Divest Notts
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1st March 2021

Re The financial performance of fossil fuels and investments with lower climate-related risk

Dear Pension Fund Committee members,

I am writing to you as a member of the Pension Fund and on behalf of Divest Notts.

The purpose of this letter is to present evidence on the following:

- Fossil fuel shares have underperformed the market over the last 5 to 10 years. They have lower price returns and higher volatility. This suggests that the Pension Fund would better meet its fiduciary duty towards its members by removing fossil fuels from its equity investments.
- Notts' Pension Fund's largest single equity investment – of £470m - is in the passive Legal & General UK Equity Index Fund. This Fund has performed relatively poorly over the last 5 years, and - relatedly - is relatively highly exposed to oil and gas companies and climate-related financial risk. Three FTSE sustainable investment Indexes examined below display higher returns and lower volatility, while weighting towards the clean transition and away from carbon emissions and exposure to fossil fuels. One of these Indexes is already the basis for a £600m investment by the Church of England Pension Board.

Under the Task-Force on Climate-Related Financial Disclosures (TCFD) framework, the Pension Fund reports on the following metrics with regard to its equity portfolio:

- Carbon footprint
- Weight in fossil fuel reserves (%)
- Weight in thermal coal reserves (%)
- Weight in clean technology (%)

It is only the fossil fuel sector which holds fossil fuel reserves, while it also has a high carbon footprint. This suggests the sector is likely to be at the highest climate-related financial risk. This is borne out in the poor performance of fossil fuel stocks and the fossil-heavy UK Equity Index Fund.

Equally, the much stronger performance of cleaner equity Indexes indicate the financial benefit of addressing climate change. The factors underlying the difference in performance between fossil fuel stocks and cleaner investments are only likely to become more significant going forwards.

This bodes well for the new LGPS Central Global Sustainable Equities Fund, to be launched in 2021. It is hoped that the Pension Fund will make a significant investment in this, but crucially that it acts now to ensure that the new Fund is aligned with restricting global warming to 1.5°C. The IPCC tells us this is the only route to avoiding catastrophic climate change impacts in Nottinghamshire and around the world. On the above TCFD metrics it is likely that the cleaner the Fund, the lower the financial risk.

Section 1: Performance of fossil fuel stocks against the market

Although it has made recent reductions in its direct holdings in oil and gas companies, the Pension Fund retains very substantial equity investment in the fossil fuels industry through direct holdings and managed funds. The largest of these investments remain in BP and Shell.

The data below compares the performance of FTSE and Standard & Poor benchmark stock indexes against their 'Ex fossil fuel' equivalent indexes. The Ex fossil fuel indexes are based on the benchmark indexes but have had most fossil fuel stocks screened out.

The data used is for the longest period that is publically available: 5 years in the case of FTSE Indexes, and 10 years in the case of Standard & Poor.

It shows that in all cases the Ex fossil fuel indexes have had higher returns and lower volatility over the period.

FTSE All-World Ex-Fossil Fuel Index

The table below is from the FTSE All-World Ex-Fossil Fuel Index Series Factsheet, issued on 29th January 2021.

It can be seen that the 5 Year return on the benchmark FTSE All-World Index (which includes fossil fuel stocks) is 93.4%. With the exclusion of fossil fuel stocks it is higher at 97.6%. The same pattern is true for the Developed version of the Index.

The benchmark All-World Index has higher 5 Year volatility at 14.8%, versus a lower 14.5% when fossil fuel stocks are excluded. The Developed Indexes also have lower volatility in their Ex fossil fuels version.

Performance and Volatility - Total Return

Index (USD)	Return %						Return pa %*		Volatility %**		
	3M	6M	YTD	12M	3YR	5YR	3YR	5YR	1YR	3YR	5YR
FTSE All-World ex Fossil Fuels	16.5	17.5	-0.5	18.9	30.5	97.6	9.3	14.6	27.0	18.8	14.5
FTSE Developed ex Fossil Fuels	16.3	16.8	-1.0	17.8	31.9	97.4	9.7	14.6	28.3	19.0	14.7
FTSE Emerging ex Fossil Fuels	18.3	22.7	3.8	28.1	16.5	100.4	5.2	14.9	22.8	20.0	16.8
FTSE All-World	17.2	17.5	-0.4	17.4	27.1	93.4	8.3	14.1	27.3	19.2	14.8
FTSE Developed	17.0	17.0	-0.9	16.5	28.5	92.8	8.7	14.0	28.5	19.4	14.9

* Compound annual returns measured over 3 and 5 years respectively
** Volatility – 1YR based on 12 months daily data. 3YR based on weekly data (Wednesday to Wednesday). 5YR based on monthly data

FTSE North America Ex Fossil Fuel Index

As at 30th September 2020 (its latest available holdings data) Nottinghamshire Pension Fund has holdings worth £294m in the Legal & General North America Equity Index Fund. This Fund tracks the FTSE North America Index, making a comparison of the performance of that Index with its Ex fossil fuels relation very relevant to the Pension Fund's investments.

The table below is from the FTSE North America Ex Fossil Fuel Index Series Factsheet issued on 29th January 2021.

It can be seen that the 5 Year return on the North America Ex Fossil Fuel Index is markedly higher (at 122.2%) than in the benchmark FTSE North America Index (114.5%).

The benchmark FTSE North America Index has 5 Year volatility of 15.3%, versus a lower 15.1% when fossil fuel stocks are excluded.

Performance and Volatility - Total Return

Index (USD)	Return %						Return pa %*		Volatility %**		
	3M	6M	YTD	12M	3YR	5YR	3YR	5YR	1YR	3YR	5YR
FTSE North America ex Fossil Fuels	14.7	15.6	-1.0	20.3	45.0	122.2	13.2	17.3	34.0	20.1	15.1
FTSE North America	15.1	15.7	-0.9	18.8	40.8	114.5	12.1	16.5	34.2	20.4	15.3
FTSE Developed ex North America ex Fossil Fuels	19.8	19.3	-1.0	13.1	11.2	60.4	3.6	9.9	23.1	19.1	15.0
FTSE Developed ex North America	20.8	19.6	-0.9	12.2	9.7	60.8	3.1	10.0	23.8	19.7	15.2
FTSE North America ex Fossil Fuels USA	14.7	15.8	-1.0	20.9	46.1	124.1	13.5	17.5	34.2	20.1	15.1
FTSE USA	15.0	15.8	-0.9	19.4	42.2	116.9	12.5	16.7	34.3	20.4	15.3

* Compound annual returns measured over 3 and 5 years respectively
** Volatility – 1YR based on 12 months daily data. 3YR based on weekly data (Wednesday to Wednesday). 5YR based on monthly data

Standard&Poor 500 Ex-Energy Index

The graph below shows price returns over the last 10 years for the benchmark Standard & Poor 500 (S&P 500) Index, the S&P 500 Ex-Energy Index (based on the benchmark but excluding fossil fuel companies), and S&P 500 Energy (fossil fuel) Sector Index.

(Note that under North American industrial sector classifications the 'Energy' sector is solely comprised of fossil fuels rather than any renewable or alternative energy. https://en.wikipedia.org/wiki/Global_Industry_Classification_Standard)

Index Name	Index Level	10 Yr Return
S&P 500 Ex-Energy Aug 24, 2015	4,202.97	12.66%
S&P 500 Mar 04, 1957	3,934.83	11.46%
S&P 500 Energy (Sector) Jun 28, 1996	334.99	-4.86%

Graph and annualised risk scores – discussed below - from Standard & Poor as at 16th February 2020:
https://www.spglobal.com/spdji/en/indices/equity/sp-500-ex-energy/#overview

The graph makes it clear that excluding fossil fuels increases returns over the last 10 years.

The data below the graph shows the annualised returns over the last 10 years. The Ex-Energy Index has annualised returns of 12.66%, versus 11.46% for the benchmark S&P 500. The Energy (fossil fuels) Sector has annualised returns of -4.86%.

Standard and Poor measure volatility by looking at 'annualised risk', which is an Index's standard deviation. A higher number indicates higher volatility. The following figures are taken from the S&P website via the above link.

As at 16th February 2021, the S&P 500 Ex-Energy Index had a 10 year annualised risk of 13.22%. The S&P 500's was higher at 13.55%, meaning the exclusion of fossil fuel stocks reduces volatility.

The Energy Sector Index's annualised risk score was 26.03%, showing very high volatility.

Given this, it is perhaps unsurprising that The Economist recently reported that "in 2019 Energy was the worst-performing sector in the S&P 500 ... as it had been in 2014, 2015 and 2018".
https://www.economist.com/business/2020/12/16/big-oils-diverging-bets-on-the-future-of-energy

Dividends and diversification

It is notable that when presented with similar data by Divest Notts and concerned members in recent years, Officers pointed to diversification of holdings across sectors and dividend payments from oil and gas companies as justifications for continuing to hold fossil fuel stocks.

However, neither of these arguments appeared in answers given to Pension Fund members' questions at the most recent AGM.

Perhaps this is in light of: the sector's stock returns performance – there is no financial reason for diversifying into a sector that is performing poorly over the longer term; and that BP and Shell as well as other oil companies including Eni, Equinor and Occidental Petroleum cut dividends in 2020. Companies such as ExxonMobil, Chevron and Total only maintained dividend levels by cutting capital investment.

Section 2: Could the Pension Fund increase returns and reduce climate-related financial risk by investing differently?

The Legal & General UK Equity Index Fund

Notts Pension Fund has £470m invested in the Legal & General UK Equity Index Fund (figure as at 30th September 2020 - the latest figure publically available). This is by far the Pension Fund's largest managed equity fund investment.

The Legal & General UK Equity Index Fund tracks the FTSE All-Share Index. As at 29th January 2021, the Index included weights of 4.74% in Royal Dutch Shell, and 2.5% in BP.

As part of its reporting on climate-related financial risk under the Task-Force on Climate-Related Financial Disclosures (TCFD) framework, Notts Pension Fund reports on the following metrics with regard to its equity portfolio:

- Carbon footprint
- Weight in fossil fuel reserves (%)
- Weight in thermal coal reserves (%)
- Weight in clean technology (%)

Oil and gas companies have both high carbon footprints and high exposure to fossil fuel reserves. The Legal & General UK Equity Index Fund is at relatively high climate-related financial risk as a result of its exposure to Shell and BP.

This appears to be reflected in its relatively poor financial performance discussed below.

Accordingly, at the Pension Fund's AGM on 21st January 2021, William Bourne – the Fund's independent advisor - said that the Pension Fund was 'over-weight UK' with reference to the relatively high proportion of UK passive equity investment accounted for by fossil fuel companies.

Financial performance comparison with low carbon and environmental Funds and Indexes

Given the financial performance of fossil fuel stocks and the urgent need for climate-friendly investment, it is useful to compare the performance of the FTSE All-Share Index (which the Legal & General UK Equity Index Fund tracks) with three FTSE Indexes designed with the climate in mind.

The first two of these Indexes weight towards companies operating in the green economy. As such they would score well on the fourth aspect of climate-related financial risk which the Pension fund reports on: weight in clean technology. The first of these Indexes is the basis for a major investment by the Church of England Pension Board.

The third Index considered is solely comprised of environmental technology companies.

Index name	**5 year return (%)**	**5 year volatility (%)**	**Description / Information on investments by Notts or other pension funds**
FTSE All-Share Index	31.5	13.8	Notts Pension Fund has £470m invested in the Legal & General UK Equity Index Fund, which tracks this Index
FTSE TPI Climate Transition Index (formally, the 'FTSE Developed Ex Korea TPI Climate Transition Index')	71.7	11.2	The Church of England Pension Board invested £600m in a new fund based on this Index in January 2019. The Index weights against fossil fuel reserves and carbon emissions, towards companies with green revenues, and towards companies whose policies are aligned with 2 degrees or below of global warming.
FTSE Divest-Invest Developed 200 Index	139.4	12.6	The Index is designed to incorporate a combination of rules-based strategies to reduce exposure to companies from certain ICB subsectors associated with the high carbon economy and obtain increased exposure to companies engaged in the transition to a green economy.
FTSE Environmental Technology 100 (ET100) Index	248.0	21.1	The Index measures the performance of the100 largest environmental technology companies globally, by full market capitalisation, To be included companies must have at least 50% of their business derived from environmental markets and technologies.

All figures in the table above, and the tables in Section 1, are taken from the relevant FTSE Russell Index Factsheets as at 29th January 2021. Factsheets – which are updated monthly – are available here https://www.ftserussell.com/analytics/factsheets/home/search (or by googling the name of the Index with the word 'factsheet').

Commentary on 5 year return and volatility figures

Review of the 5 year return figures above show that the three cleaner Indexes easily out-perform the FTSE All-Share Index.

Notably, the FTSE Environmental Technology 100 (ET100) Index returned 248%.

The Divest-Invest Developed 200 Index also had very impressive return figures, at 139.4%.

The Divest-Invest Index and the FTSE TPI Climate Transition Index both had lower 5 year volatility than the All-Share Index. The ET100 Index had higher volatility, perhaps because it is relatively undiversified.

The figures offer strong support for the notion that returns can be improved while – and indeed by - acting on climate change.

Section 3: Concluding points

In light of the information presented here, it appears very likely that the Pension Fund has lost money on fossil fuel investments in recent years, or – at the very least – lost money relative to cleaner investments which it could have made. This is on both direct investments and equity held in managed funds.

Moving investment from the UK Equity Index Fund towards funds based on the lower carbon and more sustainable Indexes examined would have increased returns and – in two of the three Indexes looked at - reduced volatility.

The factors underlying the observed performance across different Indexes are likely to be further accentuated moving forwards. Ever-tightening international climate policy, green stimulus spending, and rapid moves by the private sector – most notably recently in the automotive industry - mean that the majority of the reserves owned by fossil fuel companies will never be exploited. This greatly reduces those companies' current and future value. As can be seen above, investments weighted towards the green transition are now performing extremely well.

We hope that clean equity fund investments will be substantial and will be made very soon. The forthcoming LGPS Central Fund sounds promising. It is crucial that the Notts Pension Fund works now in its discussions with LGPS Central to ensure that the new Fund is aligned with restricting global temperature rise to a maximum of 1.5°C.

This must form part of the alignment of the Pension Fund's investment strategy with a 1.5°C pathway. The IPCC tells us that it is only by so restricting global warming that we have a reasonable chance of avoiding catastrophic impacts.

Beyond the financial information presented here, there are compelling non-financial reasons for the Pension Fund to eliminate its exposure to fossil fuel stocks. Notably: no oil and gas company is close to being aligned with the goals of the Paris Agreement on Climate Change; and there is demonstrable concern amongst individual and employer members of the Pension Fund about the

Fund's fossil fuel investments, lack of clean equity fund investments and overall approach to climate change. That said, these concerns overlap with financial ones: lack of alignment with the Paris Agreement is likely reflected in the poor financial performance of fossil fuel companies, while member concern is also partly related to concerns over financial performance.

Note that we are not recommending any of the Indexes or funds discussed. In particular, it may be the case that other sustainable investment Indexes perform better than those examined on financial and climate grounds. This is for the Pension Fund and LGPS Central to fully assess.

Many thanks for your time in reading this. We hope that you will seriously consider the information provided and act on it. For the financial and social good of its members and all Nottinghamshire citizens the Pension Fund must invest urgently to prevent catastrophic climate change.

Yours sincerely,

MH

Divest Notts