NEWFINANCIAL
Rethinking capital markets

UNLOCKING PRODUCTIVE INVESTMENT

ANALYSIS OF HOW DIFFERENT POOLS OF LONG-TERM CAPITAL IN THE UK ARE INVESTED - AND HOW TO UNLOCK THEM

February 2021

by William Wright

> This report shows that while the UK is bursting with over £5.6 trillion in pools of long-term capital it faces a drought of the sort of long-term productive investment that the economy needs in the wake of the Covid crisis. Just 1% of pensions and insurance assets are invested in unlisted UK equities: this report highlights the barriers to unlocking more of this capital and suggests some solutions to put more of it to work in the UK economy.

INTRODUCTION

'Water, water, everywhere - nor any drop to drink'

The Rhyme of the Ancient Mariner, by Samuel T Coleridge

As we approach the first anniversary of lockdown in the UK, the economy needs all the help it can get to rebuild in the wake of the Covid crisis. In particular, it needs more 'productive investment': long-term capital that is put to work in the form of equity markets, unlisted equities, growth capital, patient capital, and infrastructure investment. But does the economy have access to the sort of funding that it needs?

This paper sets out in stark terms an apparent disconnect in the UK: on the one hand, the UK is overflowing with long-term capital in the form of pensions and insurance assets. On the other, it is suffering a drought in terms of patient and productive capital, with only a tiny proportion of the abundant pools of long-term capital in the UK being put to work in the form of productive investment.

The paper analyses this disconnect by mapping the available pools of long-term capital in the UK; drilling down into the asset allocation of different 'buckets' of long-term capital; and mapping that asset allocation against different markets to identify how much (or how little) of that long-term capital is in the form of productive investment. It identifies the main barriers to unlocking more of this capital, and suggests some potential solutions.

In theory, investors with long-term time horizons and long-term liabilities like pensions funds and insurers should be ideally placed to provide long-term productive investment to the UK economy. In practice, we found that:

> The pools of long-term capital in the UK across pensions, insurance, direct retail investment and endowments add up to £5.6 trillion, the biggest and deepest in Europe. But…

> Just 12% of this is invested in the UK stock market and less than 4% is invested outside the FTSE 100.

> Less than 1% of the £4.6 trillion in pensions and insurance assets is invested in unlisted UK equities.

> Just 3% of defined benefit pensions (the largest component of UK pensions) is invested in the UK stock market.

> A one percentage point increase in the allocation to unlisted equities would unlock £55bn for UK companies

What is productive investment?

Productive investment is not a clearly defined term. At a broad level, it is any investment that has the potential to boost the productive capacity of the economy. This includes investing in plant and equipment, research and development, innovation and technology, or infrastructure. It can be debt or equity, public or private, liquid or illiquid.

For the purposes of this paper we narrow this down to focus on some key characteristics: that productive investment is long-term in nature and outlook, that it is active rather than passive, and predominantly weighted towards funding smaller companies and growth companies (listed or unlisted), and predominantly in the form of equity. Another way of looking at it is in terms of what it isn't: it probably doesn't include investing in the FTSE 100 through an open-ended index fund, valuable though that is. This is not to criticise other forms of investment: they all have a part to play and most investors are responding rationally in their allocation of capital to the incentives in front of them and restrictions around them.

In the wake of Covid, the UK economy needs to kickstart productivity and productivity growth. This will require more long-term investment in infrastructure and innovation, the essential building blocks for real increases in GDP per capita. Listed and unlisted companies will emerge from the Covid crisis with higher leverage and will need more equity and equity-like funding to rebuild. The ideal form of funding for innovation - whether it is start-up, growth or scale-up financing, or for more mature companies - is equity (listed or unlisted) with a long-term view. This is not a new challenge: HM Treasury has specifically focused on this problem over the past five years with its review of patient capital and the current working group on productive finance. We hope that this paper is a useful contribution to the debate.

This report is a working draft. We have made some quite big assumptions, and no doubt some quite big mistakes, which are entirely my own. Please contact me on the email below with any feedbacks or suggestions.

William Wright
Managing director
william.wright@newfinancial.org

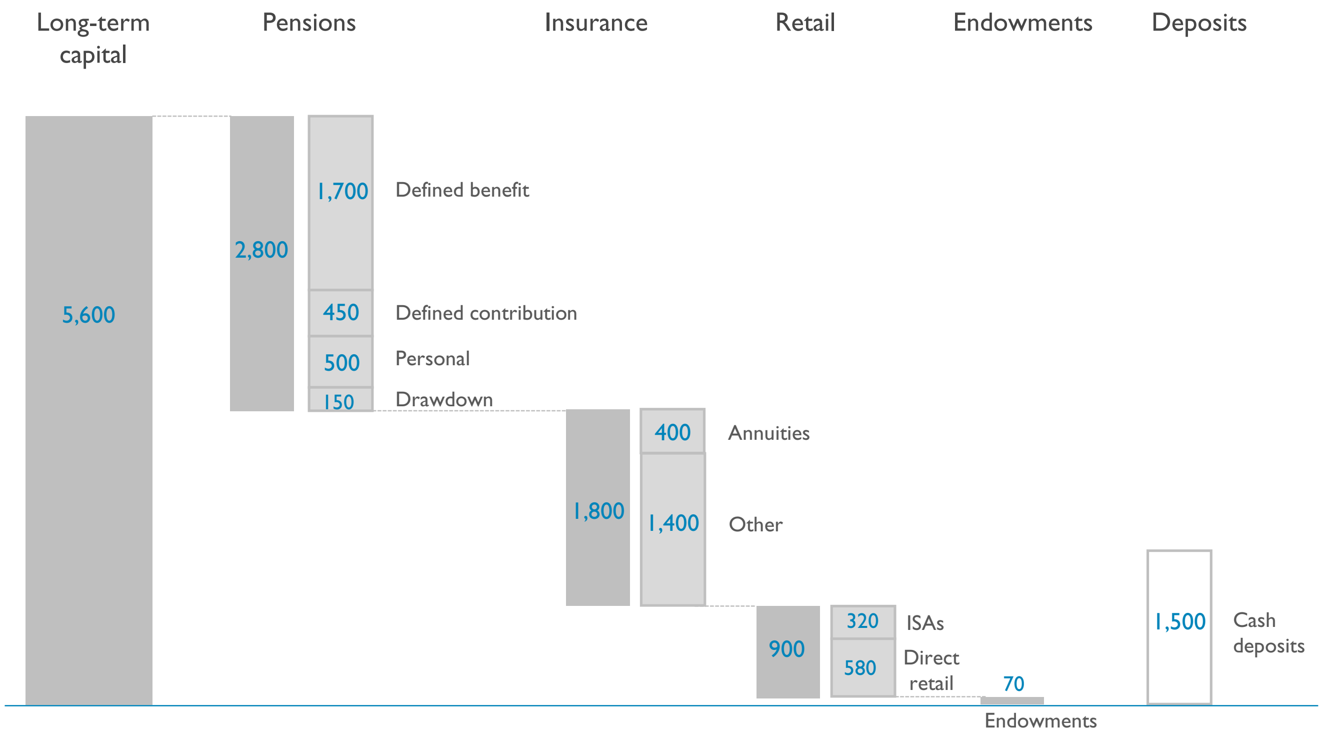
SUMMARY

Here is a short summary of this report:

1. **An embarrassment of riches:** the UK is overflowing with big and deep pools of long-term capital. We estimate that the combined value of pensions assets, insurance assets, direct retail investments and endowment funds in the UK is around £5.6 trillion, nearly three times GDP. This means the UK has the biggest and deepest pools of long-term capital in Europe (and in terms of depth not far behind the US).
2. **A clear disconnect**: only a tiny proportion of this capital is allocated to long-term, patient, productive assets. Just 12% of this huge pool of capital is invested in the UK stock market and less than 4% is invested outside of the FTSE 100. Less than 1% of the £4.6tn in pensions and insurance assets is invested in UK unlisted equities (and just 0.5% of defined contribution pensions are).
3. **Growth potential:** on the plus side, this presents a significant growth opportunity. Given the sheer scale of pools of long-term capital in the UK, a small shift in asset allocation could have a huge impact. If the asset allocation to UK unlisted equities across pensions, insurance and retail pools of capital increased by just one percentage point (to 2.1%) it would put an additional £55bn to work in the UK economy.
4. **A post-Covid recovery:** the UK economy will need all the help it can get in the wake of the Covid crisis. Companies will need more equity and equity-like funding, and the economy will need more investment in infrastructure, innovation and growth. Smaller companies in the private sector that are most likely to be hit by Covid are probably going to be the least able to access the equity funding that would help them rebuild.
5. **The decline in UK assets:** over the past 20 years the asset allocation of UK pensions, insurers and asset managers has fallen sharply. Defined benefit pensions schemes (the largest component of UK pensions) have reduced their allocation to UK equity from 48% in 2000 to less than 3% today (meaning that in real terms they have cut the value of their investment in UK equities by nearly 90%). UK asset managers and insurers have roughly halved their allocation to the UK stock market over the same period.
6. **A minority stake:** the low allocations to productive UK assets means that pools of long-term capital in the UK owns less than 30% of the UK stock market between them, around a third of venture capital and growth funds in the UK, and less than 10% of buyout funds.
7. **The flow of investment:** the flow of investment in productive assets in the UK is relatively low. Over the past five years, UK companies have raised about £30bn a year in equity on the stock market. Private equity firms have invested about £13bn a year in the UK, venture capital funds about £1.5bn a year and growth funding has averaged £2.5bn a year. Infrastructure investment is harder to identify because it straddles different sectors and asset classes, but we think it less than £10bn a year.
8. **A structural challenge:** two of the biggest challenges in unlocking more productive investment in the UK are the ubiquity of open-end / daily dealing investment funds, and the growth in passive investing. Open-ended funds account for 85% of investment funds in the UK, but are a poor vehicle for illiquid assets. The government is focused on developing a new long-term fund structure to address this. Low cost passive investing is also unsuitable for investment in illiquid assets: 30% of all assets under management in the UK are run on a passive basis, rising to 44% for equity assets.
9. **The main barriers:** the low level of productive investment in the UK is the rational outcome of a system that has grown in size, complexity and interconnectedness over the past few decades, and which has been repeatedly overlaid with new regulation and structures. There are also specific barriers within each bucket of long-term capital, such as the charge cap for DC pensions and capital requirements for insurers.
10. **Opening the taps:** there is of course no silver bullet to unlocking more productive investment. Broadly we think the government and industry should focus on getting more money into pools of long-term capital, making those pools of capital more efficient, ensuring they have right the vehicles and structures in which to invest, and recalibrating the regulatory and tax regime around them. More ambitiously, the government and the investment could work together to create a growth fund with a specific focus on productive capital.

Fig.1 An embarrassment of riches?

The value of pools of long-term capital in the UK as of the end of 2019 in £ billions



Source: New Financial analysis of data from the ONS, IA, ABI, HMRC

The law of big numbers

When it comes to thinking about how to put more money to work in long-term growth capital or productive investment in the UK, the availability of the money itself doesn't look like it should be a problem. The UK has just under £5.6 trillion in pools of long-term capital across pensions and insurance assets, retail investments, and endowments, according to our analysis. The problem, as we'll see in the next few pages, is how this capital is invested.

The biggest single pool of capital is pensions, which adds up to about £2.8 trillion or half of the total amount of long-term capital in the UK. Just over 60% of pensions asset are in defined benefit schemes (about £1.7tn in total) while defined contribution pensions assets account for another£450bn. While this pot is relatively small, the wholesale switch away from DB to DC schemes over the past 20 years and the introduction of auto-enrolment in 2012 means that this pot is growing fast and could be worth anything between £1tn and £1.5tn within a decade or so. Personal pensions add another £500bn.

The second biggest pot is insurance assets of around £1.8tn, roughly a third of the total amount of long-term capital. In an indication of the increasingly blurred lines between pensions and insurance, we have allocated £400bn in assets backing annuities to the insurance sector but we could equally have included it under pensions.

Direct retail investments - that is, investments in securities and funds outside of a pension or insurance product - add another £900bn, or which just over £300bn is held in tax efficient stocks and shares ISAs. We estimate that endowments and foundations, such as the Wellcome Trust or the nascent university endowment sector, add another £70bn. For good measure, UK households are sitting on another £1.5tn in savings and cash deposits, some of which could be redirected towards investments. It's worth noting that this pot has grown by around £150bn through the Covid pandemic over the past year as many households have saved more than they have spent.

Flush with cash

A quick comparison with some other countries underlines that the UK appears to be flush with cash (see Fig.2). Based on slightly different data from the ECB, the UK has a potential pool of long-term capital of around £7.5 trillion (including cash deposits). That's roughly 50% bigger than the comparable amounts in France (which has a similar sized economy) and Germany (which has a much bigger economy).

The big difference in financial wealth between the UK and similar sized economies in Europe is pensions. The blue bars in Fig.2 (cash deposits) and the dark grey bars (insurance assets) add up to roughly the same amount in each of the UK, France and Germany. But in the UK, funded pensions assets add another £2.7tn. That's more than 10 times the value of funded pensions assets in France (£250bn) and in Germany (£215bn).

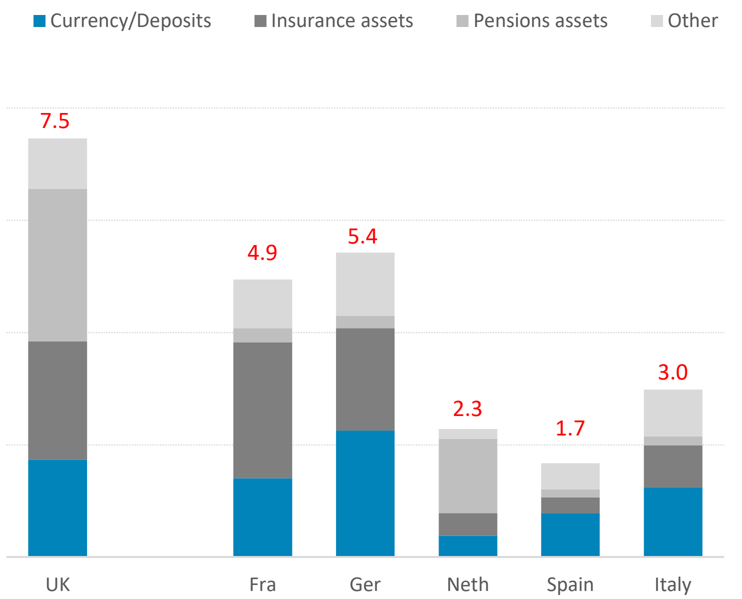
The outlier in Europe is the Netherlands, which has pensions assets of over £1.3tn, despite the relatively small size of its economy. Dutch pensions account for just under 40% of all pensions assets in the EU despite the Dutch economy representing less than 6% of combined EU GDP. For reference, the total value of pools of long-term capital in the US are off the charts at around £69tn, of which pensions accounts for £25tn and retail another £27tn.

Another way of comparing pools of long-term capital is to express them relative to GDP (see Fig.3). The US has the deepest pools of potential long-term capital at 424% of GDP, but the UK has clear lead over the rest of Europe on 358%. That's half as big again as in France (240%) and roughly double the depth of pools of capital in Germany (185%).

Again, the main difference is in pensions assets, which represent 130% of GDP in the UK but just 12% in France and 7% in Germany. The Netherlands is the main outlier, with pensions assets of 193% of GDP and total pools of capital of more than three times its GDP. So, if the UK the biggest and deepest pools of capital in Europe, what's the problem?

Fig.2 A bigger pool

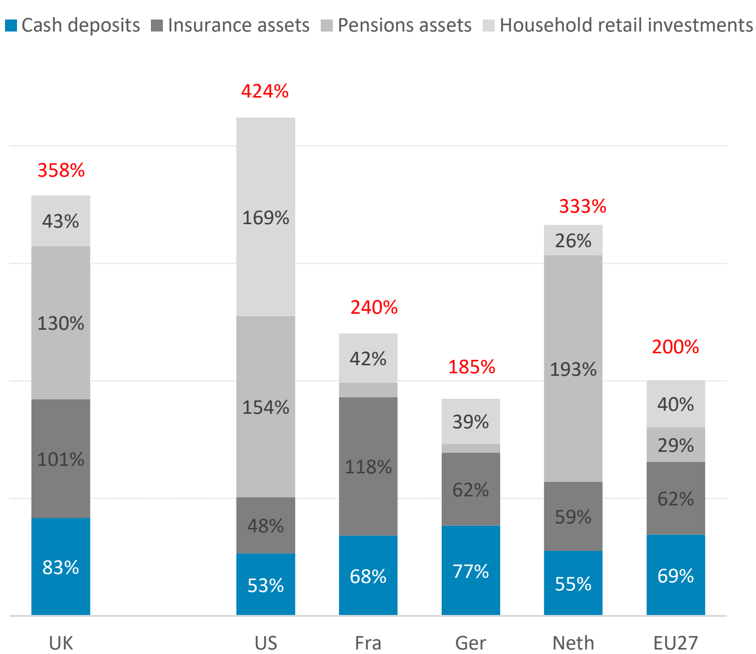
The value of pools of long-term capital in the UK and a selection of EU countries
£ trillions, end of 2019



Source: ECB, New Financial

Fig.3 A deeper pool

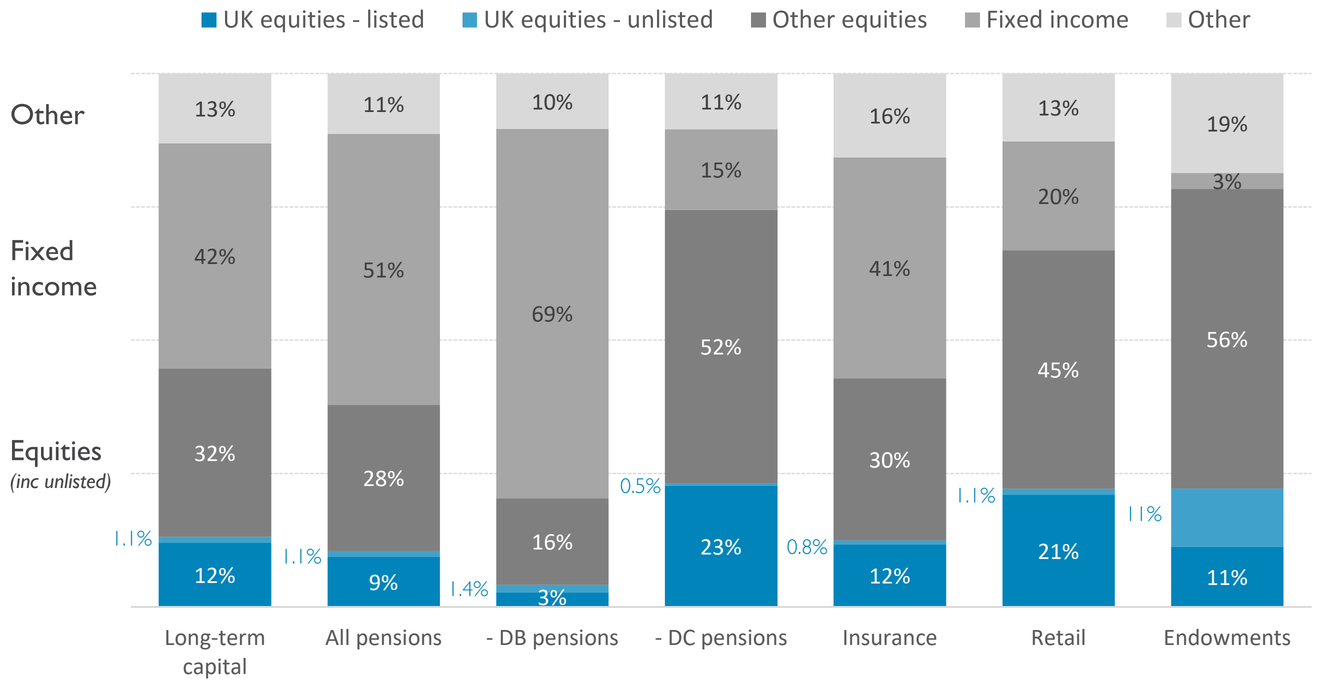
Pools of long-term capital as a % of GDP in the UK and selection of countries
End of 2019



Source: ECB, ICI, US Treasury, New Financial

Fig.4 Playing in the shallow end

The headline asset allocation of different 'buckets' of long-term capital in the UK



Source: New Financial analysis of data from the ABI, AIC, Bank of England, Investment Association, ONS, Pensions Regulator & Pensions Policy Institute
** Note: for a full methodology see page 14; for a more detailed asset allocation for each bucket see page 13*

The wrong sort of assets?

The problem is that while there is no shortage of long-term capital in the UK, most of it is invested in the 'wrong' sort of assets. Our analysis summarised in Fig.4 shows that just 13% of the £5.6tn in total pools of long-term capital in the UK is invested in UK equities, with 12% in listed UK stocks and about 1% in unlisted UK equity. A third of long-term capital in the UK is invested in overseas equities, just over 40% is invested in fixed income, and the rest is held in property, alternatives, and cash (for a full methodology, see page 14, and for a detailed asset allocation, see page 13).

The chart provides a broad breakdown of the assets allocation to UK equities, other equities, fixed income and other investments of the main 'buckets' of long-term capital. The main reason for the surprisingly low allocation to UK equities is that the headline figure is dragged down by pensions (the biggest single 'bucket'), which in turn in dragged down by defined benefit pensions (60% of all pensions assets).

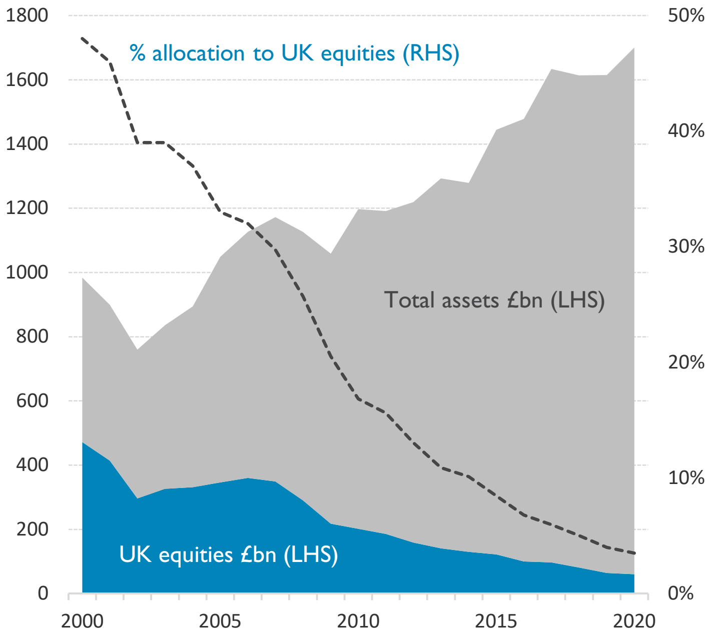
Just 10.5% of pensions assets in the UK are invested in UK equities (9.4% in listed equities and a further 1.1% in unlisted equities). As a comparison, that's about a third of the 30% allocation to US listed equities at US pension schemes. Defined benefit pensions in the UK have just 3% of their assets invested in UK listed equities and about 1.4% in unlisted equities (see Fig.5 on the next page for how that allocation has fallen dramatically over the past 20 years). Insurance firms, the next big bucket with £1.8tn in assets, has a slightly higher allocation to UK equities (11.7% listed and less than 1% unlisted).

It is striking that other buckets such as defined contribution pensions, direct retail investments and endowments have a much higher allocation to UK equities (each of these buckets has a combined allocation to UK listed and unlisted equity of between 22% and 23% of their assets. For endowments, half of this exposure is from its 11% allocation to unlisted equity in the UK.

Fig.5 Going down

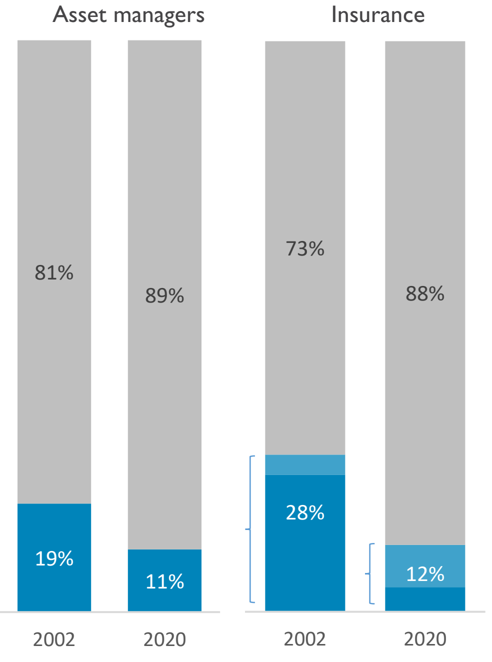
The change in the allocation of UK pension schemes, asset managers and insurers to UK equities over the past 20 years

a) UK defined benefit pensions assets & their allocation to UK equities
2000 to 2020 in real terms (2019 money)



Source: New Financial, ONS, Pensions Regulator, UBS, Bank of England

b) UK institutional asset allocation to UK equities
2002 to 2019



Source: New Financial, ABI, IA

A shift away from the UK

If you are surprised by the tiny proportion of defined benefit pensions asset invested in UK equities then you haven't been paying attention. Over the past 20 years, the value of DB pensions assets has nearly doubled in real terms, but the amount invested by DB pensions in UK listed equities over the same period has dropped by around 90% according to our analysis (see Fig.5a above). This is because the headline asset allocation to UK equities at DB pension schemes has dropped from 48% in 2000 to less than 3% today. The main driver for this change has been the increased maturity of DB schemes: only 11% of schemes are open to new members and the asset allocation of schemes servicing pensions in payment has inevitably switched to fixed income assets that are better suited to their liabilities. Fixed income accounts for 69% of the total assets of defined benefit schemes, the majority in government bonds.

Over a similar time period, asset managers and insurance companies in the UK have also significantly reduced their asset allocation to UK equities (Fig.5b). In 2002, UK-based asset managers who were members of the Investment Association invested just under a fifth (19%) of their assets under management in UK equities, but this has since almost halved to just 11% in 2019. That translates into growth in real terms of nearly 50% in the value of assets invested in UK equities, but that it is a lot less than the overall real growth rate of assets across the industry of 170%.

With insurance, we estimate that the total allocation to UK equities has fallen more sharply, from a total of 28% in 2002 to just 12% today. Both figures are higher that the stated headline allocation to UK equities in the annual state of the market report by the ABI (of 24% in 2002 and a little more than 4% in 2019), but we have adjusted the figures for the industry's stated allocations to unit trusts. A combination of the internationalisation of the investment industry and UK investors, the poor performance of UK equities, changes in regulations, and higher capital requirements for insurers have contributed to this dramatic institutional shift away from UK equities.

Investing in growth?

With a more granular understanding of where different buckets of long-term capital in the UK are invested, you can reverse engineer a better picture of who owns what. Fig.6 shows the proportion of different assets in the UK that are owned by the key buckets of long-term capital (pensions, insurance, retail and endowments).

Just 28% of the UK stock market is owned by pools of long-term capital in the UK. And all UK pensions bundled up together (defined benefit, defined contribution and personal pensions) account for just 11% of the total value of the UK stock market. We estimate that another 15% or so is owned by banks, the government and companies themselves, leaving around 57% of the market owned by overseas investors. This roughly tallies with analysis by the ONS on ownership of the UK stock market.

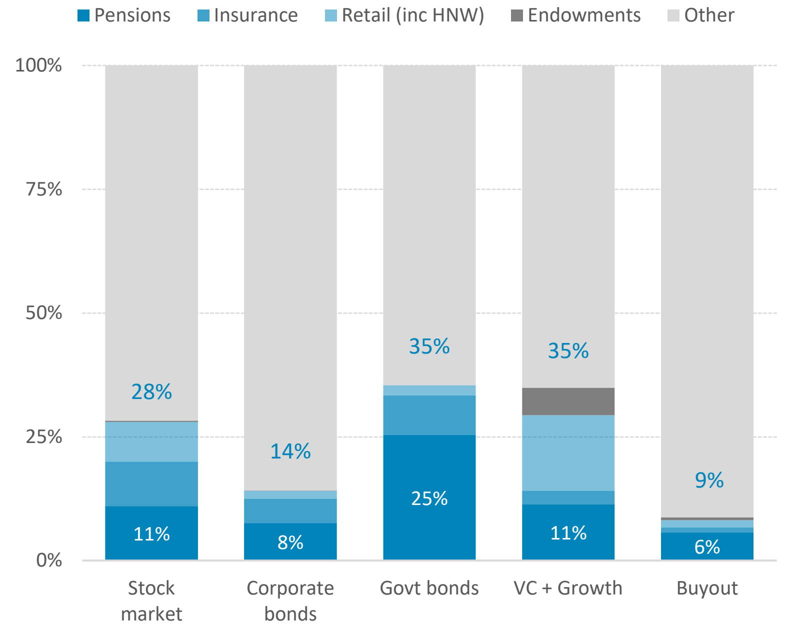
Pools of long-term capital in the UK own around 14% of the £2.5 trillion of outstanding UK corporate and financial sector bonds (a big slug is owns by banks and central banks). And they own about 35% of outstanding UK government debt, with pensions - particularly defined benefit schemes - owning most of that).

They account for about 35% of all of the money raised in the UK for venture capital and growth equity funds in the three years running up to 2019 but just 9% of UK private equity fundraising, according to our analysis of fundraising statistics from the BVCA. The figure for growth and VC is heavily skewed by high net worth individuals investing in VC funds.

Separately, Fig.7 shows how much each bucket of long-term capital has invested in UK listed and unlisted equities. We've included the total value of assets in each bucket for context. The total adds up to £672bn invested in listed UK equities and £62bn in unlisted UK equities. While the headline numbers may sound high, that translates into 12.1% of total assets and 1.1% respectively. With £5.6tn to play with, imagine the what a small change in the asset allocation of different pools of long-term capital could do in concrete terms for the UK economy.

Fig.6 A minority stake

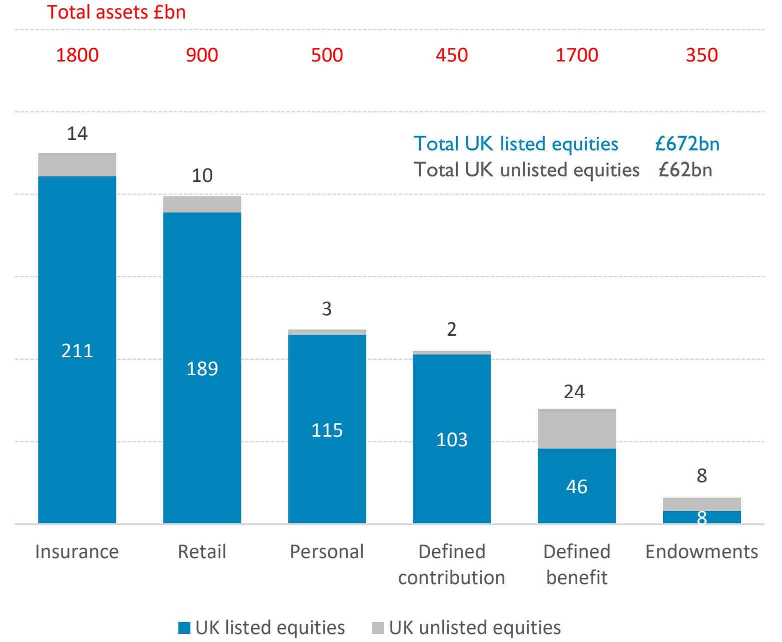
The proportion of different asset classes in the UK owned by UK long-term pools of capital



Source: New Financial, LSEG, ECB, BVCA

Fig.7 Financing growth?

How much do different pools of long-term capital in the UK invest in UK listed and unlisted equities?



Source: New Financial

A more active approach

One of the biggest challenges in unlocking more long-term productive investment is that two of the biggest trends in the asset management industry over the past few decades actively work against it. That is, the ubiquity of open-ended investment funds, and the rise of passive and index investing.

Investment funds that are priced and can be traded every day are inherently unsuitable for investing in longer-term or more liquid assets that are more difficult to price or sell (and are limited by regulation in the extent to which they can do so). While open-ended investment funds bring many benefits to retail investors and smaller defined contribution fund pensions, they have perhaps been too successful in establishing a mindset that all investors (even those investing for their retirement in 30+ years) should be able to easily access all of their money all of the time.

In the UK investment fund industry around 85% of the £1.4 trillion in funds are open-ended with just 15% in the form of closed-end funds, mainly investment trusts. These funds are more suitable to longer term investing, because investors buy and sell shares in the fund, not the underlying assets in which it is invested. This explains in part the longer-term and more 'productive' asset allocation of investment trusts in the UK: 16% to UK equities, 11% to private equity, 9% to infrastructure, and 2.5% to venture capital.

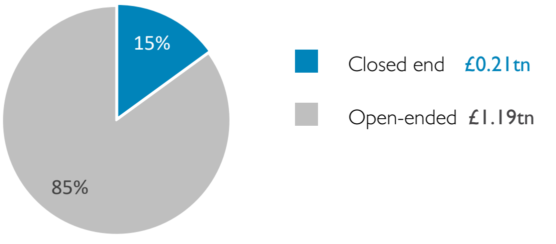
The asset management industry has been working for several years on the concept of a Long-Term Asset Fund or LTAF that would have a daily dealing structure but be able to invest in a higher proportion and wider range of long-term and less liquid assets. This fund structure, and addressing the reluctance of many investors to think beyond daily dealing funds, is the main focus on the government's current working group on productive finance.

Separately, the growth in passive or index investing reduces the capacity for longer-term and productive investment. Passive funds are more suited to more liquid markets and asset classes, and offer retail and institutional investors a valuable, cheap and efficient tool to invest in different markets and manage their asset allocation. But you can perhaps too much of a good thing. In the UK, today 30% of all assets under management and managed on passive basis, and this increases to 44% of equities under management. A FTSE 100 or S&P500 tracker is an excellent way for many individuals to plan their pensions, but doesn't provide the sort of productive funding boost to the economy that active, long-term investment in growth companies, unlisted equities, and infrastructure projects can.

Fig.8 The wrong sort of vehicle?

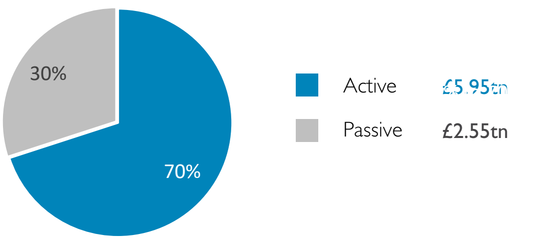
The proportion of assets in the UK that are managed on an active and passive basis, and funds that open-ended or closed end

a) Closed-end funds as a % of investment funds in the UK



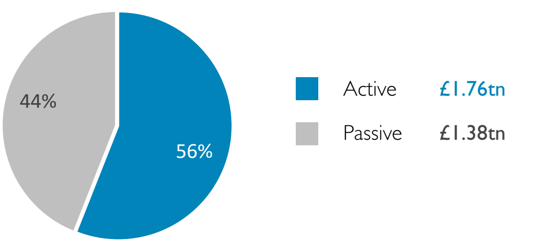
Source: AIC, Bank of England, IA

b) Passive investment as a % of all AuM in the UK



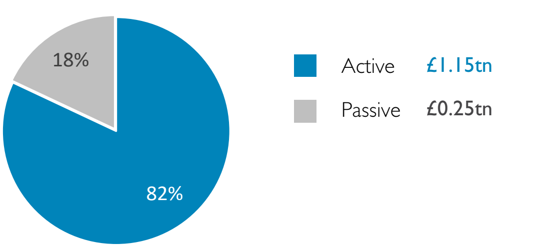
Source: Investment Association

c) Passive investment as a % of equity assets under management in the UK



Source: Investment Association

d) Passive funds as a % of investment funds in the UK



Source: Investment Association

Driving growth

Here is a short summary of some of the main types of 'productive investment' in the UK today and some of the challenges investors face in accessing them:

1. **Public equity markets:** listed equities are an obvious component of productive capital, but as we have seen, the allocation of pensions, insurance and asset managers to UK equities has fallen sharply over the past few years. This is related to and partially the cause of the decline in UK public equity markets over the past 20 years: our research shows the number of listed companies has nearly halved, the value of new issues has fallen by two thirds, and the number of new issues has dropped by three quarters. The FTSE100, which represents 70% of the total value the UK market, has flatlined over the past 20 years. Given the ownership of UK equities, we estimate that pools of long-term capital have provided just £41bn of the total £145bn raised by companies on the UK market over the past five years. Strip out the FTSE100 and index trackers, many smaller listed companies feel unloved by investors.
2. **Unlisted equity:** unlisted equity can take many forms, ranging from venture capital and growth capital (which primarily fund high potential and innovative companies) to private equity (which mainly finances and re-engineers more mature companies) to an increasingly blurred area where large asset managers or pension schemes take a big direct stake in privately-held companies before they go public. The flow of unlisted equity investment is relatively small: in the five years to 2019, we estimate there was just £8bn of venture capital investment and £13bn of growth capital (or which just a third came from UK pools of long-term capital), and around £65bn in private equity investment (where the majority of funds comes from overseas pensions and endowments). Among the biggest sources of funding at the early and growth stage are the government (directly and through the £2.5bn British Patient Capital Fund) and the Business Growth Fund, which is owned by the main UK banks and which has invested more than £2.5bn since 2011. Unlisted SMEs are likely to be heavily impacted by Covid, but least able to access the sort of equity funding they will need to help them rebuild.
3. **Infrastructure:** one of the few things that everyone can agree on is that infrastructure definitely counts as 'productive investment', that we need a lot more of it, that we probably shouldn't outsource it Canadian pension funds and SWFs, and that pensions and insurance have a potentially big role to play. But establishing how much private capital is invested in UK infrastructure is difficult: the Global Infrastructure Investor Association estimates just over £100bn of pension fund money in the UK is invested in infrastructure (which would translate into nearly 4% of assets) but this estimate include investment in listed companies in the infrastructure sector. The IA reckons it members have invested £45bn in infrastructure projects (0.5% of their total AuM). Preqin says there is £100bn in infrastructure private equity funds in the UK, but a large chunk of that will be invested overseas and managed on behalf of overseas investors. Beyond that, the data is mainly anecdotal: insurance companies investing in 'real' stuff like renewable power, ports, student and social housing, or airports through their real assets business.
4. **Structure & vehicles:** private capital - mainly funded by overseas pools of capital - has grown rapidly in the UK over the past 20 years (we estimate based on data from Preqin that private equity and VC assets under management in the UK have quadrupled in real terms to around £420bn since 2000). A big problem is that most individual investors and small pension schemes are unable to access these investments: individuals have to be qualified or high net worth investors to invest directly in most of these funds, and smaller schemes don't have the expertise or contacts to access them. The prevalence of open-ended investment funds means that most individuals suffer an 'exclusivity gap' of as much as 5% a year in returns from private versus public markets. This acts as a brake on the democratisation of wealth creation and may risk undermining the social and political licence for business and finance.
5. **Blurred lines:** one of the big problems in discussing productive investment is the often blurred lines and inconsistent definitions between different types of investment and different sorts of funding. Public equity markets are a public good but not all public equity is productive investment. Unlisted equity is a good indicator of productive investment but the sector is dominated by private equity buyouts, where the productive element of the investment may be less clear. Corporate bond markets can be put to productive use (building a new airport or a new windfarm) or less productive use (financing a share buyback). Investing in infrastructure may take the form of buying shares in a renewable energy firms (listed on unlisted), buying corporate bonds (in a private placement of a public issue), or a direct equity or debt investment in a project.

WHAT ARE THE BARRIERS?

What's stopping you?

While the disconnect between the abundant pools of long-term capital in the UK and the relatively small proportion that is put to work in productive investment is pretty stark, there is no simple or easy solution (if there were, it would have been done years ago). The problem is that the evolution of the UK market over many decades means that there are barriers to unlocking more productive investment all the way through the chain, and that these barriers are interconnected. Here is a summary of some of the main barriers to more productive investment:

1. **The weakest link?** It may be tempting to look at some of the numbers in the this report for different buckets of long-term capital and think that they hold the key to solving the problem. For example, we estimate that just 0.5% of the £950bn in defined contribution and personal pensions assets is invested in unlisted UK equities. If only we could increase that, then problem solved. That would be great, but this approach would not address a more fundamental structural issue: that the limited amount of productive capital has developed into a feature of the UK financial system not a bug over the past few decades. As the system has grown and become more complex and interconnected, governments and regulators over the years have added more well-intended layers of regulation and new structures which have a knock-on impact and unintended consequences somewhere else in the chain.

2. **Specific barriers:** that said, there are particular barriers throughout the chain that makes unlocking more productive investment quite challenging:

   > Defined benefit pensions: the maturity and funding profile of most defined benefit pensions schemes mean they are an unlikely source of significant amounts of additional productive capital. That said, public sector DB schemes that remain open and which have £350bn could be nudged by government to rethink their asset allocation.
   > Defined contribution: the fragmented nature of DC schemes and the charge cap make it harder for them to invest a significant portion of their assets in productive capital even if DC is a fast growing pool of capital.
   > Personal pensions / direct retail: the obsession with daily liquidity funds, reliance on investment platforms, and lack of expertise reduce the amount of money they are willing or sensibly able to allocate.
   > Insurance: capital requirements and matching adjustments make investing in unlisted equity prohibitively expensive for most insurers. While this is being reviewed, changes will be more an evolution than a revolution.
   > Endowments: these have a big allocation to unlisted equity already (27%). But they account for just 1.3% of long-term capital in the UK and it will take them years to become a similar force to their US counterparts

3. **A short-term focus:** one of the biggest challenges in encouraging more long-term productive investment is overcoming an increasingly short-term mindset across the industry. Companies are judged and asset managers are ranked every quarter. An entire ecosystem of investment banks, platforms, consultants and media has evolved to encourage individual and institutional investors with time horizons of decades to chop and change their managers or funds at the first sign of trouble. This has been compounded by the huge success of open-ended investment funds that enable investors to buy and sell every day, embedding an investment culture of immediacy.

4. **Incentives & disincentives:** most of the individuals and institutions in this chain are not stupid: their low allocation to productive investment is because they are responding to the incentives in front of them (in the form of tax, revenues, more business etc) and the disincentives around them (tax, investment vehicles, and regulation). The cumulative effect of this ecosystem over many decades has created a perfectly rational system, just not one that anyone would have designed if they were starting from scratch. At the same time, many in the industry complain that the focus of regulation is on cost and transparency (at the expense of long-term value) and on protecting individual consumers almost to the point of exclusion from some assets (such as unlisted equities or infrastructure).

5. **A structural shift:** this is reflected in the structure of the industry and the structures and vehicles used by investors to make their investments. At a system level, the shift from defined benefit pensions to defined contribution and the introduction of auto-enrolment has shifted investment risk to individuals who are less well equipped to shoulder it when it comes to assets like unlisted equities, while simultaneously embedding a fragmented structure of small and inefficient pension pots. This in turn has encouraged the growth in open-ended investment funds, which are a cheap and easy way to invest but an unsuitable vehicle for productive investment.

SOME POTENTIAL SOLUTIONS FOR DISCUSSION

Unlocking productive investment

This report highlights the disconnect in the UK between abundant pools of long-term capital on the one hand and the tiny amount that is put to work in productive investment in the other. There are plenty of barriers to unlocking more productive investment and there is no silver bullet. Here are some 10 suggestions for discussion (some more practical than others):

1. **Topping up the pool:** the overall priority should be to get more money more quickly into the existing pools of long-term capital by expanding the number of people of people saving for their retirement and encouraging them to contribute more to their pensions. The bigger the pool, the more of it will flow into productive investment. Removing the age and earnings limits on auto-enrolment, and raising employer contributions would be a good start.
2. **More efficient pools:** existing pools of capital could be made significantly more efficient. For example, the government's thinking on reforming small defined contribution schemes ('consolidate or explain') is a good start, and could be mirrored across the mass of small and inactive DB schemes. In an ideal world, individuals would have a portable and fungible pension pot that would sit within a small number of competing collective DC super funds.
3. **Reducing disincentives:** the review of Solvency II is looking at whether capital requirements on insurance companies could be relaxed at the margin to encourage more productive investment without undermining the financial stability of insurance firms. This approach could be applied to other investors, encouraging and allowing them to allocate a small ringfenced amount to less liquid but more productive investment.
4. **The right vehicle:** the government aims to build on the work done by the asset management industry over the past few years to develop and launch a Long-Term Asset Fund structure this year, that would enable more individuals and DC schemes to invest in productive investment. The industry and government could also review whether and how existing vehicles such as investment trusts could be adapted to make them more attractive to more investors.
5. **Increasing demand:** investing in listed and unlisted UK equities and other productive assets could be made more attractive to a wider number of people through tax incentives, such as simplifying capital gains tax and / or reintroducing indexation to encourage longer term investing. Could UK dividends be taxed at a lower rate? Existing taxes could be more imaginatively deployed: the bank levy, corporation tax surcharge or other taxes paid by the financial services industry could be hypothecated towards public investments in productive assets
6. **Build it and they will come:** increasing the supply of equity by making equity funding more attractive would in turn create increased demand. Addressing the tax differential between debt and equity funding and increasing tax relief on R&D would encourage more innovation, more investable companies, and more equity funding in the economy.
7. **Taking the lead - government:** the most effective route to accelerate productive investment would be for government to take the lead. This could involve creating a government-backed growth fund (that could partner with private capital or piggy back off the Business Growth Fund), or experimenting with a revised investment mandate for the £350bn in mainly local authority defined benefit pension schemes. More ambitiously, what better opportunity for the government to launch a sovereign wealth fund, with a specific productive investment brief?
8. **Taking the lead - industry:** the asset management, insurance and pensions industry have already done some excellent work in this field. Are there other initiatives on which they could cooperate, such as developing an industry-wide growth fund to co-ordinate and consolidate existing fund launches and initiatives by individual firms?
9. **Education, education, education:** financial education is not the silver bullet it is often painted to be but a concerted industry-wide and government campaign to encourage individuals and institutions to take a longer-term approach to their investments, combined with inserting speed bumps and speed cameras into the investment process to slow people down could help break the ubiquity of daily-dealing funds and investors' obsession with the current quarter.
10. **Better data:** for such an important area of the UK economy, the quality and consistency of data in and around pools of long-term capital and productive investment is terrible (from how big are different buckets to how they are invested). A combined industry and government taskforce could develop a better and more useful dashboard.

A SUMMARY OF ASSET ALLOCATION

Fig.9 Productive investment in numbers

This chart provides a more detailed asset allocation of different pools of UK long-term capital

		Pensions					Insurance	Retail			Other	
	Total	Total Pensions	Defined benefit	DB public	Defined contribution	Personal	Insurance	Total retail	ISAs	Other	Endowment	Cash
Equities	**39%**	**31%**	**17%**	**52%**	**74%**	**74%**	**41%**	**64%**	**64%**	**64%**	**51%**	**0%**
UK equities	11%	8%	3%	8%	23%	23%	12%	21%	23%	20%	11%	0%
Non-UK equities	28%	23%	14%	43%	51%	51%	29%	43%	41%	44%	40%	0%
Fixed income	**44%**	**53%**	**69%**	**26%**	**15%**	**15%**	**41%**	**20%**	**16%**	**23%**	**3%**	**0%**
UK public	14%	20%	29%	7%	4%	4%	10%	5%	4%	6%	0%	0%
UK corporate	7%	8%	8%	6%	4%	4%	7%	5%	4%	5%	1%	0%
Non-UK public	10%	14%	21%	5%	3%	3%	7%	4%	3%	4%	0%	0%
Non-UK corporate	12%	11%	12%	9%	5%	5%	17%	7%	6%	8%	2%	0%
Other	**17%**	**16%**	**14%**	**20%**	**12%**	**12%**	**18%**	**15%**	**20%**	**13%**	**46%**	**100%**
Property	5%	4%	4%	6%	2%	2%	7%	4%	4%	4%	8%	0%
Unlisted equities	3%	3%	4%	9%	1%	1%	2%	3%	3%	2%	27%	0%
Alternatives	6%	5%	6%	3%	3%	3%	7%	6%	6%	6%	9%	0%
Cash / other	3%	4%	1%	2%	6%	6%	1%	3%	6%	1%	2%	100%

Source: New Financial estimates based on analysis of date from Pensions Regulator, Pensions Policy Institute, Investment Association, Bank of England, Association of British Insurers, HMRC, Association of Investment Companies, ONS, company reports

Understanding productive investment in the UK

This report is a work in progress in seeking to understand the disconnect between the huge pools of long-term capital in the UK and the relatively small amounts of that capital invested in long-term patient, growth and productive capital in the UK economy. It involved three key steps: first, to map the value of different pools (or 'buckets') of long-term capital in the UK; second, to create a consistent asset allocation taxonomy across these different pools of capital that involved looking through headline allocations to 'equities', 'fixed income', 'multi asset' or 'other' to generate a more granular (if estimated) view; and third, to reverse engineer this data to analyse what proportion of different UK markets and asset classes are owned by different buckets of long-term capital.

It is very much an experiment and we recognise that we have made some quite big assumptions in some areas (and no doubt some quite big mistakes). Our work was conducted on a best efforts basis and we are pleased to see that many of our estimates, for example on unlisted equities, tally with work done by others. Please contact william.wright@newfinancial.org with any comments or corrections.

1. **Mapping pools of long-term capital in the UK:** We built our estimate from the bottom up by starting with four main buckets of pensions, insurance, direct retail and endowments. Within pensions, we created separate buckets for defined benefit, public sector defined benefit, defined contribution, personal pensions, and drawdown and annuities. We used a combination of the ONS, the Investment Association, and the Pensions Regulator to allocate headline values to each bucket. For insurance assets, we used the 'state of the market' report by the Association of British Insurers. For retail, we used ONS data on household financial assets and removed pensions, insurance, stock options and unlisted equity to create a pool of directly held retail investments outside of pensions and insurance structures.

2. **Asset allocation:** data on most of the different pools of long-term capital is reported in different and inconsistent ways. Here's how we estimated the asset allocation for different pools of capital on a more consistent basis:

   > Defined benefit: we used the latest Purple Book from the Pensions Regulator for our headline allocation and adjusted the fixed income allocation as per the fixed income allocation of IA member firms.
   > Defined contribution: we used the headline asset allocation from the Pensions Policy Institute, allocated multi-asset in proportion to other asset classes, and adjusted fixed income as per the IA data.
   > Personal pensions: we applied the same asset allocation as our adjusted asset allocation for defined contribution.
   > Drawdown / annuities: we created a synthetic asset allocation based on the average allocation of a selection of life insurance and pensions buyout firms.
   > Insurance: we used the headline asset allocation from the ABI's annual state of the market report, we allocated 'unit trusts' in line with the asset allocation of UK investment funds, and adjusted the fixed income allocation as per the IA.
   > Retail: we used HMRC data on the asset allocation of stocks and shares ISA, allocating OEICs, UCITs and unit trusts as per UK investment funds, and investment trusts as per data from the AIC. We allocated the rest of direct retail as per the asset allocation of UK investment funds.
   > Endowments: we used an average of the asset allocation of the Wellcome Trust, and the endowments at Oxford and Cambridge universities, and adjusted fixed income as per the IA data.

   Broadly, we allocated 'other' in each bucket in the same proportion as stated for defined benefit schemes; we assumed unless otherwise stated that UK equities represented 31% of all equities (as per the allocation of UK investment funds); that UK corporate bonds represented 40% of all corporate bond allocations; and that UK unlisted equity was 40% of total allocations to unlisted equity.

3. **Who owns what:** we then reverse engineered this data to identify what proportion of different asset classes and markets in the UK is owned by different buckets of long-term assets. We used data from LSEG for the combined value of UK listed stocks in 2019, and data from the ECB for the value of outstanding UK corporate, financial and government bonds. For venture capital, growth capital and buyouts, we analysed data from the BVCA on the source of funds raised in the three years to 2019 by geography and type of investors.

About New Financial

New Financial is a think tank that believes Europe needs bigger and better capital markets to help drive growth and prosperity.

We think this presents a huge opportunity for the industry and its customers to embrace change and rethink how capital markets work. We work with market participants and policymakers to help make a more positive and constructive case for capital markets around four main themes: unlocking capital markets; rebuilding trust; driving diversity; and the impact of Brexit.

We are a social enterprise funded by institutional membership from different sectors of the capital markets industry. For more information on our work, please contact us:

New Financial LLP
23 Grafton Street
London
UK, W1S 4EY
www.newfinancial.org

Follow us on Twitter
@NewFinancialLLP

William Wright
Managing director
william.wright@newfinancial.org
+44 (0) 20 3743 8269

New Financial is registered on the EU Transparency Register, registration number 435008814959-36

Our research on capital markets:
Here is a selection of some of our recent reports on capital markets:

Rebooting UK equity markets - the UK listings review

Brexit & the City: some initial reflections on the early impact

What do EU capital markets look like on the other side of Brexit?

A reality check on Capital Markets Union

Beyond Brexit: the future of UK banking & finance

Driving growth: How EU Capital Markets can support a recovery

The value of capital markets to the UK economy

The Covid crisis: how banking & finance can be part of the solution