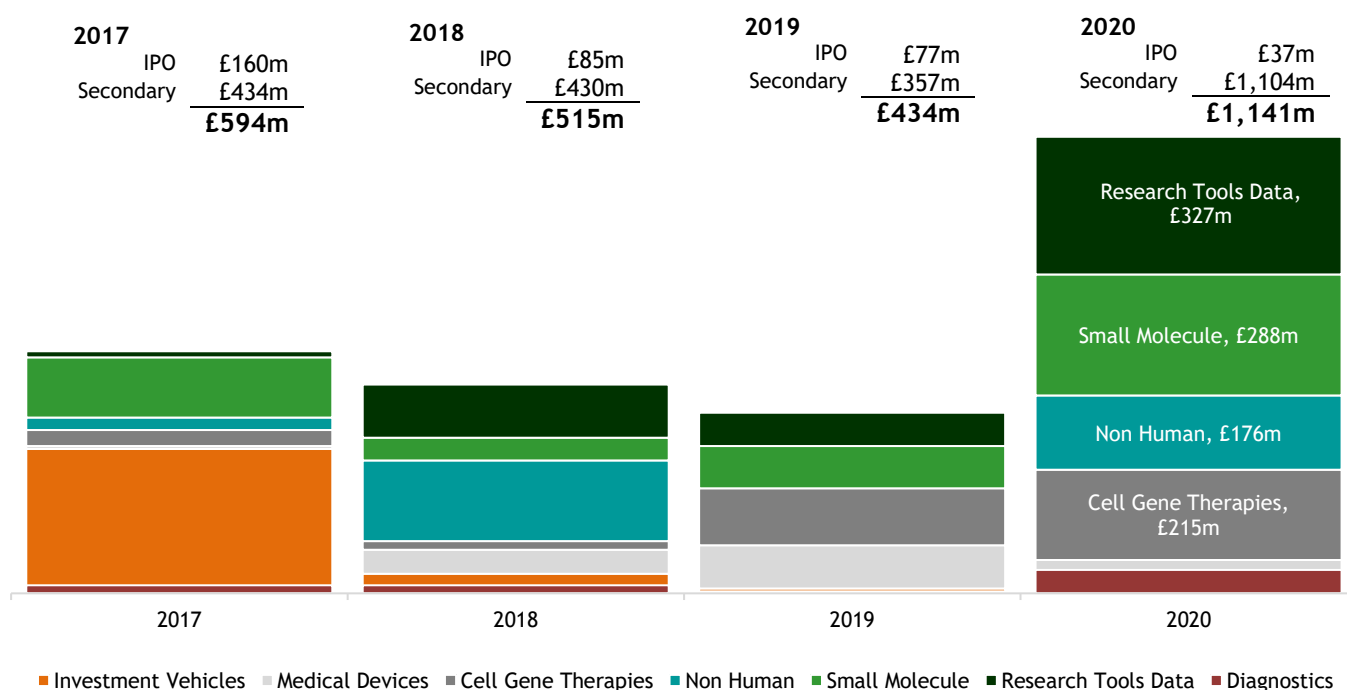
2 – Capital Raising: 2020 proved to be a stand-out year

After three relatively static years, 2020 has seen a marked increase in the scale and number of equity fundraising transactions:

- **2020** has seen a total of **£1,141m** of fresh equity raised by **51** individual companies, this is more than double the amount raised in 2018 and 2019 combined.
- However, despite the significant increase in the scale and pace of secondary fundraisings, we have only seen 2 IPOs so far this year.
- We believe there are a number of factors at play here;
 1. The lack of UK IPO activity is not unique to the biotech sector but a feature of the broader market during the pandemic period where investors have preferred to support significantly increased fresh equity issuance from existing portfolio holdings.
 2. Alternative funding sources have also been very active through the course of 2020. The most recent **BIA Biotech Financing Update** (available to download [here](#)), highlights a total of £744m of new VC funding secured in the year to date alongside £119m raised by UK biotech IPO's on North American exchanges. The BIA highlighted that 2020 was on course to surpass 2018 as the strongest year on record for overall sector financing.

In Figure 21 below, we show the **amount** (£m) of fresh equity raised across the last four years by sub-index, and also show the split between IPO's and secondary fundraises.

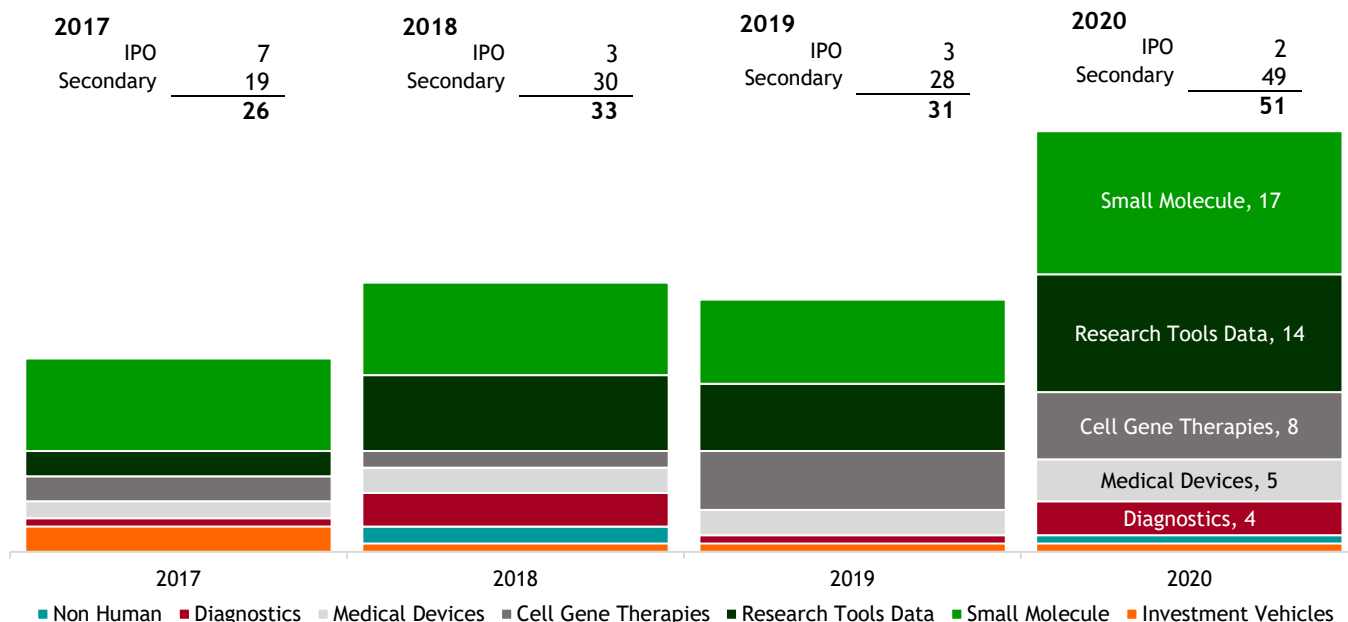
Figure 21: Primary & Secondary Fundraising Activity, 2017 – 2020 by value of transactions, £m



Source: London Stock Exchange, RNS, Radnor

In Figure 22 below, we show the **number** of companies that have raised fresh equity across the last four years by sub-index, and also show the split between IPO's and secondary fundraises.

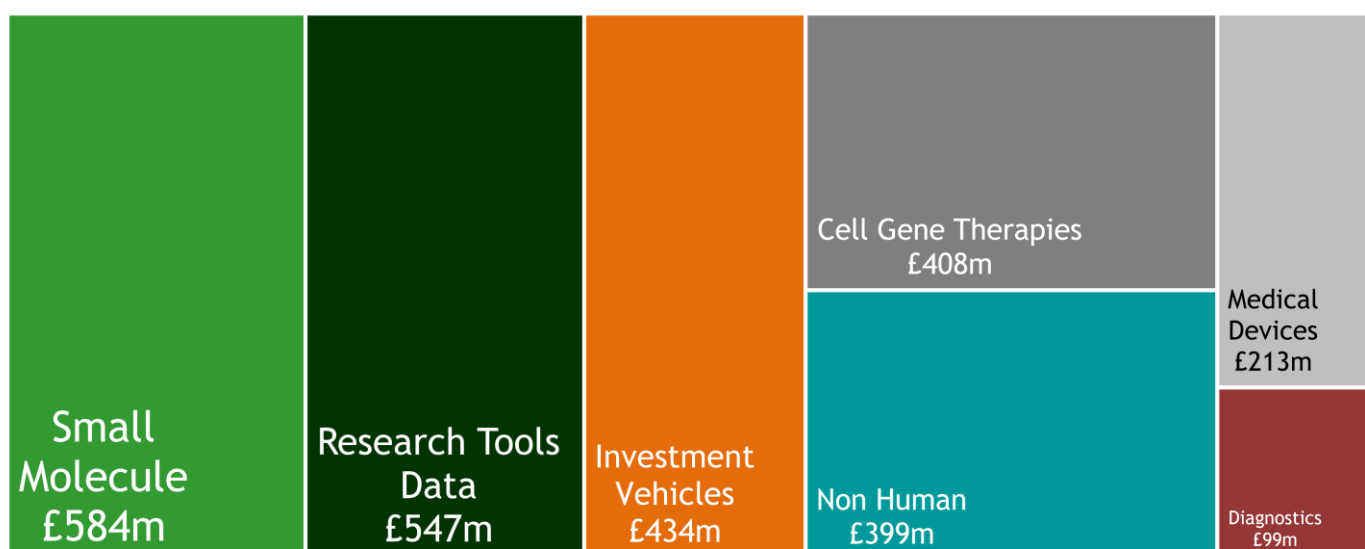
Figure 22: Primary & Secondary Fundraising Activity, 2017 – 2020 by number of companies



Source: London Stock Exchange, RNS, Radnor

Looking at the last four years in the round; Figure 23 below shows the split of total IPO and Secondary fundraising totals across the main sub-indices.

Figure 23: Primary & Secondary Fundraising Activity, 2017 – 2020 combined by value of transactions, £m



Source: London Stock Exchange, RNS, Radnor

3 – Investor Participation: Increasing breadth of ownership

Given the combination of rising share prices and the frequency and scale of equity fundraising in the sector; the interesting question is which investors have been most active in the sector?

Figure 24: All Investors Buying / Selling – March through December 2020 – by Sub Index

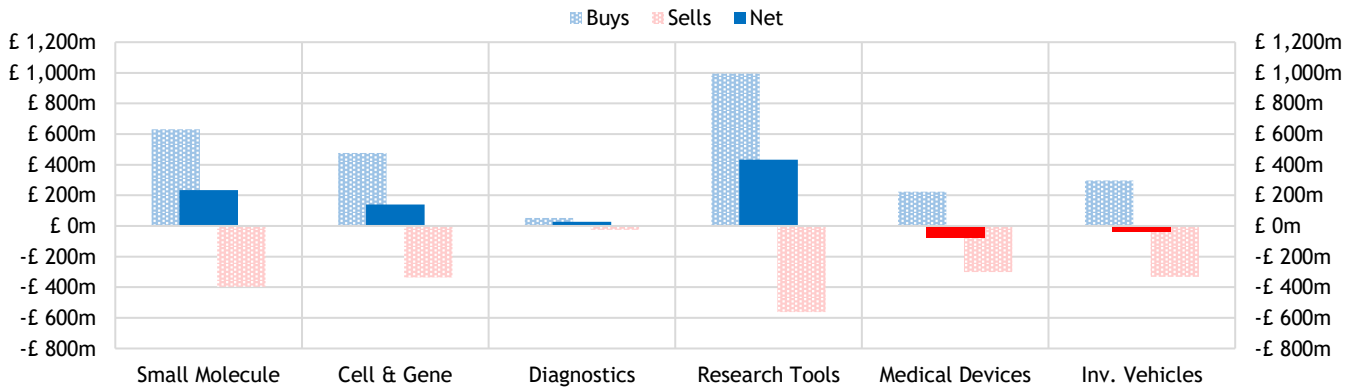


Figure 25: All Investors Buying / Selling – March through December 2020 – by Investor Type

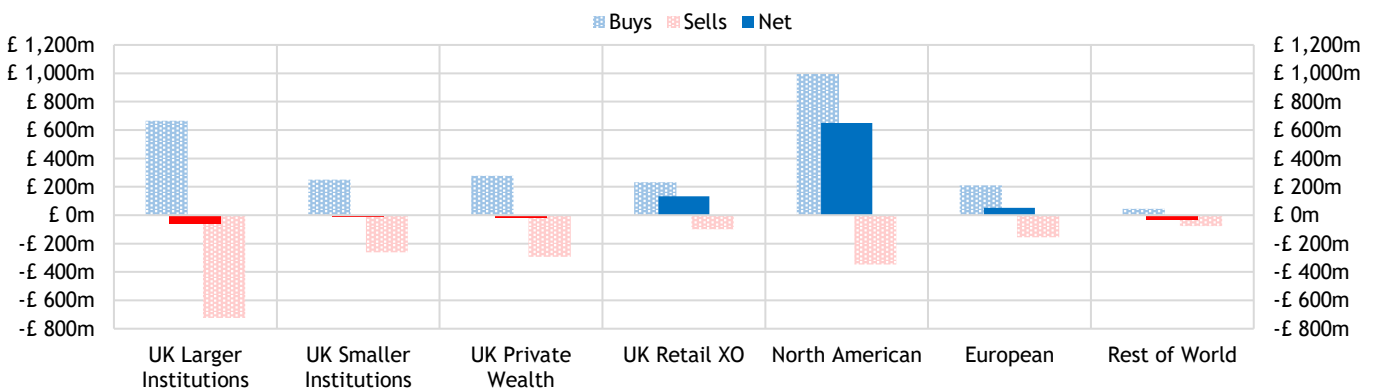
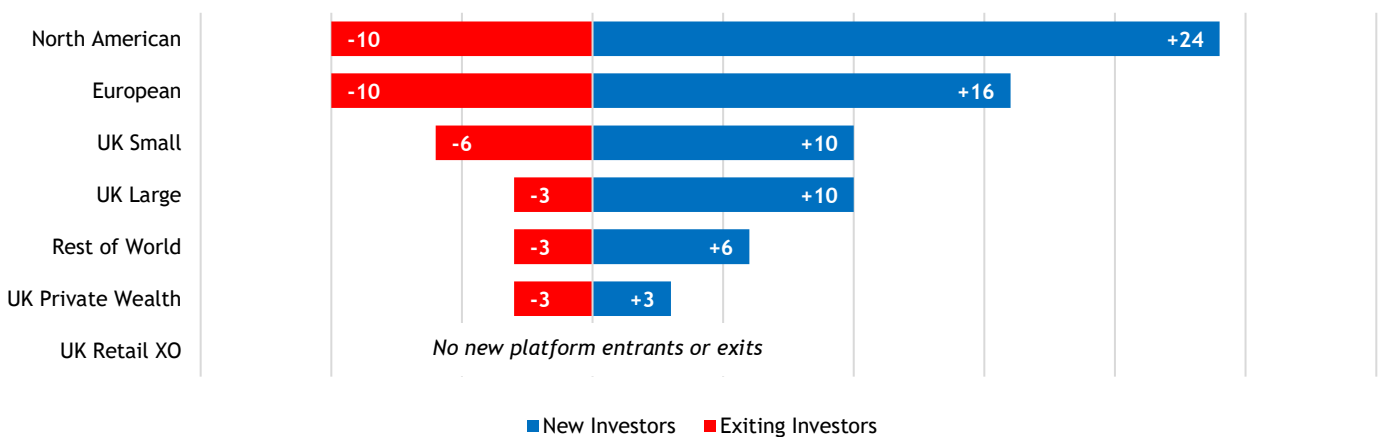


Figure 26: Total number of New Investors vs Exiting Investors – March through December 2020



Source: FactSet, Radnor

In order to answer this question, we have analysed investor net buying and selling activity from March through to December 2020.

- Across the Broad Index we can identify **£2.676bn** of new **Buying** activity, offset by **£1.959bn** of new **Selling** activity; resulting in a total net inflow of **£717m** of new buying activity across the sector;
 - **Research Tools** (net inflow of £432m), **Small Molecule** (net inflow of £234m) and Cell & Gene Therapy (net inflow of £141m) led the way in terms of net positive investor buying activity.
 - Only **Medical Devices** (-£77m) and **Commercialisation & Investment Vehicles** (-£36m) saw net outflows during the period
- Looking at the data through the lens of investor type:
 - **North American** (net inflow of £649m) and **UK Retail Execution Only** (net inflow of £132m) and **European** investors (net inflow of £52m) were the largest sources of net investor buying activity.
 - **UK Private Wealth** investors were net positive through most of 2020 but turned overall net sellers in November, which was enough to tip them into negative territory (-£11m) over the period.
 - **UK Larger Institutions**, were material net sellers in value terms with an outflow of £59m. Here overall net selling activity was concentrated in **Small Molecule** (-£77m), **Medical Devices** (-£52m) and **Investment vehicles** (-£112m). The standout sub index was **Research Tools & Data** where UK Large Institutional net buying totalled £186m.
 - UK Smaller Institutions ended the year marginally down (net outflow of **£11m**), although this was heavily skewed by a material net outflow from the **Research Tools & Data** sub index (-**£68m**).

We believe the key driver behind UK Institutional activity during 2020 was profit taking. The price outperformance delivered by the biotech sector in 2020 followed a number of years of more muted performance and provided the opportunity for UK institutions, who had been patient, but unrewarded, supporters of the sector in prior years to lock in gains.

The headline net selling by UK institutions (in value terms) should not detract from the fact that UK Institutional participation in the biotech sector has grown considerably during 2020. Figure 24 above shows the count of new investors **entering** the sector during the period, against the number of investors **exiting** the sector. By this measure:

- A net **seven** new UK Larger Institutions (**10** new entries vs **3** exits) entered;
- A net **four** new UK Smaller Institutions (**10** new entries vs **6** exits) entered.

In the charts below, we show the scale and breadth of investor activity across the Broad Biotech index. We break this data down by each individual sub-index and also by each investor type.

Our classification of Larger vs Smaller UK Institutions is a proprietary and largely subjective exercise. The primary determinant is the scale of actively managed, UK focused equity assets under management. The broad cut off point here is £10bn, below which we classify a UK Institution as being Smaller.

By Sub Index – Buying / Selling, March through December 2020

Figure 27: Small Molecule – by Investor Type

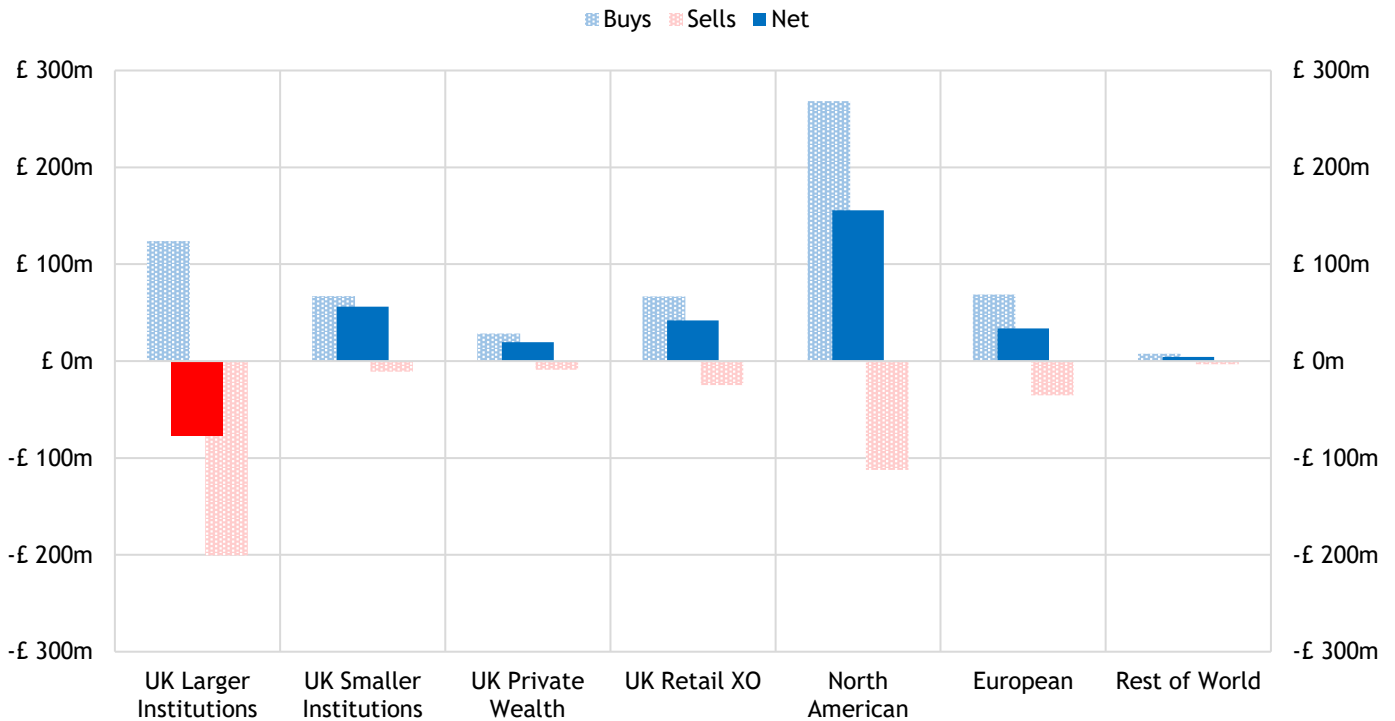
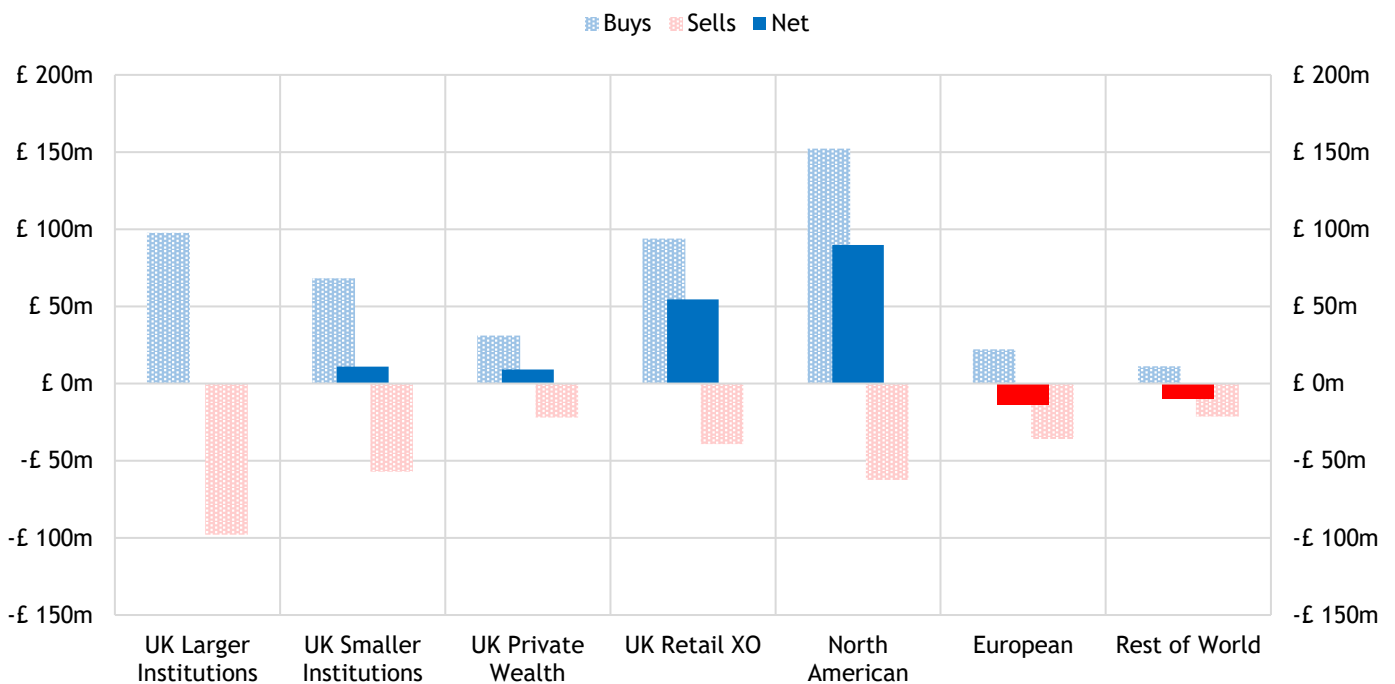


Figure 28: Cell & Gene Therapy – by Investor Type



Source: FactSet, Radnor

Figure 29: Diagnostics – by Investor Type

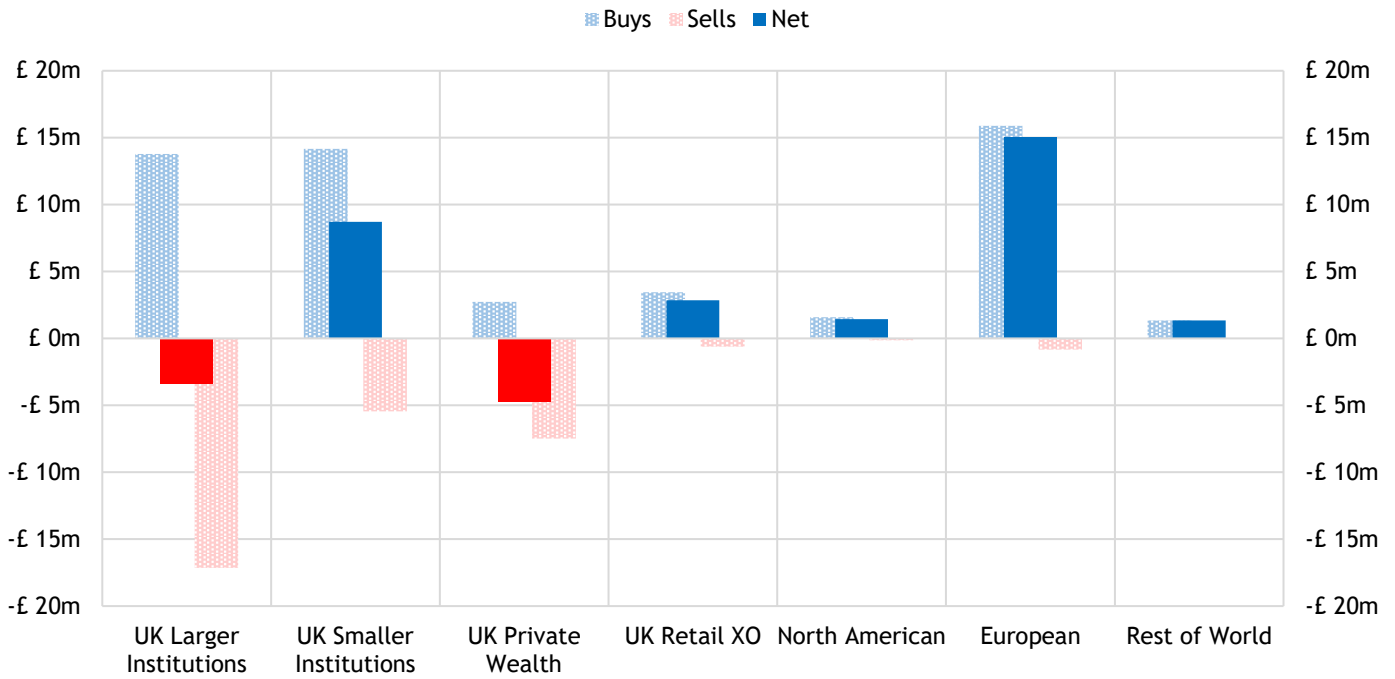
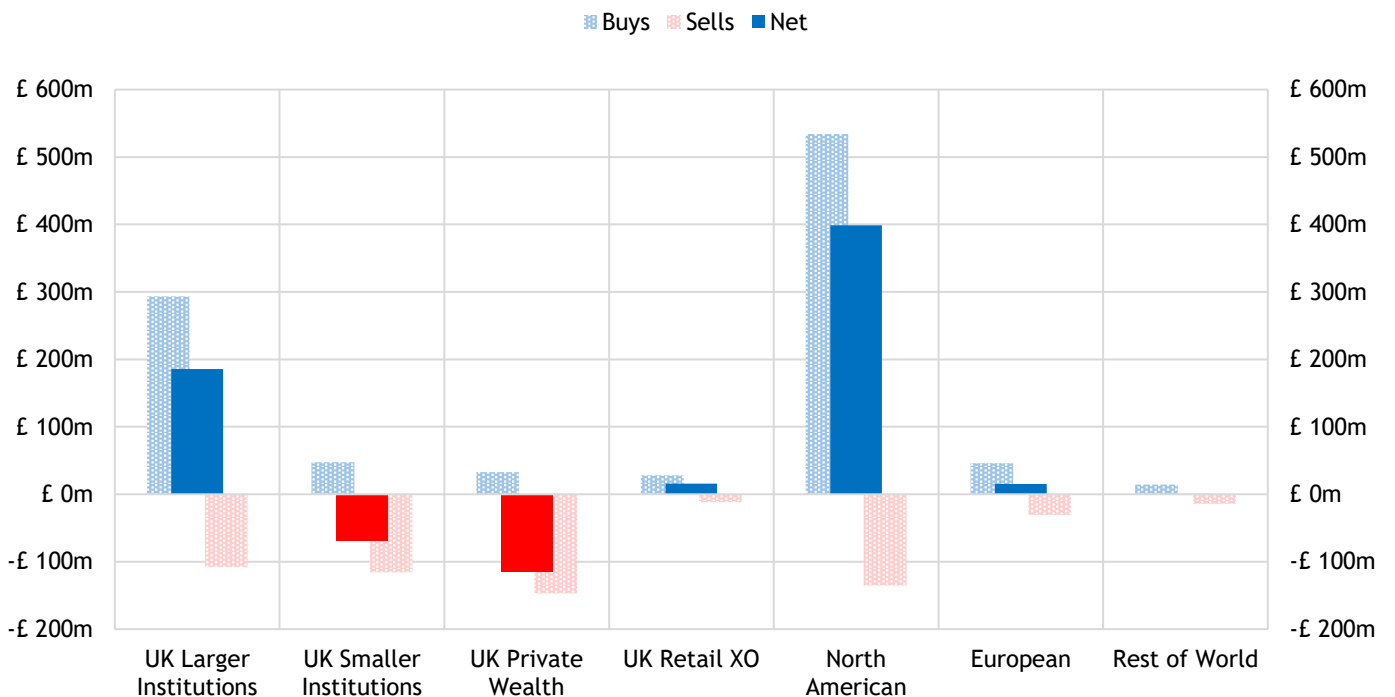


Figure 30: Research Tools & Data – by Investor Type



Source: FactSet, Radnor

Figure 31: Medical Devices – by Investor Type

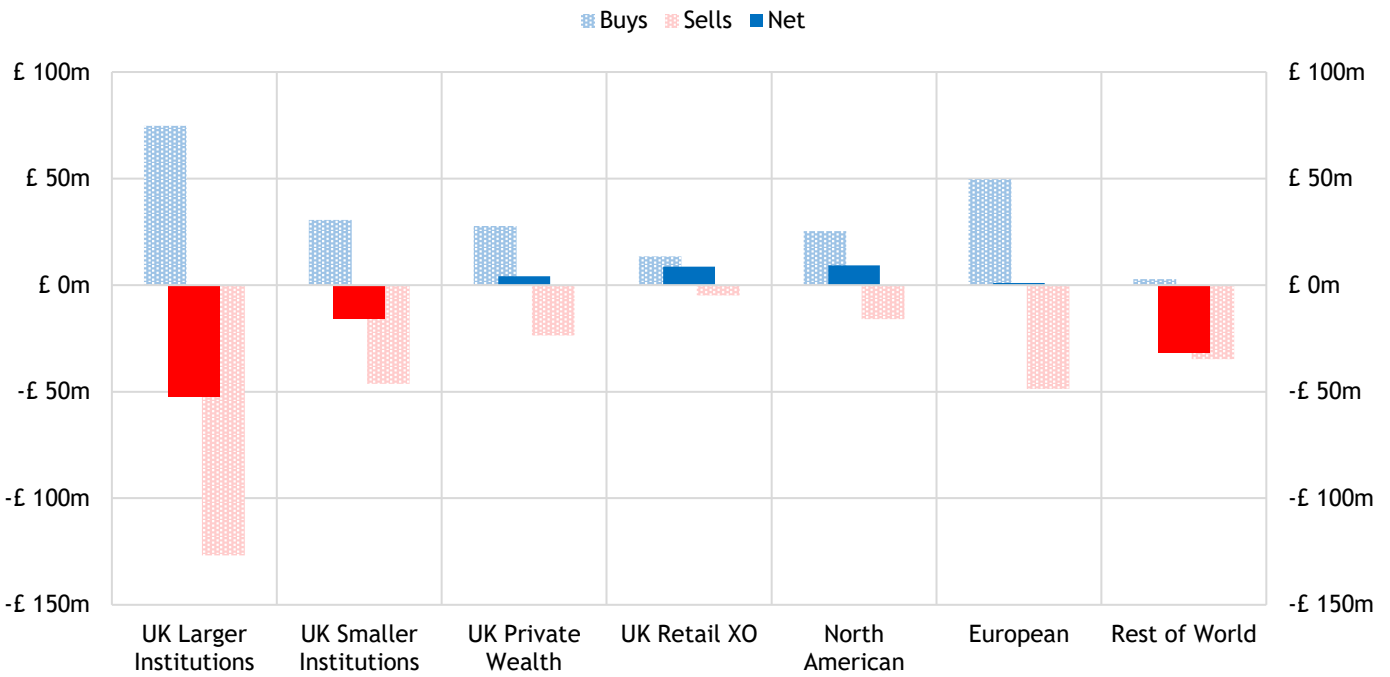
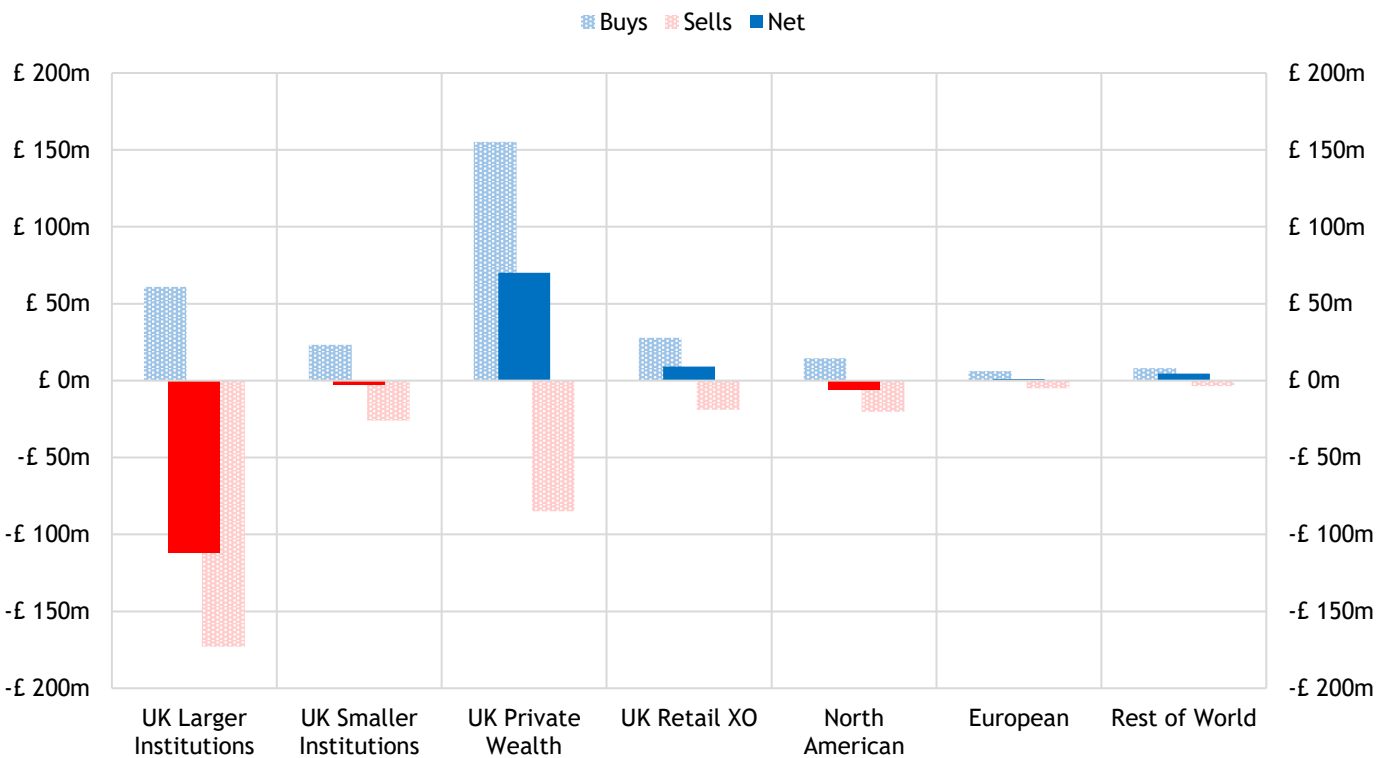


Figure 32: Commercialisation & Investment Vehicles – by Investor Type



Source: FactSet, Radnor

By Investor Type – Buying / Selling, March through October 2020

Figure 33: UK Large Institution – by Sub Index

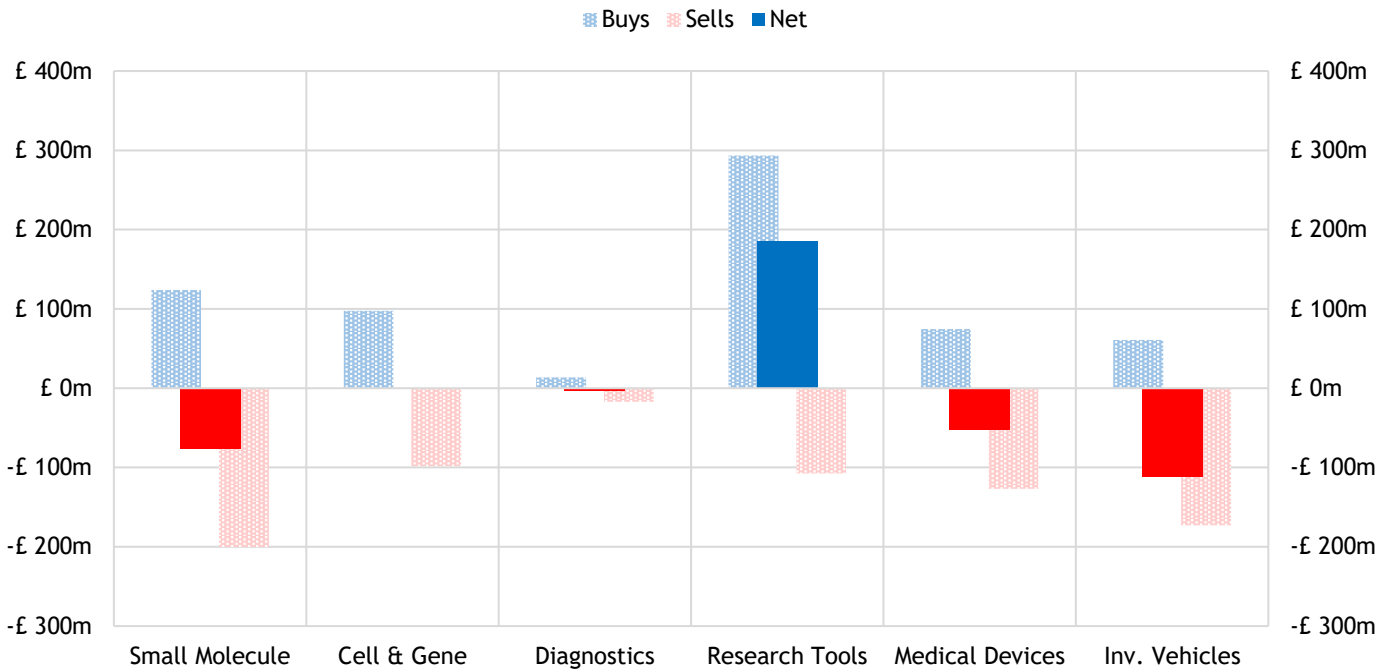
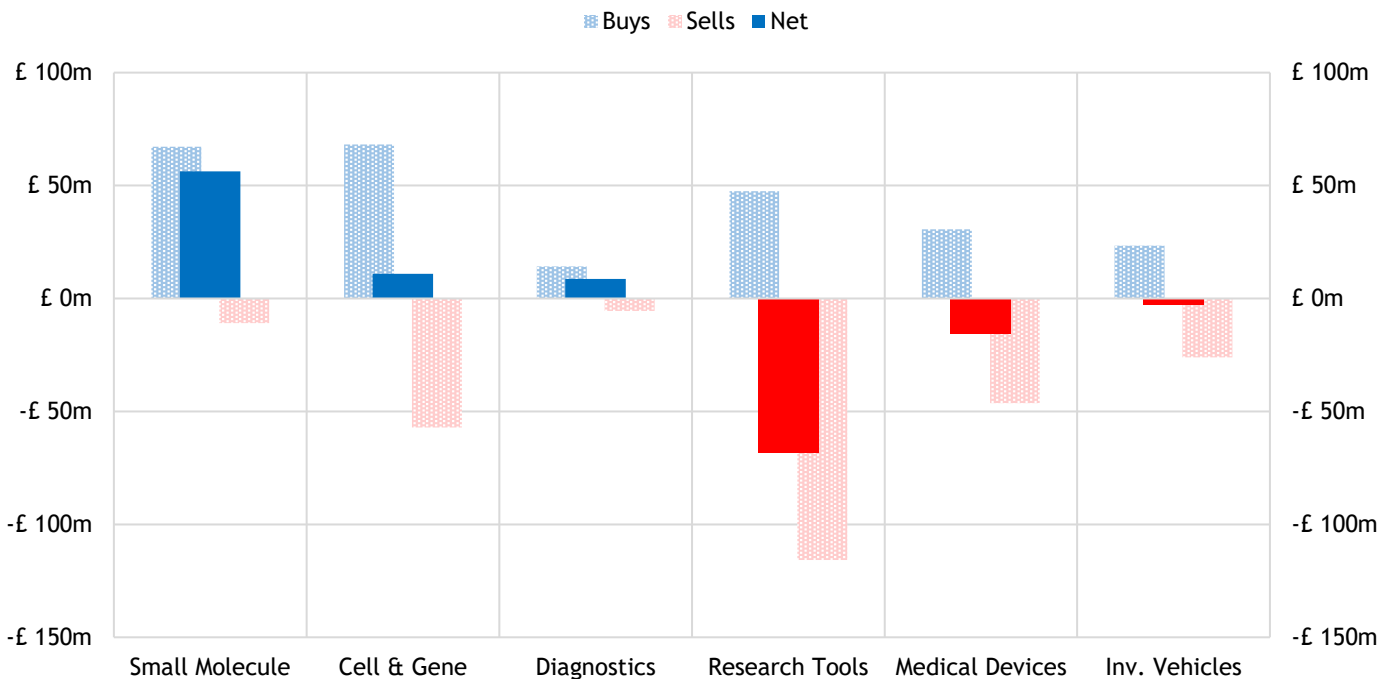


Figure 34: UK Smaller Institution – by Sub Index



Source: FactSet, Radnor

Figure 35: UK Private Wealth – by Sub Index

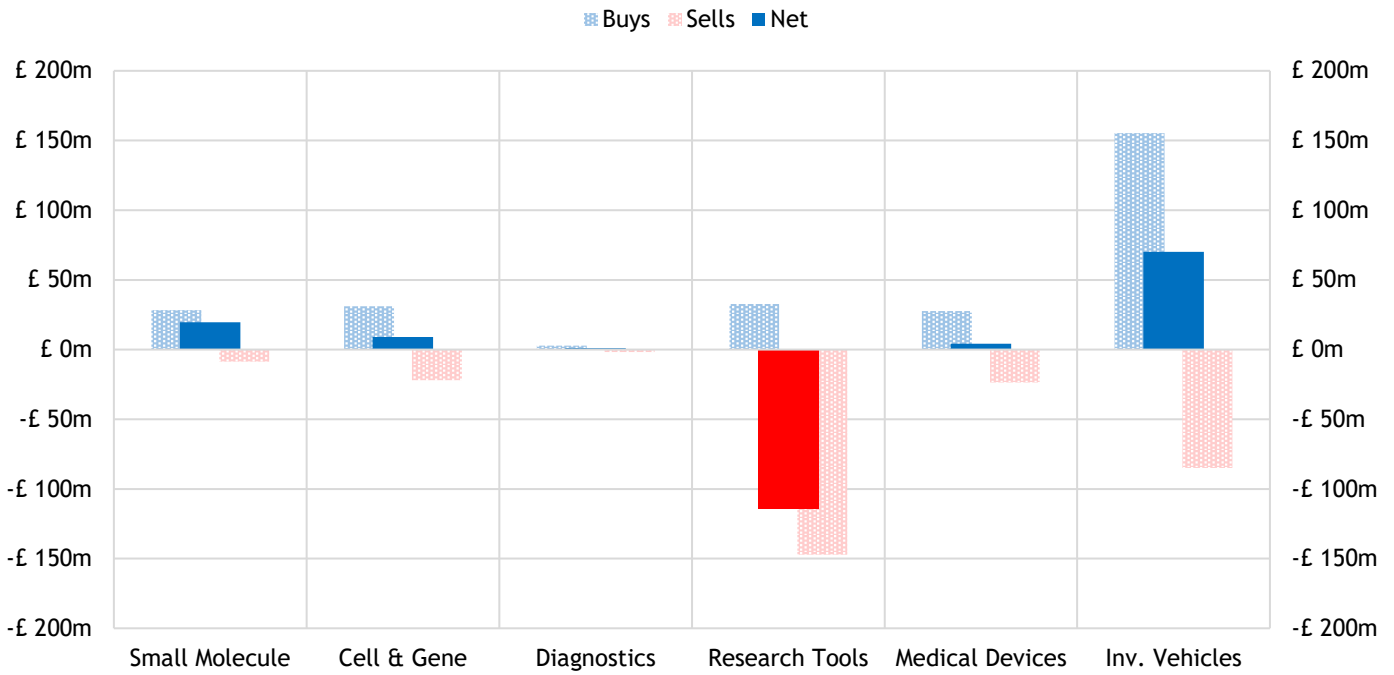
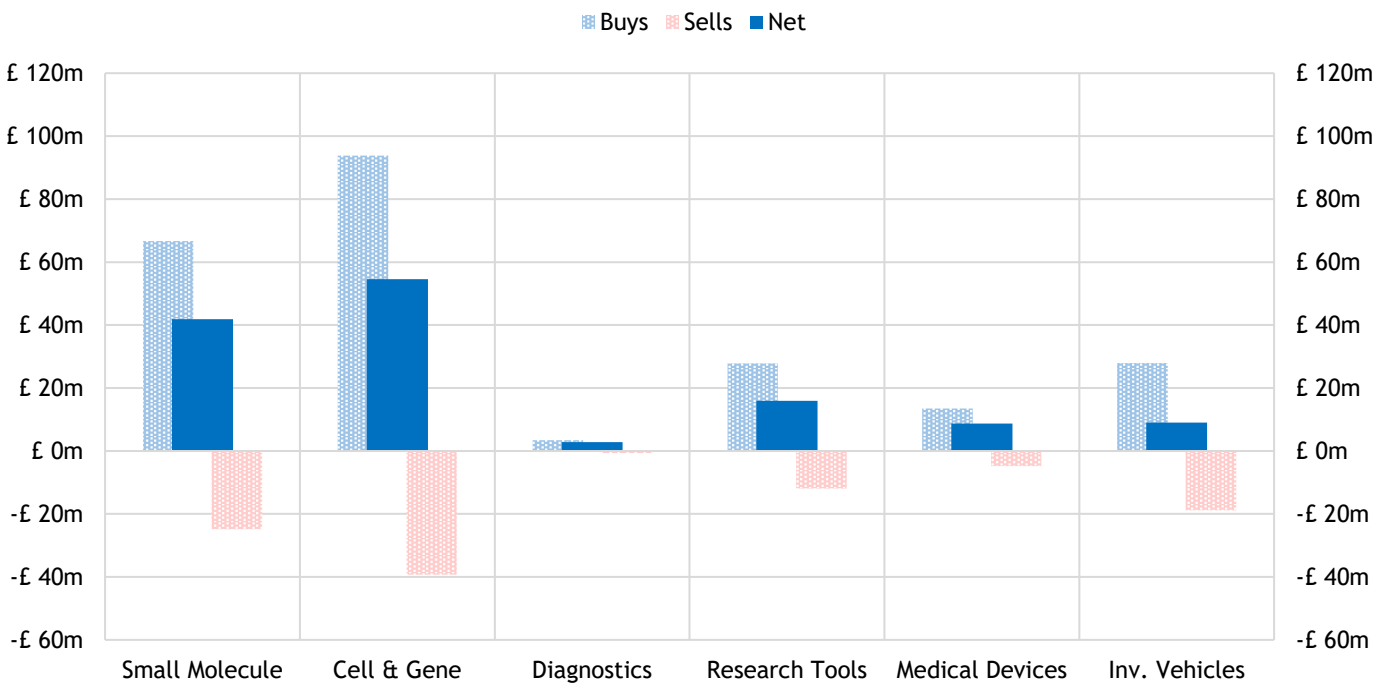


Figure 36: UK Retail Execution Only – by Sub Index



Source: FactSet, Radnor

Figure 37: North American Investors – by Sub Index

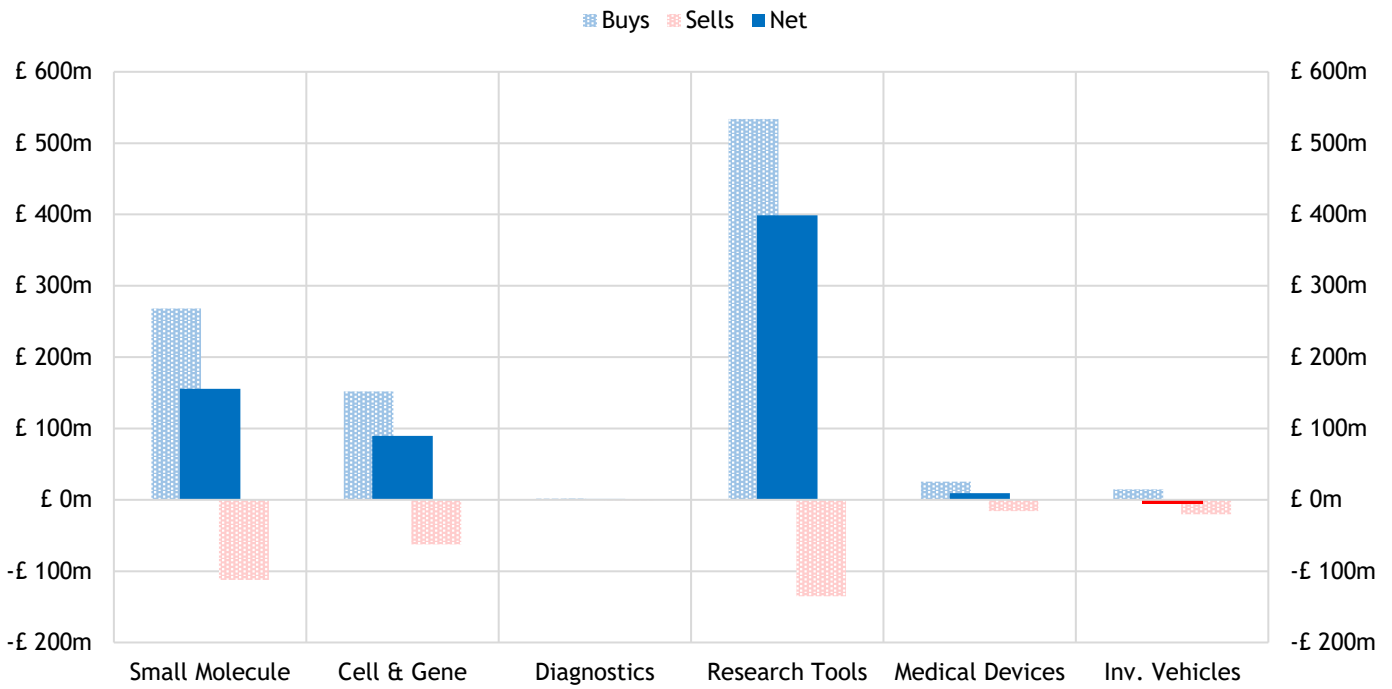
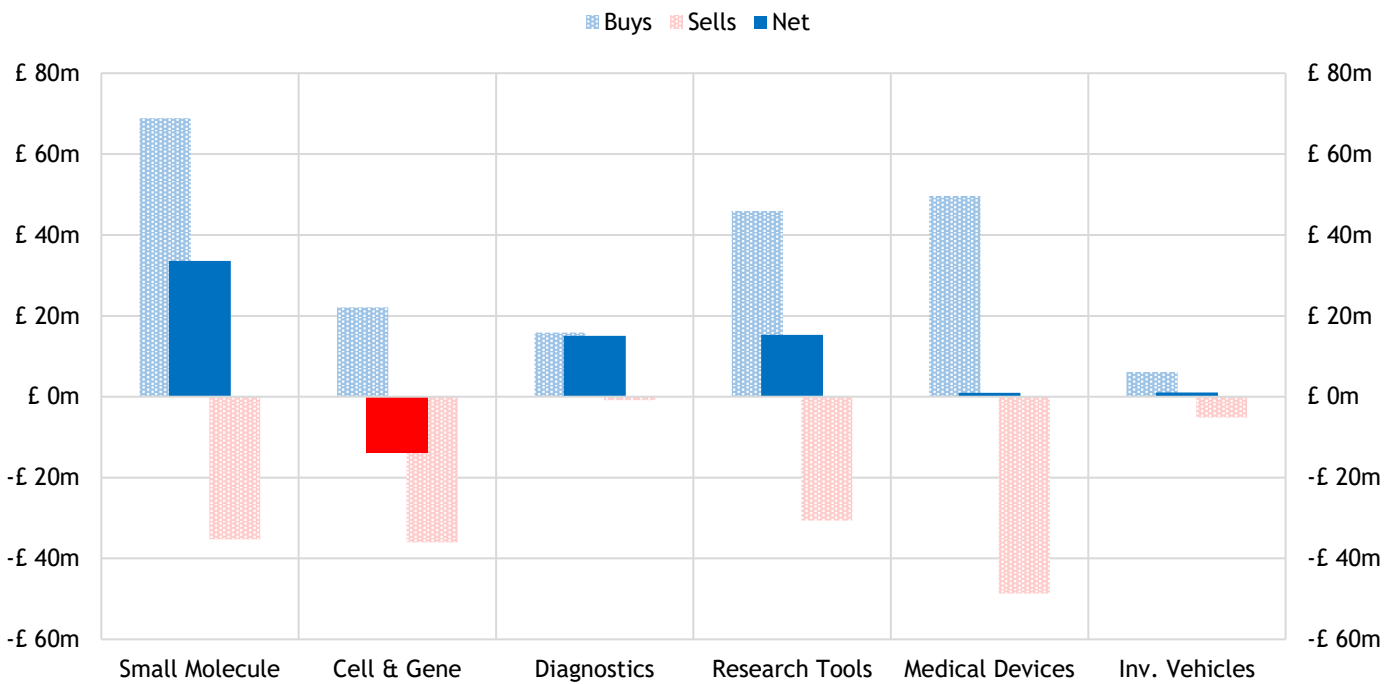
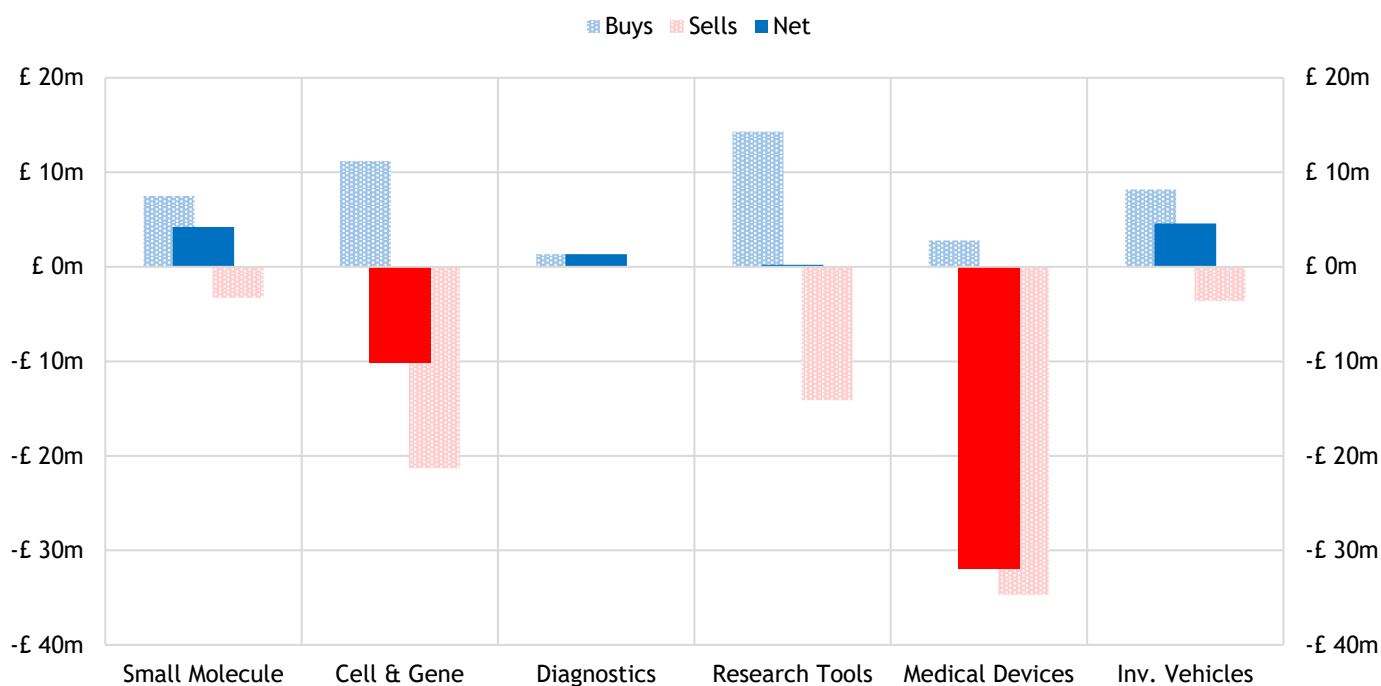


Figure 38: European Investors – by Sub Index



Source: FactSet, Radnor

Figure 39: Rest of the World Investors – by Sub Index



Source: FactSet, Radnor

By Investor Type – Net New Investors by Number, December vs March 2020

In Figures 40 – 45 below, we recut the investor data to show how many **net** new investors have entered the sector since the start of March 2020; ie pre Covid-19. We break these investor numbers down by each individual sub-index.

- In terms of UK Large and Smaller Institutions; **Small Molecule** and **Research Tools & Data** saw the largest number of new institutions (+6) entering the sector
- In terms of North American investors; **Small Molecule** also led the way (+19) followed by **Medical Devices** (+5). The new US investors comprised a broad spread of traditional mutual fund managers, hedge funds and life science specialist investors.
- 2020 saw a number of UK Private Wealth firms entering the sector with **Small Molecule** (+4), **Cell & Gene Therapy** (+4) and **Diagnostics** (+2) the most popular areas.
- **Commercialisation & Investment Vehicles** has traditionally been an area attractive to the Private Wealth audience and ownership levels were already high here leading into 2020, which saw one fewer Private Wealth firms active in the sector by the end of the year

Figure 40: Small Molecule – Net New Investors

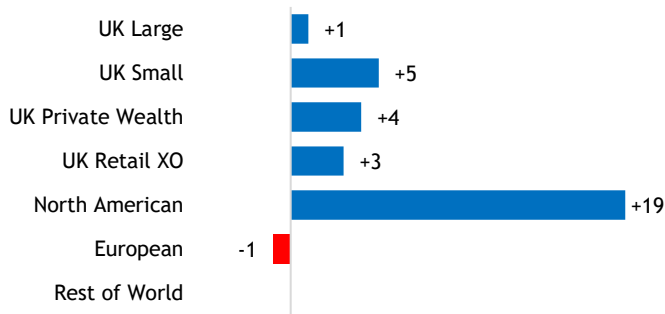


Figure 41: Cell & Gene Therapy – Net New Investors

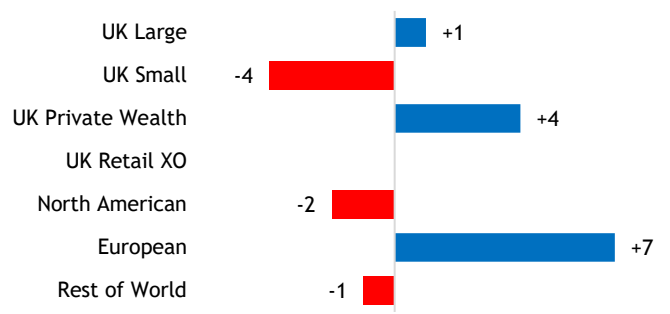


Figure 42: Research Tools – Net New Investors

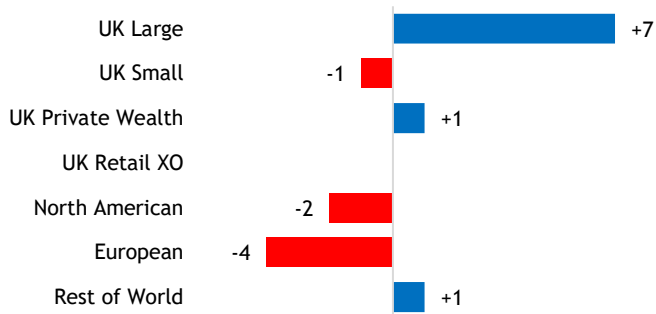


Figure 43: Medical Devices – Net New Investors

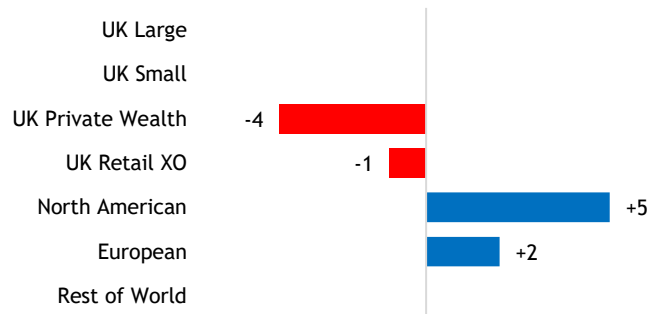


Figure 44: Diagnostics – Net New Investors

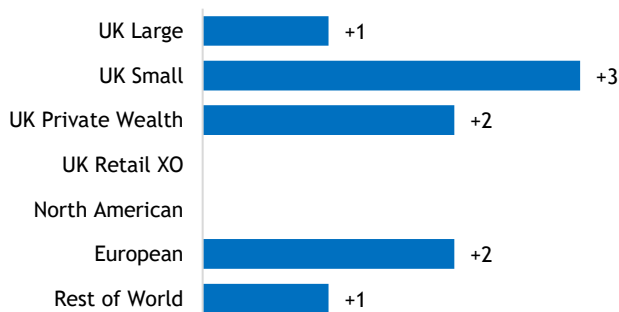
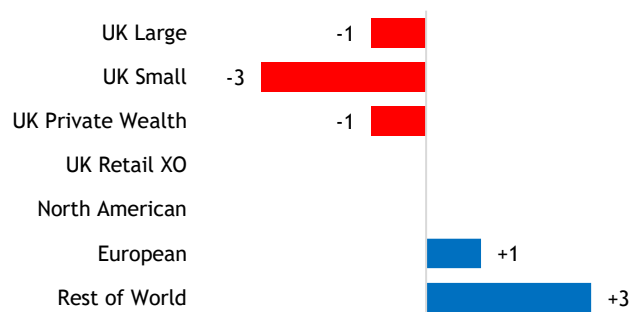


Figure 45: Investment Vehicles – Net New Investors



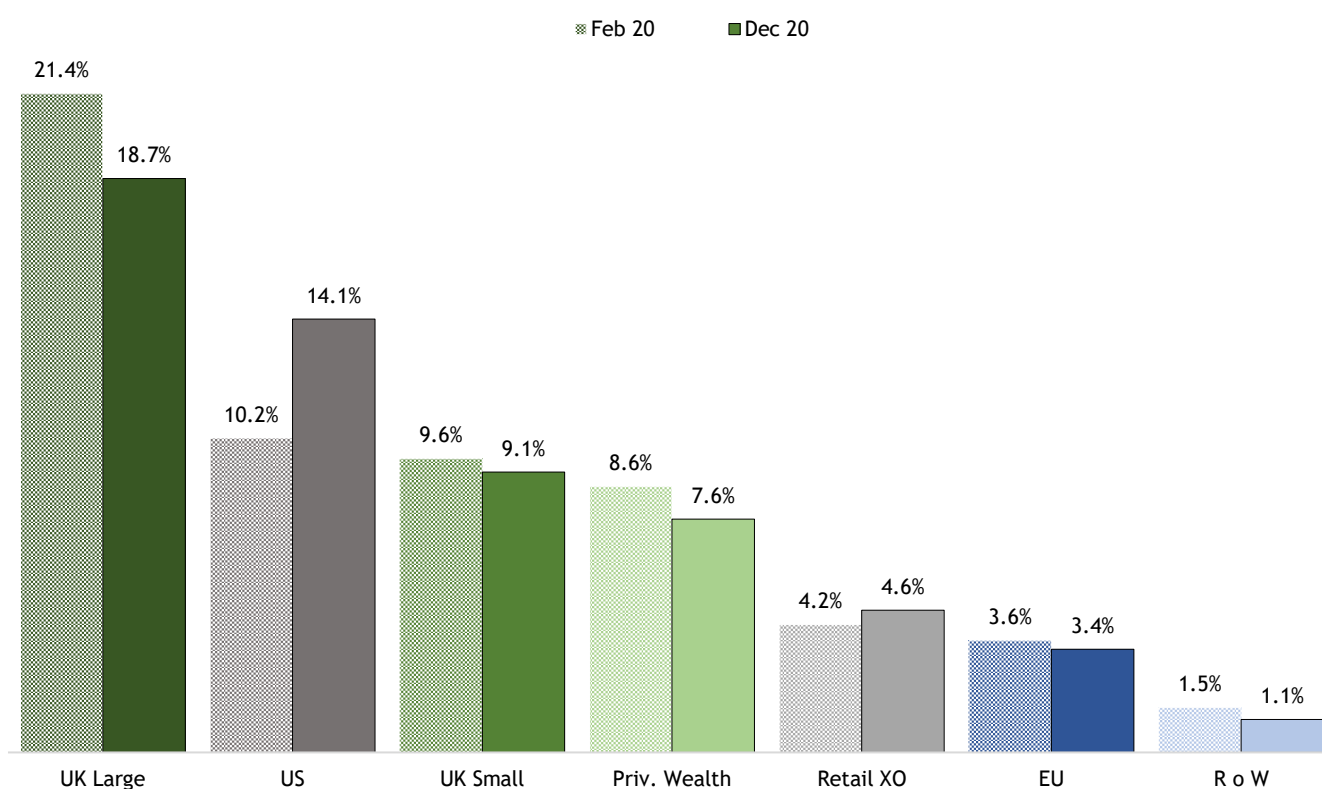
Source: FactSet, Radnor

Percentage Ownership by Investor Type – February 2020 to December 2020

In Figures 46 – 52 below, we show the proportion of the Broad Biotech index owned by each investor type (calculated by reference to the aggregate value of holdings as a percentage of total market value). We have cut the data at December 2020 and then compared to February 2020 in order to show how the ownership mix has evolved through the pandemic period.

This data only captures holdings information relating to external investors and does not show VC or founders' holdings, nor those holdings by private individuals held outside of retail execution only platforms.

Figure 46: Percentage ownership by Investor Type – February 2020 to December 2020



Source: FactSet, Radnor

- We can see that the two largest movements have been the material increase in **North American** ownership by external investors (10% to 14%) and a slightly smaller decrease by **UK Large Institutions** (21% to 19%)

Figure 47: Small Molecule – Percentage Ownership by Investor Type – February 2020 to December 2020

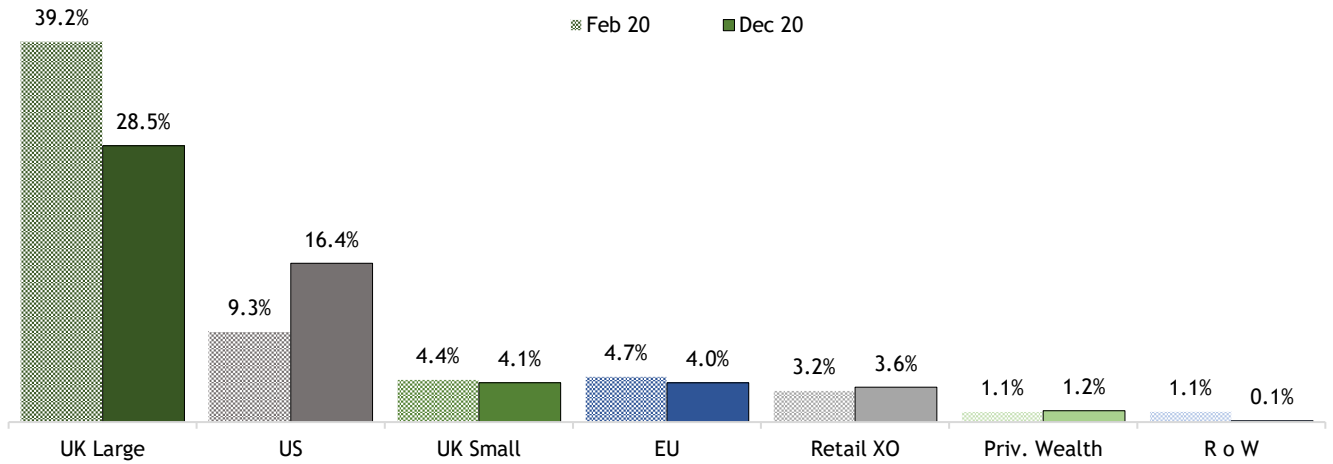


Figure 48: Cell & Gene Therapy – Percentage Ownership by Investor Type – February 2020 to December 2020

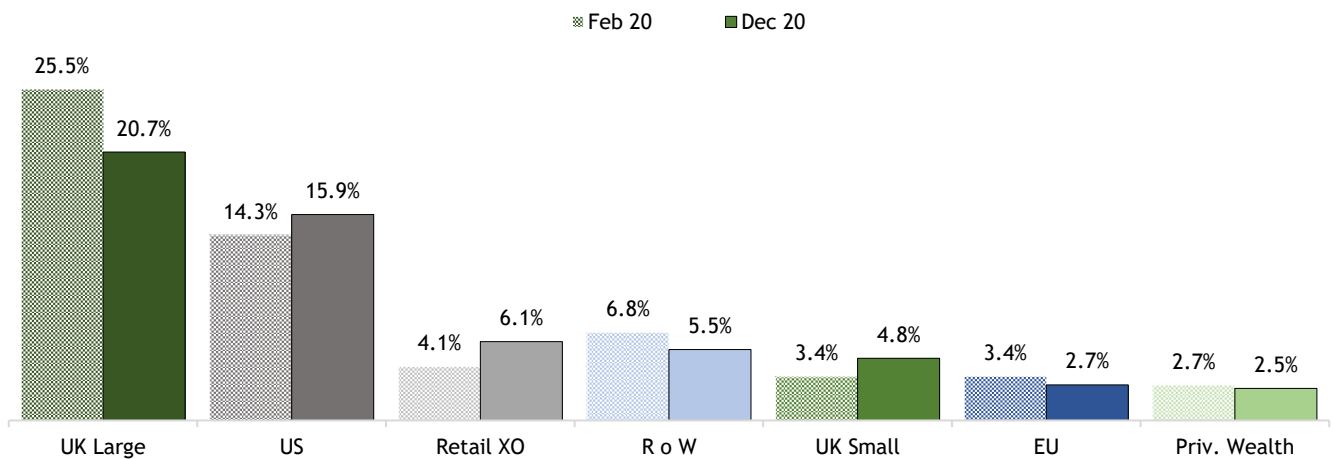
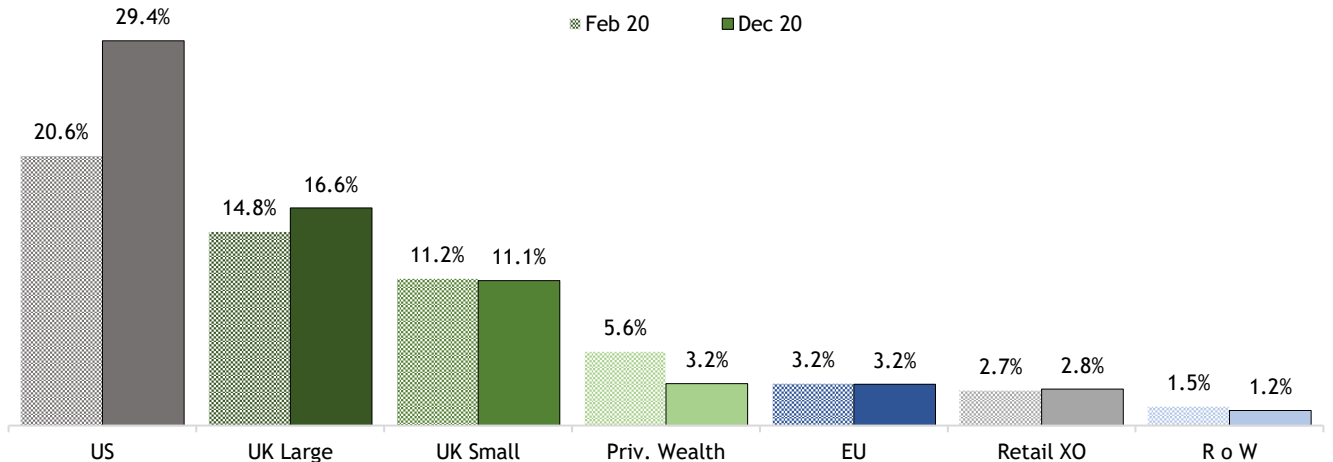


Figure 49: Research Tools & Data – Percentage Ownership by Investor Type – February 2020 to December 2020



Source: FactSet, Radnor

Figure 50: Medical Devices – Percentage Ownership by Investor Type – February 2020 to December 2020

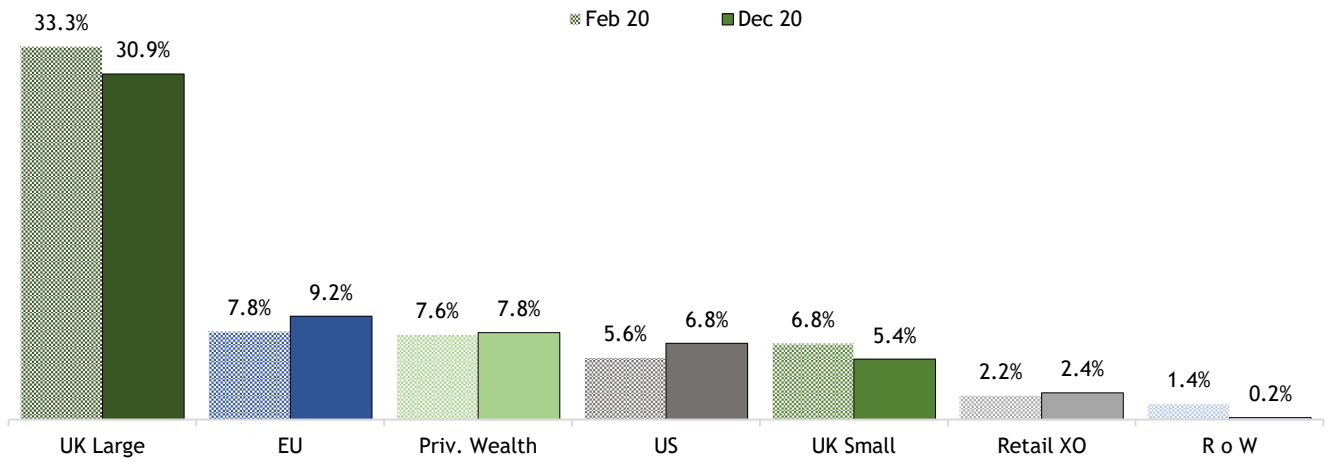


Figure 51: Diagnostics – Percentage Ownership by Investor Type – February 2020 to December 2020

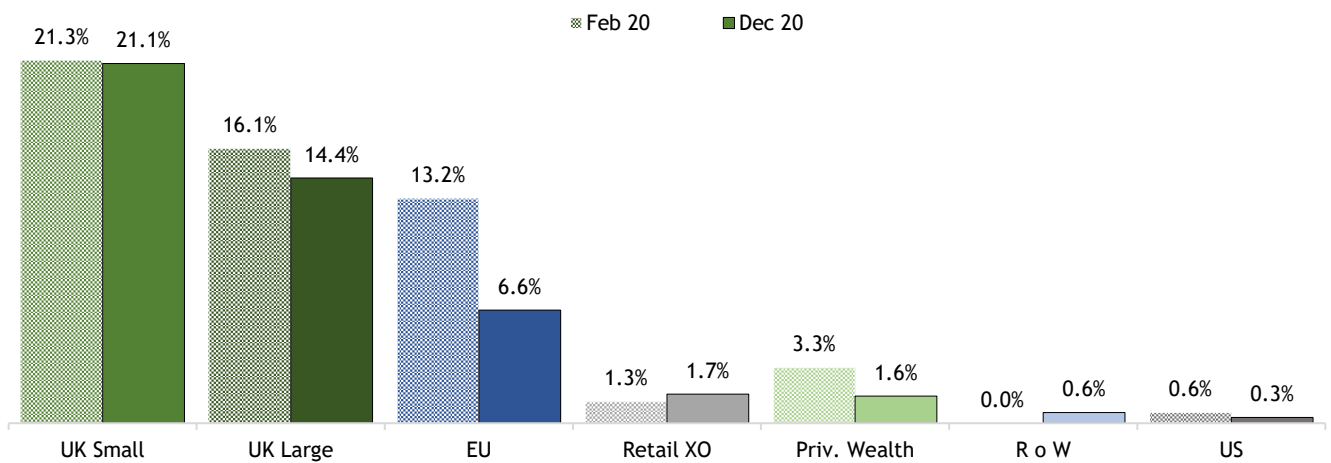
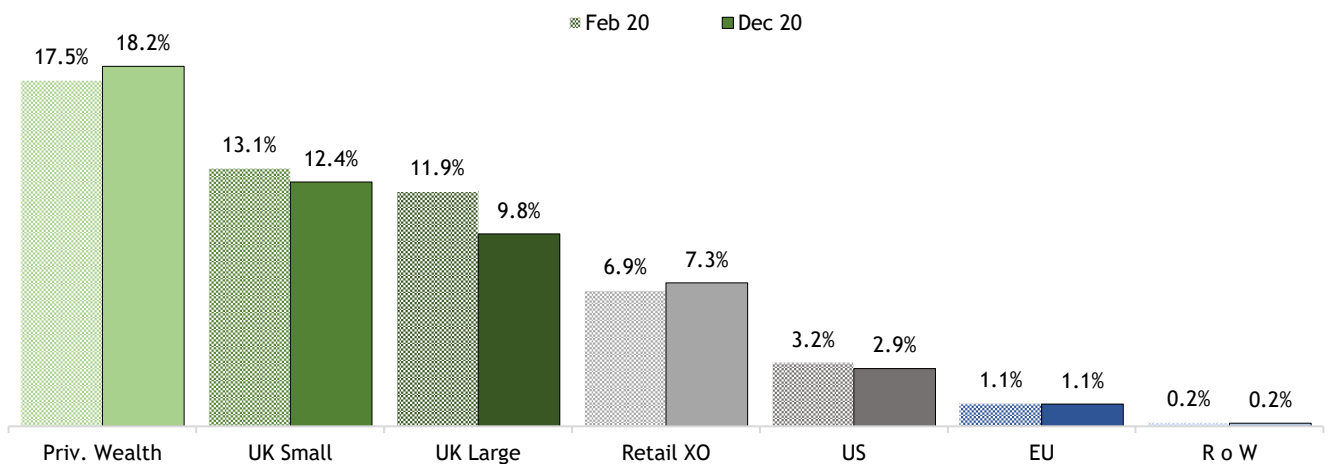


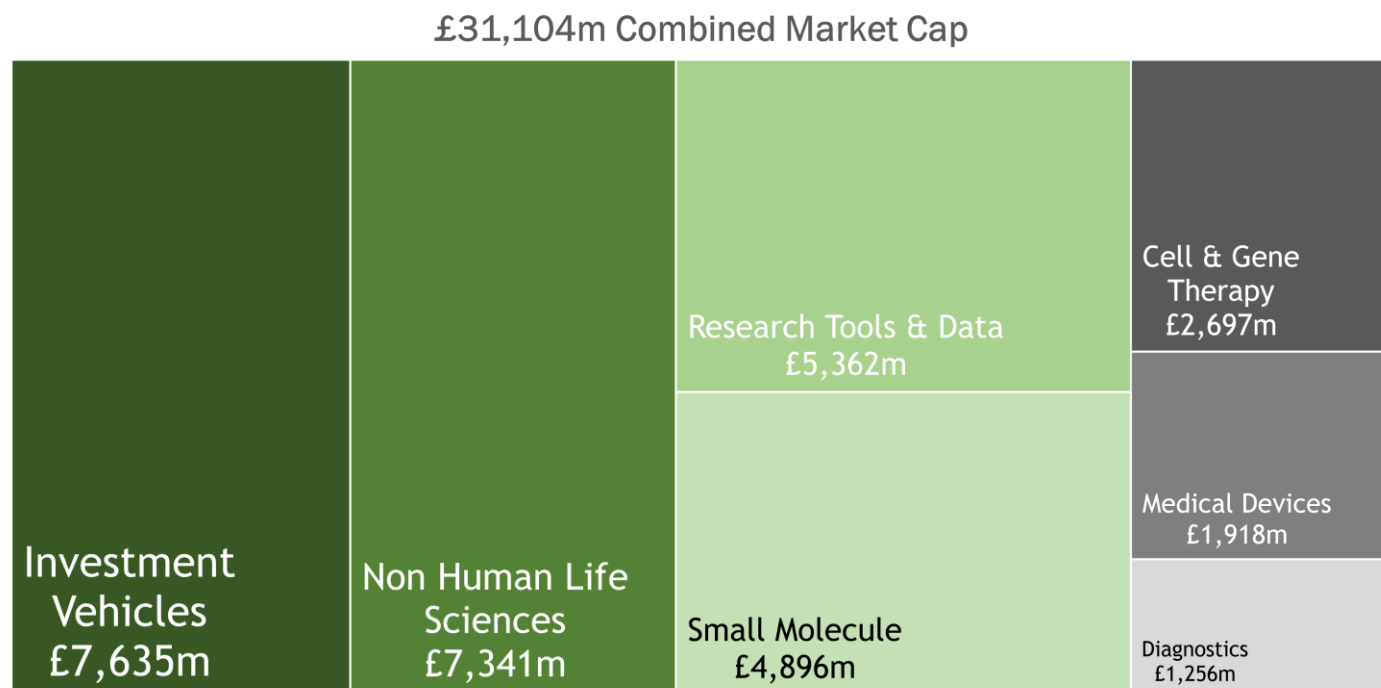
Figure 52: Commercialisation & Inv Vehicles – Percentage Ownership by Investor Type – February 2020 to December 2020



Source: FactSet, Radnor

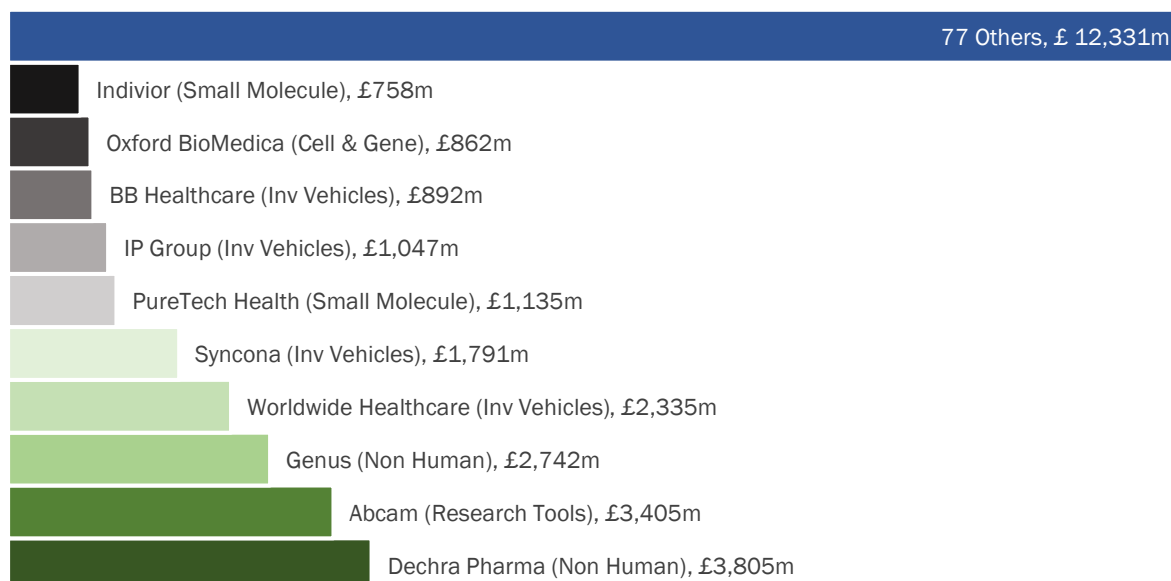
Appendix:

Broad Biotech Index – Market Cap Analysis



Source: FactSet, Radnor

Broad Biotech Index – Top Ten Constituents and Market Caps



Source: FactSet, Radnor

Broad Biotech Index – All Constituent List

Small Molecule

Allergy Therapeutics plc
 Circassia Group PLC
 4d Pharma PLC
 Destiny Pharma Plc
 Diurnal Group plc
 Evgen Pharma Plc
 Faron Pharmaceuticals Oy
 Futura Medical plc
 HemoGenyx Pharmaceuticals Plc
 ImmuPharma plc
 Indivior PLC
 Midatech Pharma Plc
 N4 Pharma Plc
 OptiBiotix Health PLC
 PureTech Health PLC
 Redx Pharma Plc
 Sareum Holdings plc
 SkinBioTherapeutics Plc
 Synairgen plc
 Shield Therapeutics Plc
 Tiziana Life Sciences PLC
 ValiRx PLC
 Vectura Group plc

Non Human

Animalcare Group PLC
 Anpario plc
 Benchmark Holdings Plc
 Dechra Pharmaceuticals PLC
 ECO Animal Health Group plc
 Genus plc

Covid-19 composite peer group

Cell & Gene Therapy

Amryt Pharma PLC
 Avacta Group PLC
 Oxford BioMedica plc
 Horizon Discovery Group Plc
 MaxCyte, Inc.
 ReNeuron Group plc
 Scancell Holdings Plc
 Silence Therapeutics plc

Research Tools & Data

ABCAM PLC
 ANGLE plc
 Bioventix Plc
 C4X Discovery Holdings PLC
 Cambridge Cognition Holdings Plc
 Collagen Solutions Plc
 MyHealthChecked PLC
 Diaceutics Plc
 e-Therapeutics plc
 Ergomed PLC
 Fusion Antibodies Plc
 Genedrive Plc
 hVIVO /Open Orphan plc
 IXICO Plc
 Oxford BioDynamics PLC
 Physiomics Plc
 Proteome Sciences plc
 Renalytix AI Plc
 Sensyne Health Plc
 Yourgene Health Plc

Medical Devices

Advanced Medical Solutions Group plc
 Advanced Oncotherapy Plc
 Creo Medical Group Plc
 Consort Medical Plc
 Deltex Medical Group plc
 Kromek Group Plc
 LiDCO Group Plc
 RUA Life Sciences Plc
 SDI Group plc
 Surgical Innovations Group plc
 Tissue Regenix Group plc
 Vectura Group plc

Diagnostics

EKF Diagnostics Holdings plc
 Immunodiagnostic Systems Holdings plc
 Novacyt SAS
 Omega Diagnostics Group PLC
 Oncimmune Holdings Plc
 Polarean Imaging Plc
 Verici Dx Plc
 Abingdon Health PLC

Commercialisation & Investment Vehicles

Arix Bioscience Plc
 BB Healthcare Trust Plc
 Biotech Growth Trust PLC
 International Biotechnology Trust PLC
 IP Group plc
 Polar Capital Global Healthcare Trust plc
 RTW Venture Fund Limited USD
 Syncona Ltd GBP
 Worldwide Healthcare Trust PLC GBP

Source: UK BioIndustry Association, Radnor

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