AN UPDATE FROM THE FUND'S INVESTMENT CONSULTANT

I am pleased to provide an update from an investment perspective on the activities of the Clwyd Pension Fund (CPF) during 2017/18. As the Fund's Investment Consultant I provide advice to the Fund on how to manage various investment risks. I also have a specific role in guiding the overall direction of the Fund via my seat on the CPF Advisory Panel.

Investment Strategy Statement (ISS)

When considering the Fund's investments it is appropriate to start with the overall investment objectives, which are set out in the ISS, which replaced the Statement of Investment Principles with effect from 1 April 2017. It is appended to this report and sets out the funding and investment objectives for the Fund. The specific investment objectives are:

- Strike an appropriate balance between long-term consistent investment performance and the funding objective to maintain assets equal to 100% of liabilities within the 15 year timeframe. .
- Ensure net cash outgoings can be met as and when required.
- Ensure that its future strategy, investment management actions, governance and reporting procedures take full account of longer-term risks and sustainability
- Promote acceptance of sustainability principles and work together with others to enhance the Fund's effectiveness in implementing these.

This report demonstrates progress made towards these long term objectives during 2017/18, compliance with the ISS, the economic and market environment and changes implemented or planned during the year.

Summary of 2017/18

Market Commentary

2017 was marked by ultra-low volatility as strong corporate earnings, low unemployment levels and broadly positive economic growth supported equity markets world-wide. Various political events like the snap-elections in the UK and Japan, geo-political tension between the US and North Korea, coupled with a series of elections in Europe failed to weigh-down on asset prices. The central banks in most of the developed nations started withdrawing stimuli as the global economy appeared to be in a 'Goldilocks' scenario. However as we approached 2018, concerns over rising inflation, accelerating wage growth and faster-than-expected rate hikes by the Federal Reserve caused market volatility to hit all time highs. In addition, concerns over a flattening yield curve in the US and a potential trade war between the US and China, also caused markets to weaken towards the end of the first quarter of 2018.

In the UK, Prime Minister Theresa May unexpectedly called a snap election to in June 2017, the outcome of which weakened the Conservative party's strength and stability prior to the crucial Brexit negotiations. However, towards the end of 2017, EU leaders agreed to move to the second phase of Brexit negotiations to discuss the future of the UK's trading relationship with the bloc. After falling to a 30-year low post Brexit, Sterling regained some strength over the year against the backdrop of progress in the negotiations and expectations that the Bank of England might increase rates faster than previously expected.

Despite sluggish domestic growth, the Bank of England (BoE) raised interest rates for the first time in a decade, from a record low of 0.25% to 0.50% in November 2017. UK gilt yields fell to historic lows post the BoE's decision to extend its quantitative easing programme and remained volatile thereafter. While concerns around rising inflation in the UK and a hawkish BoE helped to push the yields higher in the beginning of 2018, rising geo-political tensions and a global equity market sell-off contributed to their fall towards the end of Q1 2018.The BoE in its latest quarterly inflation report, increased the forecast for UK GDP growth from 1.7% to 1.8% in 2018. Over the year, the FTSE 100 index fell by 3.6%, in local currency terms.

The nationalist parties that gained momentum across Europe in 2016 were seen to take a back seat in 2017 as both Mark Rutte and Emmanuel Macron emerged as winners against the anti-EU leaders in Dutch and French elections respectively. After an initial round of inconclusive elections in September 2017, Angela Markel managed to form a new government and win her fourth term as German chancellor. While spreads between French and German government bond yields widened at the beginning of 2017 amid concerns over the French elections, they narrowed post the win and have been stable over the year. Political unrest was re-ignited in Europe as regional elections in Catalonia failed to resolve the independence issue. In addition, Italy's election in March 2018 yielded no overall winner, but the results were tilted in the favour of populist extremist parties.

In October 2017, the ECB decided to extend its quantitative easing policy to September 2018, but at the same time it began to gradually withdraw the stimulus by reducing the amount of monthly asset purchases from €60 billion per month currently to €30 billion from January 2018. Overall, the economic backdrop remained positive in Europe as the Q4 2017 GDP grew at an annualised rate of 2.5% thereby growing at the fastest pace since 2007. Over the year, the STOXX Euro 600 index provided a return of 0.4% in local currency terms.

The US equity markets corrected sharply in February 2018 after touching their all-time highs in 2017. An increase in US wage inflation that caused investors to believe in faster-than-expected rate hikes primarily led to the fall. Also, concerns around US-China trade relations resulted in increased equity market volatility towards the end of the period under review. There remains some uncertainty around the implementation of President Trump's economic and fiscal policies, given his efforts to reduce trade deficit gave rise to trade war tensions. In December 2017, the US Senate approved a $1.5 trillion tax bill, which not only reduces the corporate tax rate to 21% from the current 35%, but also includes temporary tax cuts for individuals. During the fourth quarter of 2017, the US economy grew at an annualized rate of 2.6%, as compared to a growth rate of 3.3% in the third quarter.

Treasury yields continued to rise over the year as expectations of growth, inflation and interest rate rises increased. Given the strong momentum in economic growth, the US Federal Reserve has raised rates three times in the last twelve months, in effect increasing the base rate range to 1.50% – 1.75%. In addition, the Federal Reserve, at its bi-monthly meeting in September 2017, unveiled its plan of systematically shrinking the $4.5 trillion balance sheet starting in October 2017. The S&P 500 index returned 11.8% in dollar terms over the year.

China has raised its profile within the global market, with its currency joining the International Monetary Fund's basket of reserve currencies alongside MSCI's decision to include its mainland equities, known as A-shares, in the global benchmark equity index from 2018. In December 2017, the People's Bank of China raised its interest rates by 5 basis points, in an attempt to keep the currency stable. Steps were taken to bar individuals and companies from investing in overseas markets and tighter liquidity rules were introduced to restrict loans to the shadow banking sector. Considerable efforts were also taken to open up the Chinese economy, particularly the financial sector. A new law which removes the presidential term limit was also introduced in 2018. GDP in the world's second-largest economy grew by 6.9% year-on-year in the fourth quarter of 2017, slightly higher than the 6.8% growth in the third quarter. In September 2017, Standard and Poor's cut China's sovereign credit rating from AA- to A+ against the backdrop of rising debt levels in the economy. The 19th Communist Party Congress was held in October 2017 to address structural risks and focus on the quality of growth. Concerns around a trade war (imposition of tariffs by the US on steel and aluminium products) with the US negatively impacted the Chinese equity markets towards the end of Q1 2018. Over the year, the FTSE China A50 index rose by 21.4%, in local currency terms.

In Japan, 10-year government bond yields have hovered around the targeted level of zero since the adoption of yield curve control by the Bank of Japan. While the Yen depreciated significantly against the US Dollar in 2017 due to a hawkish Fed, it started gaining some strength in 2018 owing to its safe haven status. Prime Minister Shinzo Abe's Liberal Democratic Party (LDP) won a clear majority in the snap elections held in October 2017 and Haruhiko Kuroda was re-appointed as the governor of the Bank of Japan in March 2018. This implied continuation of loose monetary policy in Japan when the world is treading on the path to quantitative tightening. Abe also announced a 2 trillion yen ($18 million) stimulus package to be spent on education, child-care and to encourage corporate investments. However, controversy surrounding the Moritomo Gakuen land sale has significantly reduced the Prime Minister's approval rating in the recent past. During the first quarter of 2018, its economy expanded at an annualized rate of 1.6%, primarily driven by strong private consumption and increased business spending. Equity markets were supported by improving macro-economic data and corporate earnings during the year. Over the year, the Nikkei 225 rose by 13.5% in local currency terms.

While Brent crude prices were range bound for the first half of the period under review, they increased in the second half as both OPEC and non-OPEC members agreed to extend production cuts to the end of 2018. Supply disruptions from around the globe coupled with a weakening US Dollar also provided some support to prices. Brent crude prices rose by 33.0% during the period in review.

Clwyd Pension Fund Investment Performance 2017/18

The Fund returned +4.3% in 2017/18 which is behind the expected return assumption of CPI +4.0% as quoted in the Investment Strategy Statement (ISS) and Funding Strategy Statement (FSS). The return of +4.3% compared with a composite benchmark (of the underlying manager benchmarks) of +4.4% and a composite target of +4.8%. Whilst the returns for the year were below the required rate, this needs to be seen in context of the longer term performance; over three years to the 31 March 2018 the Fund achieved a return of +8.1% per annum compared with a composite benchmark of +7.1% per annum and the composite target of +7.5% per annum .

The Equity portfolio that includes Global and Emerging Market Equity exposures returned +11.2% with both the Developed Global Equity Fund and the Emerging Markets Funds producing strong absolute returns despite the market volatility in February and March 2018. Both Wellington Emerging Markets Core and Local portfolios outperformed their targets over the 12 months, whilst the Investec Global Strategic Equity fund underperformed its target by -0.2%. The Fund invested in the BlackRock ACS World Multifactor Equity fund in November 2017 as part of the implementation of the 2016/17 review of the investment strategy. There is no annual performance for this fund due to the short holding period.

The Multi-Asset Credit portfolio produced a small positive return of +2.9% outperforming its target. The review of the 2016/17 Investment Strategy included, for the first time, an allocation to Private Credit. During 2017/18 the Fund appointed two managers for this allocation and the Permira investment (accessing European Private Credit) was funded in September 2017, although it will take some time to drawdown the full commitment. A second manager, BlackRock was subsequently appointed to manage the Fund's exposure to North American Private Credit.

The year was a tough one for the Tactical Allocation Portfolio, which suffered in the market sell-off in February and March 2018. It returned +1.5%, underperforming its objective. The portfolio comprises a Diversified Growth Portfolio which returned -0.1% and a Best Ideas Portfolio that produced a return of +2.9%. Within the Diversified Growth Portfolio both of the managers underperformed their benchmarks; Investec had a positive return of +2.8% and Pyrford returned -2.4%.

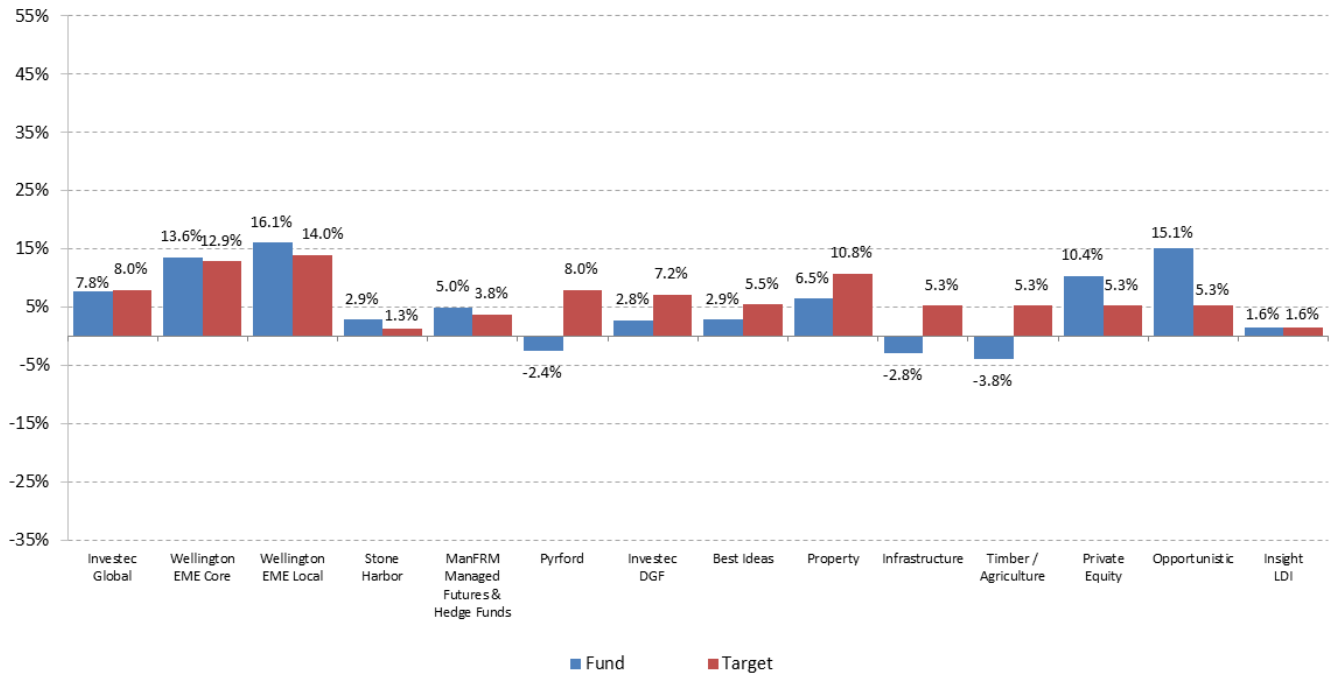
The Managed Account Platform with ManFRM contains a Managed Futures & Hedge Funds portfolio which produced a positive absolute return of +5.0%. In addition the residual balances of the Fund's illiquid legacy Hedge Funds holdings are contained on the Platform which reduced the overall return of the Managed Account Platform to +2.5%. With the exception of the legacy investments it is pleasing to see the diversification the MANFRM portfolio is starting to give the Fund.

After the strategy review in 2016/17 the Fund's In-house portfolio was split between Private Markets (Private Equity & Opportunistic) and Real Assets (Property, Infrastructure, Timber/Agriculture). In the 12 months the Private Markets portfolio achieved a return of +11.1% and the Real Assets portfolio +3.0%.

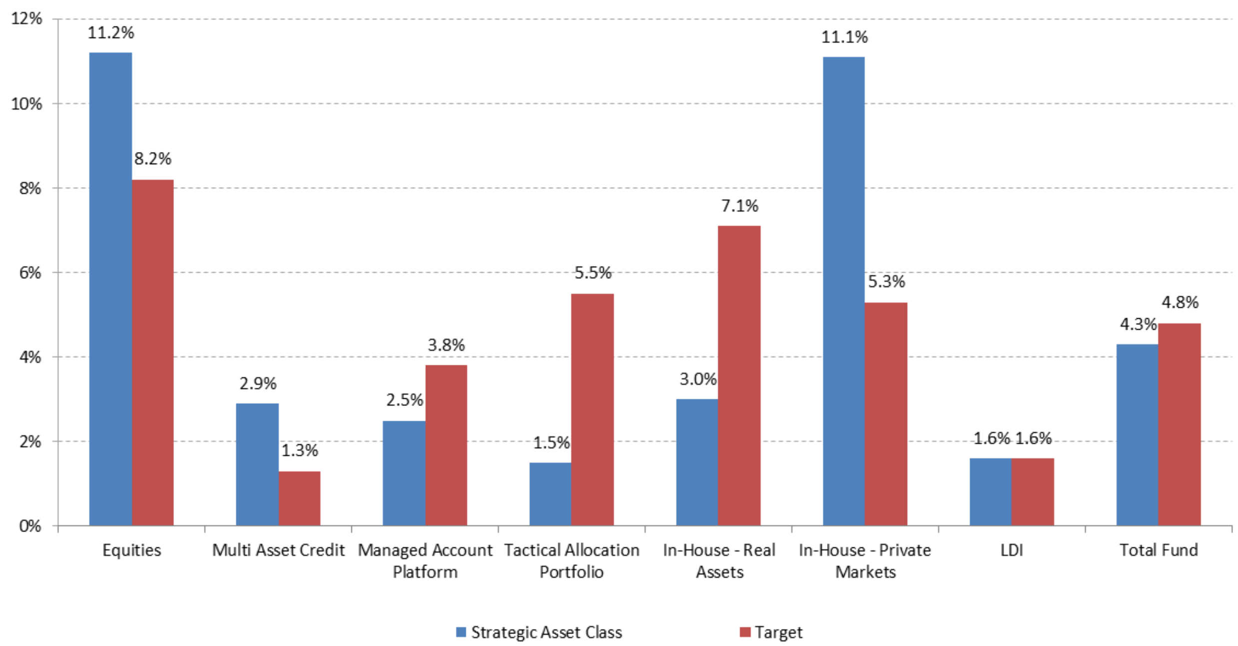
Within the Private Markets portfolio Opportunistic investments performed best returning +15.1%. Private Equity also achieved a strong absolute performance with a return of +10.4% over the year. Within the Real Assets portfolio Property investments produced a positive return of +6.5% in the year, however this was partially offset within the overall return by the Infrastructure and Timber/Agriculture assets that declined by -2.8% and -3.8% respectively in the year.

The Liability Driven Investment portfolio (a key component of the Flightpath/De-Risking Framework) which consists of regional Global Equity, Gilt and inflation exposures returned +1.6% in 2017/18 compared to +50.8% the previous year. However the performance of this portfolio over the short term is less relevant due to its risk management characteristics.

The following charts below summarise the 12 month performance against the target for each of the Fund's asset classes and managers together with the total Fund. It should be noted we have only included those funds/asset classes that have a full 12 month return.



The chart below summarises the performance of the key components of the Fund's investment strategy versus their target.



Source: JLT Employee Benefits

Summary of Investment Performance

2017-18

The market conditions for the first ten months of 2017/18 were beneficial for the Fund with most of the major asset classes producing strong positive returns in particular Equity markets. However in February and March 2018 a lot of this good performance was tempered by volatile and falling markets. Despite this sell-off late in the financial year, equity markets still produced the strongest returns overall. However, the diversification within the Fund's investment strategy was exemplified with the performance of the In-House Private Market investments which was the next best performing element of the portfolio. This diversification of sources of return is expected to position the Fund well in the future.

Whilst the Fund will not have produced a return as high as an investment strategy more heavily weighted to Equities, which is seen when comparing to the average local authority, it is important to bear in mind that the Fund is investing for the long term and has a diversified portfolio which aims to achieve a targeted balance between return and risk. However this is not to say that we are not cognisant of shorter term market conditions – as commented in last year's annual report the creation and implementation of the Fund's Best Ideas Portfolio (within the Tactical Allocation Portfolio) is evidence of this.

Post 31 March 2018

Given the market volatility and sell off in markets that affected market values and ultimately performance in February and March 2018, it is appropriate to update the position of the Fund as at 30 June 2018. Since the end of March, investment markets have seen a sustained recovery, with global developed equity markets leading the way, with most regions recovering all of the value lost in the first quarter of 2018. As a result of this recovery in markets the Clwyd Fund has seen its value rise to circa £1,848m at the end of June, an increase of £70m since the end of March.

Investment Strategy

The detail of the "light touch" Investment Strategy review, undertaken in 2016 in conjunction with the Actuarial Valuation, was reported in last year's Annual Report and in the year under review, the implementation of the new strategy has been progressing.

One important aspect of the review was to increase the Fund's illiquidity premium (to increase the long term expected return) by introducing a 3% allocation to Private Credit within the Fund's Credit Portfolio. The manager search for Private Credit was progressed in the year and Permira were appointed as European Private Credit manager in September 2017. A separate process to appoint a North American Private Credit manager was concluded in the year with BlackRock appointed, although no committed capital had been drawn down as at the end of March 2018.

A number of JLT's strategic recommendations are more medium term by way of implementation as at 31st March 2018 the more short term changes had been implemented. The "light touch" nature of the review has meant that the characteristics of the investment strategy have remained broadly similar to last year. The key features of the Fund's strategy are outlined below.

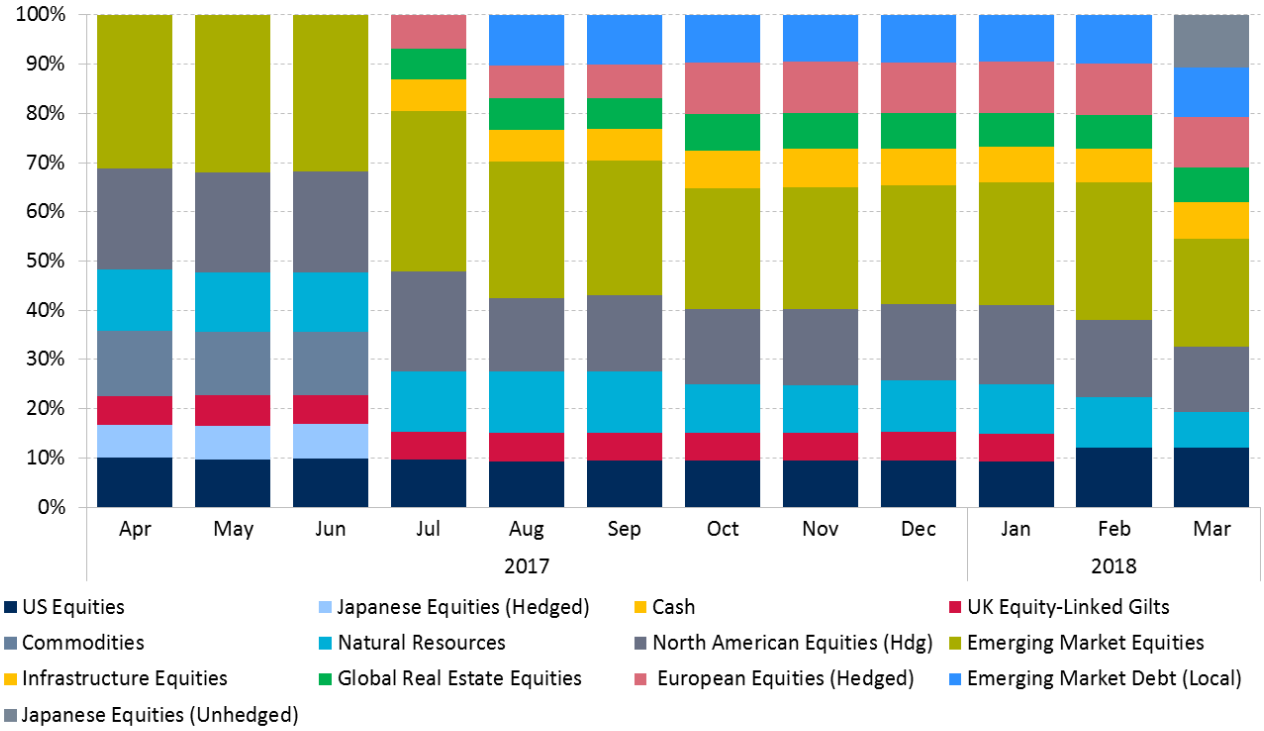
The Fund's investment strategy continues to be more diversified than most LGPS Funds and incorporates a Flightpath/De-Risking Framework (which was not covered in the strategy review but the structure of which is being reviewed separately), which differentiates the Fund from many other LGPS Funds. The aim of the Fund's strategy is to reduce the volatility of returns, in line with the objective of stabilising employer contribution rates. Although history suggests that in the long term Equities should out-perform other asset classes, these returns can be very volatile and the asset class can under-perform for many years. It does appear that other LGPS funds are moving to more diversified strategies as the average LGPS fund has 55% allocated to equity, compared to 62% as at 31 March 2017. However, this is still significantly higher than the Clwyd Fund.

In July 2017 the strategic decision to allocate 4% of the Fund to Global Equity Smart Beta was implemented with the appointment of BlackRock to manage the mandate.

The ManFRM Managed Account Platform (MAP) includes Managed Futures and Hedge Funds. In addition the legacy illiquid Hedge Fund holdings were incorporated onto the MAP pending their full redemption, given the illiquid nature of some of the underlying positions in these funds. During the year proceeds from the holdings redeemed were reallocated within the ManFRM MAP.

The Tactical Allocation Portfolio includes a Diversified Growth Portfolio comprising two DGF managers (Investec and Pyrford) and a Best Ideas Portfolio. The Best Ideas Portfolio is a short term (12 month horizon) tactical allocation based upon JLT's suggested "best ideas". Aside from the decisions being made on a tactical (short term) basis, the basic premise of the decisions within this portfolio is that any asset allocation implementation should be liquid (to enable speed of action should it be required) and cost efficient. Given the increase in the Fund's strategic allocation to the Best Ideas Portfolio, and the material size of this allocation (11% of total Fund assets) we provide further details as to the composition of this portfolio overleaf.

Throughout the year under review a number of positions have been taken within the underlying composition of the Best Ideas portfolio as demonstrated in the chart below. There is a monthly meeting of the Tactical Asset Allocation Group where JLT monitor and review the portfolio and make recommendations to Fund Officers. A robust process has been put in place with a transparent audit trail (including minutes of all meetings) documenting any changes and decisions together with their rationale.



The chart demonstrates the diversified nature of the holdings within the Best Ideas Portfolio which has included regional Equities, Commodities, UK Equity Linked Gilts, Emerging Market Debt as well as liquid alternatives in the form of listed Infrastructure and Global REITS. It also shows how the underlying holdings have changed following decisions that have been taken by the Tactical Asset Allocation Group over the year.

The Fund's current strategic asset allocation, strategic and conditional ranges (established following the 2016 "light touch" review), are shown below:

Strategic Asset Class	Strategic Allocation	Strategic Range (%)	Conditional Range (%)
Global Equity	8.0%	5.0 – 10.0	0 – 30
Emerging Markets Equity	6.0%	5.0 – 7.5	0 – 15
Credit Portfolio	15.0%	10.0 – 20.5	0 – 25
Multi Asset Credit	*12.0%*	*10.0 – 15.0*	*5 – 20*
Private Credit	*3.0%*	*2.0 – 5.0*	*0 – 10*
Managed Account Platform	9.0%	7.0 – 11.0	5 – 15
Tactical Allocation Portfolio	21.0%	15.0 – 25.0	10 – 30
Diversified Growth	*10.0%*	*8.0 – 12.0*	*5 – 15*
Best Ideas Portfolio	*11.0%*	*9.0 – 13.0*	*5 – 15*
Private Markets	10.0%	8.0 – 12.0	8 – 12
Real Assets	12.0%	10.0 – 15.0	5 – 20
Property	4.0%	*2.0 – 6.0*	*0 – 10*
*Infrastructure**	8.0%	*5.0 – 10.0*	*2 – 12*
Liability Hedging	19.0%	10.0 – 30.0	10 – 30
Cash	0.0%	0.0 – 5.0	0 – 30

* Infrastructure includes exposure to Agriculture and Timber

The following table shows the strategic ranges compared to the actual asset allocations as at 31 March 2018 and 31 March 2017.

Manager	Mandate	Strategic Allocation 16/17	Actual Allocation 31/03/17	Strategic Allocation 17/18	Actual Allocation 31/03/18
	Equities				
Investec Asset Management	Global Equity	4.0%(1)	7.8%	4.0%	4.2%
Wellington Management International Ltd	Emerging Markets Equity	6.0%	6.4%	6.0%	6.9%
BlackRock	Global Equity	4.0%(1)	0.0%	4.0%	3.8%
	Credit				
Stone Harbor Investment Partners	Multi-Asset Credit	15.0%(2)	11.9%	12.0%	11.5%
Permira	Private Credit	0.0%(2)	0.0%	3.0%	0.9%
	Managed Account Platform				
ManFRM	Managed Futures & Hedge Funds	9.0%	8.2%	9.0%	8.1%
ManFRM	*Hedge Funds (Legacy)*		0.6%		0.4%
	Tactical Allocation Portfolio				
Pyrford International	*Diversified Growth*	5.0%	4.9%	5.0%	4.5%
Investec Asset Management	*Diversified Growth*	5.0%	4.9%	5.0%	4.8%
Consultant	*Best Ideas Portfolio*	9.0%	10.9%	11.0%	10.6%
	In-House - Real Assets				
Various	Property	4.0%	6.7%	4.0%	6.4%
Various	Infrastructure	6.0%	1.9%	6.0%	2.3%
Various	Timber/Agriculture	2.0%	1.7%	2.0%	1.4%
	In-House – Private Markets				
Various	Private Equity	8.0%	8.7%	8.0%	8.7%
Various	Opportunistic	2.0%	1.0%	2.0%	1.7%
	Liability Hedging				
Insight	Liability Driven Investments	19.0%	23.5%	19.0%	22.5%
	Cash		0.8%		1.2%

1) The Global Developed Equity Portfolio has a new allocation to Smart Beta which was implemented in November 2017.
2) The Credit Portfolio has a 3.0% allocation to Private Credit. Managers have been appointed but the draw down will take some time.

Responsible Investment

The Fund's ISS includes its policy on Responsible Investment which is implemented through a Sustainability Policy. The ISS shows the Fund's compliance with the Financial Reporting Council's UK Stewardship Code and in March 2018 the Fund was approved as a Tier One signatory to the Code. The Fund continues to be a member of LAPFF and PLSA who both act on behalf of its members on stewardship matters.

Although the Fund is invested in pooled vehicles, and therefore does not own individual shares, the fund managers still report on how they voted the shares held within the vehicle. In particular if corporate governance concerns are raised by LAPFF, these are reported to fund managers and an explanation is received from fund managers on how they voted and the engagement undertaken with the managers of the company.

A summary of the voting activities of the managers for 2017/18 is shown in the following table.

Manager	Annual/Special Meetings	Proposals	Votes For	Votes Against	Votes Abstained	Not Voted/ Refer/Withheld
Investec	262	3,532	3,263	196	63	10
Pyrford	53	885	785	61	4	1
Wellington	312	2,563	2,203	232	82	46

The Fund invests in property, private equity, infrastructure, timber and agriculture. A list of these investments is attached with commitments to those with a particular environmental or social objective separately identified. The commitments made to date in these areas amount to £127m.

Investments regulations now allow for LGPS funds to consider social impact where some part of financial return is forgone in order to generate a social impact and there is no significant risk of financial detriment. The Fund's approach to Social Investments is included in the ISS but no investments have been made to date where financial return has been foregone, although many of the investments do have a social impact. The Fund is working on how this can be effectively measured and reported to stakeholders.

United Nations Principles for Responsible Investment

The Fund engages with all of its asset managers to ensure that they are fully aware of their responsibilities with regard to Sustainability, and one of the ways in which the fund management industry can demonstrate that it takes its responsibilities seriously is to become a signatory to the UN Principles for Responsible Investment (UN PRI). Firms that are signatories to the UN PRI are required to commit to a set of six principles promoting and incorporating Environmental Social and Governance (ESG) principles into all aspects of its work. It is pleasing to report that all of the Fund's major asset managers (listed below) are UN PRI signatories.

BlackRock

Insight

Investec

MAN Group

Pyrford

StoneHarbor

Wellington.

LGPS Code of Transparency

In 2017, the LGPS Scheme Advisory Board introduced a Code of Transparency for asset managers, to encourage transparent reporting of costs. The Code is voluntary but is being widely adopted across the LGPS including within the developing pools. The Scheme Advisory Board is monitoring and reporting on those managers that have committed to the Code, and it is pleasing to note that all of the Fund’s major managers (shown below) have signed up.

BlackRock

Insight

Investec

MAN Group

Pyrford

StoneHarbor

Wellington.

Summary of the Longer Term

The market value of the Fund has increased from approximately £909m in 2008 to £1,777m in 2018. This is detailed in the Management and Financial Performance section of this report.

The table below shows a summary of the annualised investment performance over the last 20 years compared with the Fund's benchmark and local government pension funds.

Period (Years)	Clwyd Pension Fund (%) pa	Clwyd Benchmark (%) pa	Average Local Authority (%) pa
1	+4.3	+4.4	+4.5
3	+8.1	+7.1	+8.3
5	+7.9	+7.2	+8.8
10	+6.2	+6.6	+7.7
20	+6.0	+5.8	+6.5

Source: JLT Employee Benefits, PIRC

The following table documents the changes in investment strategy since 2001. As can be seen the asset allocation is very different from that of the average local government pension fund. The Fund has been particularly active and very early in its commitments to alternative assets through a broad range of specialist managers. The current weightings were reviewed and agreed in 2016/17 as part of the "light touch" investment strategy review.

Investments	2001 (%)	2004 (%)	2007 (%)	2011 (%)	2015 (%)	2018 (%)	LGPS Average
Equities							
Global Unconstrained	-	-	5.0	5.0	8.0	4.0	
Global Developed (Smart Beta)	-	-	-	-	-	4.0	
Global High Alpha/ Absolute	-	-	-	5.0	-	-	
UK Active (Traditional)	35.0	29.0	15.0	-	-	-	
UK Active (Portable Alpha)	10.0	10.0	12.0	-	-	-	
US Active	7.0	8.0	5.0	-	-	-	
Europe (ex UK) Active	11.0	9.0	6.0	-	-	-	
Japan Active	4.0	4.0	4.0	-	-	-	
Far East (ex UK) Active	2.5	3.0	4.0	7.0	-	-	
Emerging Markets Active	2.5	3.0	4.0	7.0	6.5	6.0	
Frontier Markets Active	-	-	-	-	2.5	-	
Developed Passive	-	-	-	19.0	-	-	
	72.0	**66.0**	**55.0**	**43.0**	**17.0**	**14.0**	**55.0**
Fixed Interest							
Traditional Bonds	10.0	9.5	-	-	-	-	
High Yield/ Emerging	1.5	2.0	-	-	-	-	
Unconstrained	-	-	13.0	15.0	15.0	12.0	
Private Credit (illiquid)	-	-	-	-	-	3.0	
Cash/ Other	2.5	0.5	-	-	-	-	
	14.0	**12.0**	**13.0**	**15.0**	**15.0**	**15.0**	**18.0**
Liability Driven Investment	-	-	-	-	**19.0**	**19.0**	-
Alternative Investments							
Property	5.0	7.0	6.5	7.0	7.0	4.0	
Infrastructure	0.5	5.0	1.5	2.0	2.0	6.0	
Timber/ Alternatives	-	-	1.5	2.0	2.0	2.0	
Commodities	-	-	2.0	4.0	-	-	
Private Equity & Opportunistic	4.5	4.5	6.5	10.0	10.0	10.0	
Hedge Fund of Funds	4.0	4.0	5.0	5.0	-	-	
Hedge Fund Managed Account Platform	-	-	-	-	9.0	9.0	
Currency Fund	-	4.0	4.0	-	-	-	
Tactical Asset Allocation (TAA)	-	2.0	5.0	12.0	-	-	
Tactical Allocation (Diversified Growth)	-	-	-	-	10.0	10.0	
Tactical Allocation (Best Ideas)	-	-	-	-	9.0	11.0	

	14.0	22.0	32.0	42.0	49.0	52.0	24.0

IN HOUSE PORTFOLIO

REAL ASSETS

Property Open Ended Holdings	Number of Fund	Environmental/Social Impact	Number of Funds
Schroders	1		
Hermes	1		
LAMIT	1		
Legal & General	1		
BlackRock	1		
Property Closed Ended Holdings			
Aberdeen Property Asia Select	2	Bridges Property	2
BlackRock US Residential	1	Igloo Regeneration	1
Darwin Leisure Property	1	Threadneedle Low Carbon	1
Franklin Templeton	2		
InfraRed Active Property	3		
North Haven Global Real Estate	2		
Paloma Real Estate	2		
Partners Group Global Real Estate	2		
Schroders – Columbus UK Real Estate	1		
Timber			
		BGT Pactual Timberland	2
		Stafford Timberland	3
Agriculture			
		Insight Global Farmland	1
		GMO	1
Infrastructure			
Arcus European Infrastructure	2	InfraRed Environmental	1
Base Camp	1		
Carlyle Global Infrastructure	1	Impax Infrastructure	2
GSAM West Street Infrastructure	1		
HarbourVest Real Assets	1		
Hermes Infrastructure	1		
InfraRed	2		
Innisfree	1		
North Haven Global Infrastructure	2		
Pantheon	1		
Partners Group Direct Infrastructure	1		
Total Funds	**35**		**14**

PRIVATE MARKETS

Private Equity Direct Funds	Number of Funds	Environmental/Social Impact	Number of Funds
Access Capital	1	Bridges Ventures	2
Apax	5	Environmental Technologies	3
August Equity	3	Ludgate Environmental	1
Candover	1		
Capital Dynamics	3		
Carlyle	2		
Charterhouse	4		
ECI	3		
Granville Baird	2		
Parallel Ventures	3		
Partners Group Direct	2		
Unigestion	1		
Private Equity Fund of Funds			
Access Capital	4	HarbourVest Cleantech	1
Capital Dynamics	7	Hermes Environmental	1
HarbourVest	5		
Partners Group	10		
Standard Life	2		
Unigestion	2		
Opportunistic			
BlackRock European Property	1	Foresight Regional Investment	1
Carlyle	2		
Dyal	1		
JP Morgan Secondary's	1		
Marine Capital	1		
Marquee Brands	1		
NB Credit Opportunities	1		
Pinebridge Structured Capital	1		
Total Funds	**69**		**9**

Private Debt	
Permira	1
BlackRock	1
Total Funds	2