

Due Diligence on Passive Funds

Report: Up to 31st December 2022

For financial professionals only

Introduction

This document summarises the results of our passive due diligence up to 31st December 2022.

While past performance is no indication of the future and investment returns can go down as well as up, our comprehensive, robust and repeatable passive fund due diligence process is designed to make sure that your clients are invested in the best possible passive fund for each sector at all times.

All data presented is based on the specified periods and sourced from FE Analytics. Underlying fund charges are included in performance, while Parmenion or adviser charges are excluded. Rates and basis of taxation are liable to change.

For more information on our process, please see our Due Diligence on Passive Funds document.

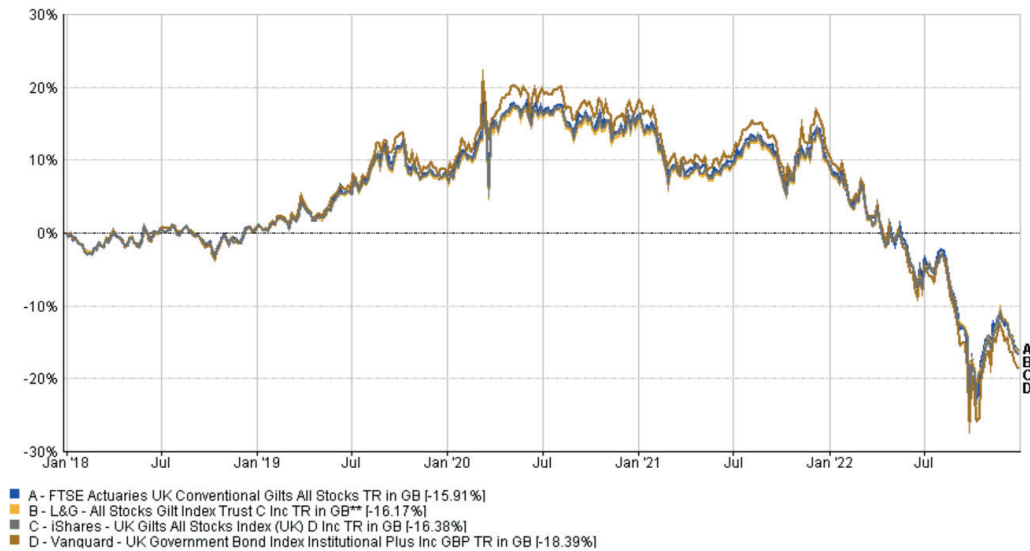


Peter Dalgliesh
Managing Director, PIM

IA UK Gilts

The top three funds in this asset class all score very highly. There are no changes in the rankings since last quarter.

Fund Name	Fund Benchmark	Rank
L&G All Stocks Gilt Index	FTSE Actuaries UK Conventional Gilts All Stocks	1
iShares UK Gilts All Stocks Index	FTSE Actuaries UK Conventional Gilts All Stocks	2
Vanguard UK Government Bond Index	Bloomberg Barclays UK Government Float	3



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

Vanguard has the lowest OCF and overall holding cost of the three funds, which is below 0.1% p.a.

Consistent with last time’s analysis, the top 3 funds including our holding with Vanguard all achieved full marks for tracking error and tracking difference versus their benchmarks.

Vanguard also scores moderately well on ESG aspects, albeit behind L&G and iShares.

iShares remains as the largest fund, although Vanguard’s fund is also very big. Vanguard tracks a slightly different index to our PIM benchmark, while the L&G and iShares funds track our PIM benchmark index. The historical differential in performance is marginal, as seen in the above chart showing the three funds performing similarly over the last 5 years.

We remain comfortable to maintain our Vanguard holding, given it scores so highly and is currently only just behind L&G and iShares in a very highly-scoring asset class. We’ll continue to monitor this as part of our ongoing passive due diligence reviews.

Recommendation	Hold	Vanguard UK Government Bond Index
----------------	------	-----------------------------------

IA UK Index Linked Gilts

The L&G fund we use is still leading the peer group, with Vanguard and iShares sitting in second and third place respectively. These rankings are now unchanged for the last 12 months.

Fund Name	Fund Benchmark	Rank
L&G All Stocks Index Linked Gilt Index	FTSE Actuaries UK Index-Linked Gilts All Stocks	1
Vanguard UK Inflation Linked Gilt Index	Bloomberg Barclays UK Government Inflation-Linked	2
iShares Index Linked Gilt Tracker	FTSE Actuaries UK Index Linked Gilts Over 5 Years	3



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

L&G has tracked the benchmark index closely and achieves our maximum possible score in this category. L&G has also achieved strong tracking difference versus the index, although marginally behind Vanguard's fund, which achieves full marks for its fund tracking difference.

Vanguard is the cheapest fund closely followed by L&G, both with an OCF below 0.1% in a highly competitively priced asset class. L&G's fund continues to achieve full marks for its benchmark-to-benchmark tracking error, benchmark tracking difference, method of replication and the fact that it doesn't undertake stock lending. iShares' and Vanguard's funds are larger, but L&G still gets a decent score for its size.

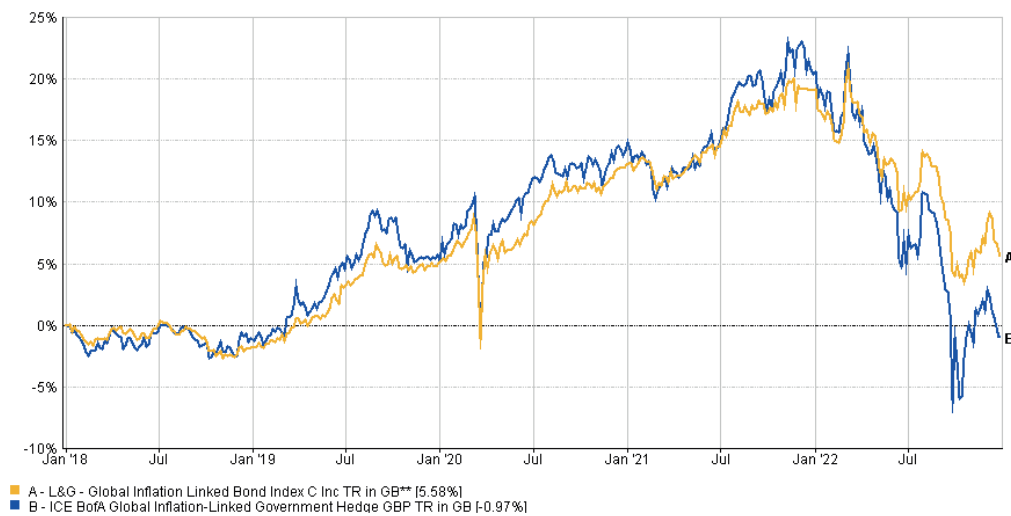
We remain comfortable with our L&G holding.

Recommendation	Hold	L&G All Stocks Index Linked Gilt Index
----------------	------	----------------------------------------

IA Global Inflation Linked Bond

We hold the L&G Global Inflation Linked Bond Index fund within our Global Index Linked Government Bond asset class. This quarter we've added abrdn's Global Inflation-Linked Bond Tracker fund into our analysis too. L&G remains first, with abrdn's fund entering the rankings in second place.

Fund Name	Fund Benchmark	Rank
L&G Global Inflation Linked Bond Index	Barclays World Government ex UK Inflation Linked Bond Index (GBP Hedged)	1
abrdn Global Inflation-Linked Bond Tracker	Barclays World Government Inflation Linked Bond Index (GBP Hedged)	2



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

Please note that the abrdn fund only has a track record back to May 2019 so it is not included in the above chart.

Our L&G fund continues to score very highly on its low tracking error and good tracking difference versus its benchmark. We view L&G to be leading in managing ESG considerations. The fund has achieved the highest marks for its size, replication and stock lending.

The fund is marginally more expensive than the abrdn fund, although both have the same overall 3-year holding costs of around 0.20% p.a., which are very competitive.

The benchmark tracked by the L&G fund is different to the ICE BofA Global Inflation Linked Government Hedge GBP Index we use in our models (the main difference is the fund's benchmark is ex UK while the UK is a reasonable weighting in the index). This can be seen in the above chart, with some divergence in performance between the fund and our benchmark, particularly over the last 6 months when index-linked gilts have seen high volatility in the wake of the Truss/Kwarteng mini-budget. As a result, the L&G fund has been marked down for its benchmark tracking error.

The L&G fund continues to rank highest overall in our assessment and we are comfortable maintaining our holding.

Recommendation	Hold	L&G Global Inflation Linked Bond Index
----------------	------	----------------------------------------

IA Sterling Corporate Bond

abrnd has been included in the analysis for this asset class this time.

The top two fund rankings are unchanged from last time. The Vanguard fund we invest in is ranked first, with L&G second. abrnd has come into the rankings in third place, pushing iShares down to fourth.

Fund Name	Fund Benchmark	Rank
Vanguard UK Investment Grade Bond Index	Bloomberg Barclays GBP Non-Government Float Adjusted Bond	1
L&G Sterling Corporate Bond Index	Markit iBoxx Sterling Non-Gilts ex BBB	2
abrnd Sterling Corporate Bond Tracker	Markit iBoxx Sterling Non-Gilts	3
iShares Corporate Bond Tracker	iBoxx Sterling Non Gilt	4

The abrnd fund only has a track record back to 2019 so is not included in the chart below.



Vanguard and abrnd jointly have the lowest OCF of the four funds, while iShares has the lowest overall holding cost.

The top 3 funds, including our Vanguard holding, have all achieved the maximum possible score for fund tracking error, with iShares slightly behind. All top 4 funds score highly on tracking difference relative to their benchmark indices.

While not leading on ESG aspects in our assessment, Vanguard has achieved a solid score in this area, albeit lower than the other 3 managers.

iShares remains as the largest fund, although Vanguard nevertheless scores relatively well on size.

All funds have a degree of benchmark tracking error versus our PIM benchmark for this asset class - the ICE BofA Sterling Corporate Index - as can be seen in the chart above, although there is a strong correlation between the performance of the index and the top 4 funds. The Vanguard fund we hold has delivered the best performance over the period shown.

There's no stock lending currently in the Vanguard fund, which means it gets full marks in that category.

We remain comfortable with our Vanguard holding.

Recommendation	Hold	Vanguard UK Investment Grade Bond Index
----------------	------	-----------------------------------------

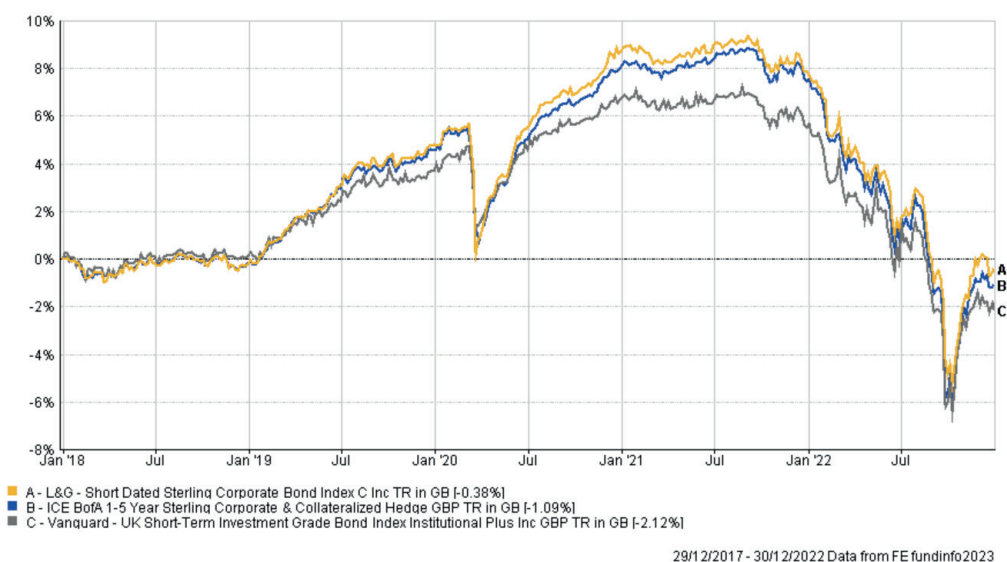
Short Dated Sterling Corporate Bonds

Many of our core investment solutions include an allocation to Short Dated Sterling Corporate Bonds within our Diversified Alternatives Asset Class.

We've introduced abrdn into our analysis this quarter for the first time. L&G and Vanguard continue to rank first and second respectively and abrdn has come into the rankings in third place.

Fund Name	Fund Benchmark	Rank
L&G Short Dated Sterling Corporate Bond Index	Markit iBoxx Sterling Corporates 1-5 Index	1
Vanguard UK Short-Term Investment Grade Bond Index	Bloomberg GBP Non-Government 1-5 Year 200MM Float Adjusted Bond Index	2
abrdn Short Dated Sterling Corporate Bond Tracker	Markit iBoxx Sterling Non-Gilts 1-5 Index	3

Please note the abrdn fund only has a track record back to 2019 so is not included in the chart below.



Vanguard's and abrdn's OCFs are marginally more competitive than L&G's, however L&G has the lowest overall 3-year holding costs. All three funds have been given top marks for fund tracking error, while L&G and Vanguard also score very highly on fund tracking difference. L&G ranks best of the three managers on ESG aspects.

As can be seen from the chart above, the index L&G is tracking performs relatively similarly to our index – the ICE BofA 1-5 Year Sterling Corporate & Collateralised Index. However, the performance of Vanguard's and abrdn's funds differ more materially from our index. This means that L&G scores more highly on benchmark tracking error and benchmark tracking difference than the other two funds.

L&G and Vanguard receive top marks for size, while neither fund undertakes stock lending currently. L&G also receives full marks for its replication method. abrdn has been marked down for its smaller size and use of stocklending in the portfolio.

We recommend maintaining our holding with L&G at the current time.

Recommendation	Hold	L&G Short Dated Sterling Corporate Bond Index
----------------	------	-----------------------------------------------

IA Global Bonds

We hold global bonds within our Global Government Bonds asset class. This time, our holding with HSBC is in first place, with Vanguard second and iShares third. HSBC and Vanguard have switched places since last time.

Fund Name	Fund Benchmark	Rank
HSBC Global Government Bond Index	FTSE World Government Hedged GBP	1
Vanguard Global Bond Index	Bloomberg Barclays Global Aggregate Float Adjusted and Scaled Index Hedged in GBP	2
iShares Overseas Government Bond Index	JP Morgan Global Government Bond Index ex UK Hedged GBP	3



24/01/2019 - 30/12/2022 Data from FE fundinfo2023

The track record for the HSBC share class we use only goes back to February 2019, so the chart above starts from that date.

HSBC's fund has the most competitive OCF and overall 3-year holding cost, so scores best on our cost factor. All three funds score very highly on fund tracking error and fund tracking difference.

Vanguard scores reasonably well on costs and ranks very highly on benchmark tracking error and tracking difference, replication, size and stock lending (they don't undertake any stock lending in their bond funds in our analysis).

HSBC achieves the best score of the three funds for ESG and its benchmark tracking error and tracking difference versus our Global Government Bond index. It can be seen in the chart that the HSBC performance (gold line) is consistently very close to the index (blue line).

HSBC's fund is smaller than the Vanguard and iShares funds, but still gets a decent mark for its size.

The main downside is HSBC's stock lending in the fund with a maximum of 30% of the fund on loan at any time, although at the time of our analysis none of the holdings were on loan so the fund only saw a small reduction in its score for stock lending.

Recommendation	Hold	HSBC Global Government Bond Index (Hedged)
----------------	------	--------------------------------------------

IA Global Corporate Bonds

We recently added an allocation to global corporate bonds within our Global Bonds asset class. This is a new asset class included in our analysis for the first time.

We selected abrdn's Global Corporate Bond Tracker fund for this holding, which ranks first in our analysis. Vanguard is in second place and HSBC third.

Fund Name	Fund Benchmark	Rank
abrdn Global Corporate Bond Tracker	Bloomberg Global Aggregate Corporate Index (GBP hedged)	1
Vanguard Global Corporate Bond Index	Bloomberg Global Aggregate Float Adjusted: Corporate Index (GBP Hedged)	2
HSBC Global Corporate Bond Index	Bloomberg Global Aggregate Corporate Index (GBP hedged)	3

The track record for the HSBC fund only goes back to February 2019, so it has not been included in the chart below.



abrdn has the most competitive OCF of the three funds, although its overall 3-year holding cost is a couple of basis points higher than the other two funds. All three funds are very competitively priced, with overall 3-year holding costs below 0.25% p.a.

abrdn achieves highest possible marks for its fund tracking error, and also scores reasonably well on fund tracking difference and ESG.

All funds track very similar benchmark indices, as shown in the chart above, which closely follow the performance of our index (ICE BofA Global Corporate GBP hedged). So all funds score well on benchmark tracking error and benchmark tracking difference.

abrdn's fund is the largest of the three and has been awarded top marks for size. It also scores very well for replication. However, abrdn's fund has seen marks deducted for use of stocklending in the fund – up to 50% of the fund can be on loan at any one time, although less than 5% of the fund was on loan at the time of our analysis.

Recommendation	Hold	abrdn Global Corporate Bond Tracker
----------------	------	-------------------------------------

IA UK All Companies

There has been some re-ordering of the rankings this time. L&G remains in first place. Our holding with Vanguard is back in third, having temporarily fallen to fourth in last time's analysis. HSBC has risen from third place into second place, while iShares has dropped to fourth. Overall, this is an extremely highly scoring asset class and all the top 4 funds have been awarded very high marks.

Fund Name	Fund Benchmark	Rank
L&G UK Index	FTSE All Share	1
HSBC FTSE All Share Index	FTSE All Share	2
Vanguard FTSE UK All Share Index	FTSE All Share	3
iShares UK Equity Index	FTSE All Share	4



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

The UK is a highly competitive market. Overall, Vanguard is cheapest when considering all costs, though costs are very similar for the top four funds.

All four funds track the FTSE All Share and achieve the highest possible scores for fund tracking error, benchmark tracking error and benchmark tracking difference. All funds also score very well on fund tracking difference. This can be seen in the above chart, which shows that all the top four funds have consistently performed very similarly to the index (blue line) over the last 5 years.

Vanguard lags some of the other funds in our ESG assessment, but we are comfortable investing with them. They score top marks for their large fund size and the fact that there's currently no stock lending in their fund. Vanguard uses optimisation so its score for replication is marginally lower than the other funds.

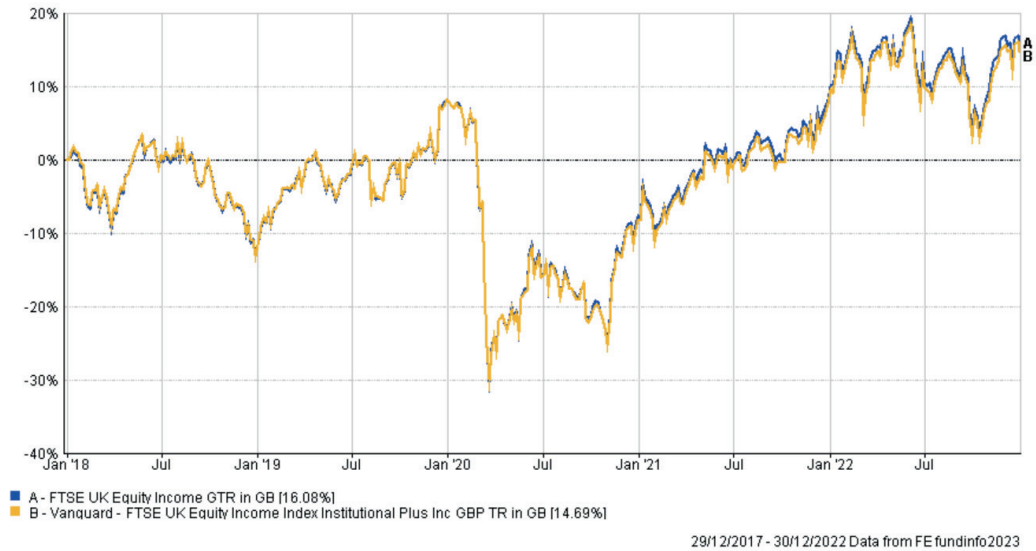
Given our Vanguard fund continues to perform very strongly and scores very highly, and mindful of the costs of trading – particularly the 0.5% stamp duty levied for buying UK equity – we are comfortable to maintain our holding.

Recommendation	Hold	Vanguard FTSE U.K. All Share Index
----------------	------	------------------------------------

IA UK Equity Income

There's just one passive instrument in the UK Equity Income space..

Fund Name	Fund Benchmark	Rank
Vanguard FTSE UK Equity Income Index	FTSE U.K. Equity Income	1



Our holding with Vanguard continues to score very well across fund tracking error, benchmark tracking error, benchmark tracking difference and replication. It's competitively priced.

It also has moderately good scores for fund tracking difference and ESG.

While there's some stock lending in the fund, this was a very small amount at the point of our analysis and 100% of the net proceeds from stock lending are paid into the fund. This means the fund isn't penalised too much in our scoring.

The main drawback is the fund size, which means we do own a reasonable portion of the fund. However, this has been consistently reducing over time.

We continue to look for viable alternatives, but are very comfortable to maintain our holding in the fund given it scores very well overall.

Recommendation	Hold	Vanguard FTSE UK Equity Income Index
----------------	------	--------------------------------------

IA Europe Excluding UK

L&G and iShares remain in first and second place respectively, however, the positions of HSBC and Vanguard have switched since last time.

Fund Name	Fund Benchmark	Rank
L&G Continental European Equity Tracker	FTSE World Europe Ex UK	1
iShares Continental European Equity Index	FTSE World Europe ex UK	2
HSBC European Index Trust	FTSE Developed Europe ex UK	3
Vanguard FTSE Developed Europe ex UK Equity Index	FTSE Developed Europe ex UK	4



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

The Vanguard fund we hold continues to rank well on costs, still with the lowest 3-year costs of the top four funds. It also scores very highly for fund tracking error, size and replication. All top four funds have achieved very similar scores on fund tracking difference.

While we have not given Vanguard as high an ESG score as some other providers it still scores moderately well and we are comfortable using Vanguard funds.

The top four funds are all large and track an index which is very close to our PIM benchmark for the asset class, as can be seen from the chart above and the performance lines being very close together.

Vanguard has had a point deducted for their stock lending in the portfolio, as there was a very small amount on loan at the point of our analysis (less than 1% of the fund), although all net proceeds from stock lending are paid into the fund which is positive.

Given our Vanguard fund continues to perform very strongly and mindful of the costs of trading we are comfortable to maintain our holding, although we will review this in our future six-monthly assessments.

Recommendation

Hold

Vanguard FTSE Developed Europe ex UK Equity Index

IA North America

We hold a 50/50 blend of L&G and Fidelity. The rankings are broadly the same since last time – L&G, iShares and Vanguard remain in the top 3 places. However, Fidelity has climbed from fifth place into fourth place, while HSBC is now at the bottom of the table.

Fund Name	Fund Benchmark	Rank
L&G US Index	FTSE USA	1
iShares US Equity Index	FTSE USA	2
Vanguard US Equity Index	S&P Total Market	3
Fidelity Index US	S&P 500	4
HSBC American Index	S&P 500	5



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

All top 5 funds have an OCF of 0.06% or less so all funds are very competitively priced. When considering all costs there's slightly more differentiation, with Vanguard cheapest, then Fidelity, iShares and L&G jointly. HSBC is currently the most expensive, albeit with 3-year holding costs of only 0.11% p.a.

The 5 funds in our analysis have all achieved the top score for fund tracking error, with the exception of HSBC who are slightly behind. Consistent with last time, Vanguard ranks best on fund tracking difference, while L&G and HSBC have the highest marks for ESG. Fidelity scores relatively poorly on ESG in our assessment. We've held various meetings with their stewardship team in the US to discuss how they are improving in this area and future plans to enhance their voting and engagement practices in particular.

L&G and iShares track the FTSE USA index we use in our modelling, so for this reason both funds achieve the maximum possible scores for benchmark tracking - error and benchmark tracking difference. L&G also scores top marks on size, replication and stock lending. Fidelity's fund is relatively smaller, although it is still large and achieves our highest score for size. Fidelity gets marked down for its use of derivatives (albeit the exposure is less than 5% of the fund), but also achieves the best possible score for the fact that there's no stock lending in the fund.

Our combined blend of L&G and Fidelity continues to score very well (ranking in third place if it were included in the table above) and we are happy to hold both funds.

Recommendation	Hold	L&G US Index
Recommendation	Hold	Fidelity Index US

IA Japan

Our holding in this sector, L&G, is in first place, the same as last time's analysis. HSBC and iShares have flipped places compared to six months ago.

Fund Name	Fund Benchmark	Rank
L&G Japan Index	FTSE Japan	1
iShares Japan Equity Index	FTSE Japan	2
HSBC Japan Index	FTSE Japan	3



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

L&G and iShares jointly have the most competitive OCFs, though iShares' overall 3-year holding cost is a couple of basis points below L&G's. But both funds are very competitively priced and achieve our maximum score for this category.

L&G and iShares receive top marks for fund tracking error and have also delivered very strong fund tracking difference, while HSBC has lagged slightly. L&G and HSBC also achieved a very strong score on ESG, although iShares nevertheless does well in this area too. All funds track the FTSE Japan index we use, so get the maximum possible marks for benchmark tracking error and benchmark tracking difference.

L&G receives a perfect score for size, replication and stock lending, while HSBC and iShares have lost points for stock lending in their funds, particularly iShares whose fund had stock out on loan at the point of our analysis. HSBC also has a point deducted for its relatively smaller fund size compared to L&G and iShares.

We remain very comfortable with our L&G holding.

Recommendation	Hold	L&G Japan Index
----------------	------	-----------------

IA Asia Pacific Excluding Japan

We have included abrdn and State Street in our analysis this time. abrdn is now in first place, followed by Vanguard and then our holding with L&G. State Street has entered the rankings in fourth place and iShares is now in fifth place.

Fund Name	Fund Benchmark	Rank
abrdn Asia Pacific ex Japan Tracker	MSCI AC Asia Pacific ex Japan	1
Vanguard Pacific ex Japan Stock Index	MSCI Pacific ex Japan	2
L&G Pacific Index	FTSE World Asia Pacific ex Japan	3
State Street Asia Pacific ex Japan Screened	FTSE Developed Asia Pacific ex Japan ex Controversies ex contro-versial weapons	4
iShares Pacific ex Japan Equity Tracker	FTSE Customer Developed Asia Pacific ex Japan	5



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

The abrdn fund track record only goes back to November 2019, so is not included in the chart above.

The L&G fund we invest in has the lowest OCF of the funds in our analysis, although Vanguard has the lowest overall 3-year holding costs. All the top 5 funds score top marks in delivering consistently low tracking error versus their own benchmark indices. L&G scores particularly well in our assessment of ESG aspects, with the highest score of the top 5 funds.

All funds score relatively poorly on the fund benchmark to PIM benchmark tracking error and benchmark to benchmark tracking difference, as they don't track the FTSE Asia Pacific ex Japan index, we use in our PIM models. This can be seen from the chart above, with the performance of the funds differing quite significantly from our index (blue line). All funds have been assigned the lowest score for this metric.

iShares, Vanguard and State Street achieve the maximum possible score for their fund size, with L&G and abrdn slightly smaller. However, L&G's fund is still large in absolute terms and we do not have any concerns with our holding. All top 5 funds score well on their method of replication. L&G doesn't use stock lending in the fund and gets top marks for that, while the other managers do stock lend and have seen some points deducted.

Given L&G continues to score very highly and its score is only slightly behind abrdn and Vanguard in our latest analysis, we remain comfortable with our holding.

Recommendation

Hold

L&G Pacific Index

IA Global

We don't adopt a global equity allocation within our strategic asset allocation for the majority of our solutions, preferring to use more granular regional allocations to better align with our 20-year risk framework. However, we continue to analyse the Global sector for context as part of our ongoing Due Diligence. The rankings this time are unchanged from our previous analysis.

Fund Name	Fund Benchmark	Rank
L&G International Index	FTSE World ex UK	1
Vanguard Developed World ex UK Equity Index	FTSE Developed ex UK	2
Fidelity Index World	MSCI World	3



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

There's no recommendation for this sector.

IA Global Emerging Markets

The rankings in this asset class are the same as last time. Our holding in iShares remains in second place, with L&G first and Vanguard third.

Fund Name	Fund Benchmark	Rank
L&G Global Emerging Markets Index	FTSE Emerging	1
iShares Emerging Markets Equity Tracker	FTSE Custom Emerging	2
Vanguard Emerging Markets Stock Index	MSCI Emerging Markets	3



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

Of the 3 funds in our analysis, Vanguard scores highest on costs, although all three funds are competitively priced and overall 3-year holding costs are very similar.

L&G scores best on fund tracking error and tracking difference, and also leads in ESG aspects.

L&G and iShares track the FTSE Emerging Index used in our modelling, which means they have been awarded the highest scores for benchmark tracking error and tracking difference, while Vanguard has lost marks for tracking a different index, the MSCI Emerging Markets.

iShares and Vanguard's funds are large, so they get full marks for fund size, while L&G's fund is relatively smaller, although L&G scores best on stock lending as it does not undertake any lending in the fund.

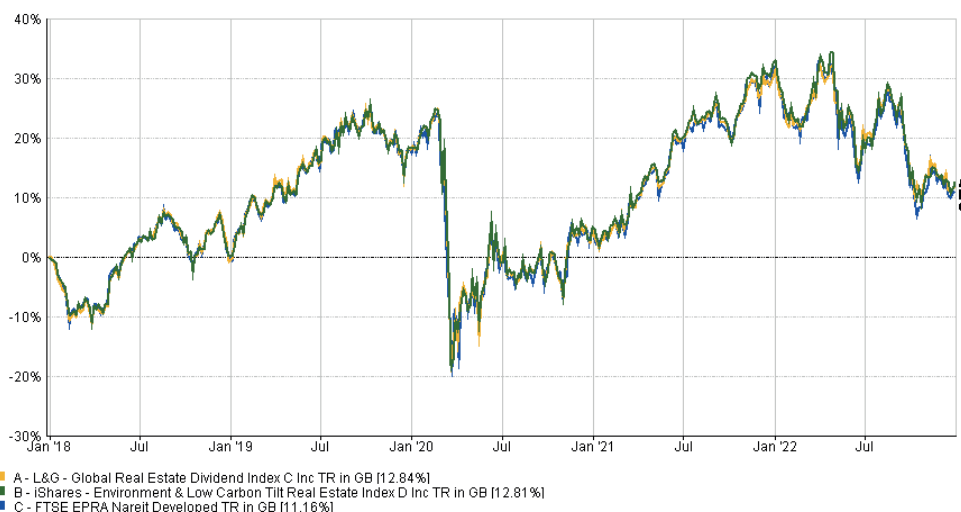
We continue to support holding iShares in this asset class.

Recommendation	Hold	iShares Emerging Markets Equity Tracker
----------------	------	-----------------------------------------

IA Property

We don't generally hold passive property within our core solutions, but there are certain solutions where this is an option - and we hold L&G's Global Real Estate fund in this asset class. This time, we have added abrdn and Northern Trust into our analysis. L&G remains in first place, while abrdn has entered the table in second and Northern Trust third, moving iShares down into fourth place.

Fund Name	Fund Benchmark	Rank
L&G Global Real Estate Dividend Index	FTSE EPRA/NAREIT Developed Dividend Plus Index	1
abrdn Global REIT Tracker	Markit iBoxx Sterling Non-Gilts ex BBB	2
Northern Trust Global REITs	FTSE EPRA Nareit Developed	3
iShares Global Property Securities Equity Tracker	FTSE EPRA/NAREIT Green Low Carbon Target Index	4



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

The abrdn fund track record only goes back to 2019 and the Northern Trust fund isn't available in FE analytics, so both funds are excluded from the above chart.

The 3-year holding costs for all funds are very similar, although abrdn's fund has a slightly lower OCF than the other funds while Northern Trust has the lowest overall 3-year holding costs. Our L&G fund is nevertheless very competitively priced. abrdn scores best on fund tracking error and fund tracking difference, closely followed by L&G. L&G has been awarded the highest mark on ESG of the funds in our analysis.

In November 2022, the benchmark tracked by the iShares fund was changed to the FTSE EPRA/NAREIT Green Low Carbon Target Index, which incorporates various ESG-based exclusionary criteria. Based on our analysis of back-tested data from BlackRock, this change of index increases the benchmark tracking error versus the index we use in our models. This means we expect the performance of the iShares fund to diverge from the other funds and our index over time, which is not reflected in the historical data we use for our scoring or in the chart above. L&G's fund tracks a slightly different index to our model too, so it's been marked down slightly, although the chart shows a very close tracking between the performance of the L&G fund and the index we use.

L&G and iShares have the biggest funds so achieve full marks for size. All funds score well on replication. L&G and Northern Trust score best on stocklending, while iShares and abrdn have points deducted because some of their funds were on loan at the time of our analysis.

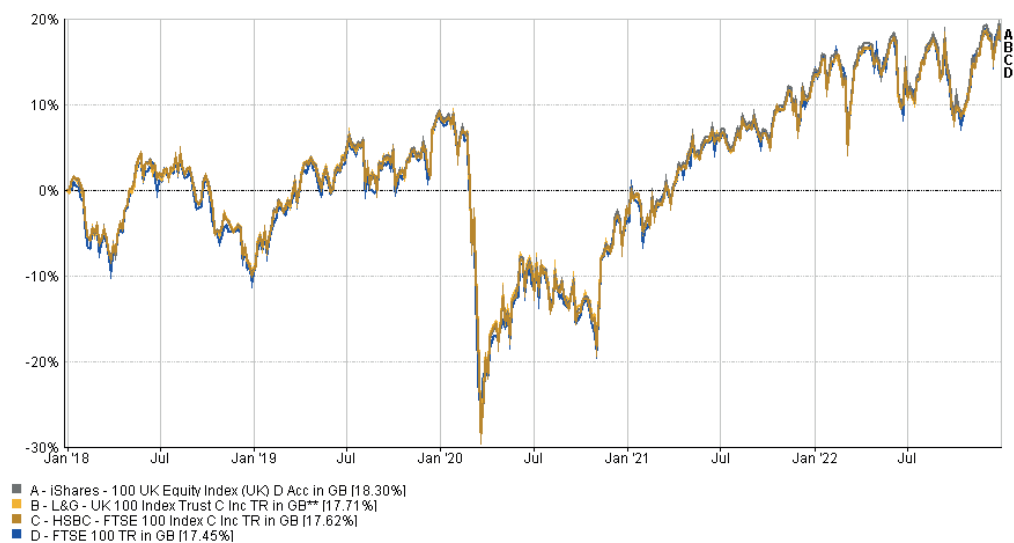
Recommendation	Hold	L&G Global Real Estate Dividend Index
----------------	------	---------------------------------------

UK Large Cap Equity

We don't generally hold UK large cap equity as a dedicated asset class within our core solutions, but there are certain solutions where this is an option.

Our holding with L&G is in first place, then iShares second and HSBC third. These rankings are unchanged from last time.

Fund Name	Fund Benchmark	Rank
L&G UK 100 Index Trust	FTSE 100	1
iShares 100 UK Equity Index	FTSE 100	2
HSBC FTSE 100 Index	FTSE 100	3



29/12/2017 - 30/12/2022 Data from FE fundinfo 2023

This is a very high-scoring asset class.

Our holding with L&G has the lowest OCF and the lowest 3-year holding costs, but HSBC and iShares are not far behind.

Consistent with last time's analysis, all 3 funds have been awarded full marks on fund tracking error. iShares also gets full marks for fund tracking difference, although L&G and HSBC score very highly as well.

All funds track the FTSE 100 index we use in our models and therefore achieve the maximum possible score for benchmark tracking error and benchmark tracking difference. This can be seen from the above chart, with all of the top 3 funds tracking the index tightly over the last 5 years.

Our holding with L&G performs best in our ESG assessment out of the three managers.

L&G has top marks for size, replication and stock lending, while iShares and HSBC fall down on stock lending.

We remain comfortable to hold L&G for this asset class.

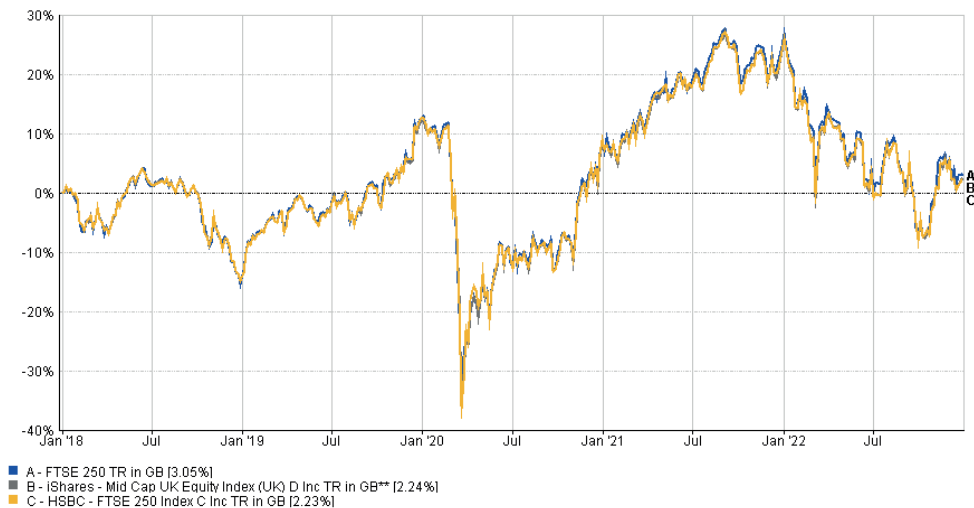
Recommendation	Hold	L&G UK 100 Index Trust
----------------	------	------------------------

UK Mid Cap Equity

We don't generally hold UK mid cap equity as a dedicated asset class within our core solutions, but there are certain solutions where this is an option.

Our holding with HSBC is in first place, then iShares is in second place. This is unchanged from last time.

Fund Name	Fund Benchmark	Rank
HSBC FTSE 250 Index	FTSE 250	1
iShares Mid Cap UK Equity Index	FTSE 250	2



29/12/2017 - 30/12/2022 Data from FE fundinfo2023

Both of the funds in our analysis have very competitive overall 3-year holding costs, which are currently within 0.01% of each other. Consistent with last time's analysis, both funds score full marks for fund tracking error, benchmark tracking error and benchmark tracking difference.

iShares has delivered stronger fund tracking difference over the last 5 years, although HSBC scores better on ESG aspects.

Both funds achieve the top scores for size and replication.

While both funds have the option to use securities lending, at the time of our analysis the HSBC fund did not have any stocks on loan. So it only received a minor deduction, while part of the iShares fund was on loan so received a lower score.

We remain comfortable to hold HSBC for this asset class.

Recommendation	Hold	HSBC FTSE 250 Index
----------------	------	---------------------

Your expert investment management team



Harry Garrett,
Investment Director

As chair of PIM's monthly committee meeting, Harry has oversight of all solutions and ensures the continual delivery to mandate. His other responsibilities include active and passive fund analysis across all asset classes and inputting to the long-term strategic asset allocation framework. Harry is a member of the Tactical Asset Allocation Committee.



Mollie Thornton,
Senior Investment Manager

Mollie's background is in strategic asset allocation, portfolio construction, investment manager selection and monitoring. She has a wide-ranging remit and looks after our award-winning PIM Strategic Ethical Active Profiles A-D. Mollie is qualified as a Fellow of the Institute of Actuaries (specialising in investments), bringing a specialist perspective to risk management and investment selection.

Get in touch

If you'd like to chat to us about passive investing, or our wider proposition, please get in touch.

Phone:

03300 945 900

Email:

mail@parmenion.co.uk

Parmenion

Registered Office: Aurora,
Counterslip, Bristol, BS1 6BX.
Website: www.parmenion.co.uk

Parmenion Capital Partners LLP
Authorised and regulated by the
Financial Conduct Authority.

FCA Number 462085.
Registered in England and Wales
OC322243.

Disclaimer: This document is only suitable for professional distribution. Any news and/or views expressed within this document are intended as general information only and should not be viewed as a form of personal recommendation. Parmenion accepts no duty of care or liability for loss occasioned to any person acting or refraining from acting as a result of any material contained within this document. Please note past performance is not an indicator of future performance, investment returns can go down as well as up.

Version date: 07/03/2023