APPENDIX A

LANCASHIRE COUNTY PENSION FUND

CREDIT AND FIXED INCOME STRATEGY

1. EXECUTIVE SUMMARY

As part of the work to implement the Fund's agreed Investment Strategy, a review has been undertaken of the current fixed income exposure, the opportunities available to the Fund in the credit and fixed income space and the place such opportunities may have in delivering the Fund's investment objectives. This paper sets out the conclusions of this review and presents the Investment Panel's proposals for a restructuring of the Fund's fixed income exposure to the Committee for approval.

In summary the conclusions of the review are that:

- Lancashire County Pension Fund (LCPF) needs to use its credit and fixed income investments more actively in order to improve investment returns and deliver against the Fund's investment objectives. Within this LCPF should pursue the strategy of seeking higher yielding investments, ideally Floating Rate, which will therefore exhibit lower levels of capital volatility. The Fund has a long-term strategic allocation to investment in Global Equities. Whilst the anticipation of long term growth underpins this investment decision, it is accepted that this allocation may be volatile in value; in addition, whilst equities can produce income in the form of dividends, these are not guaranteed. The Fund has currently decided to reinvest dividend cashflows within the equity allocation.

- Credit-based investments compliment the fund's equity allocation by delivering regular, more predictable cashflows whilst demonstrating lower levels of capital value volatility. There is always the risk of payment default and typically, the higher the perceived risk of default, the better the running yield that a credit investment will pay.

- The search for a higher yield which offers stable income flows does not mean a rush towards risky investments for the Fund, because current market dynamics present opportunities for the long-horizon investor to lock in high margins based on the ('technical') dynamics of supply and demand, rather than the ('risk') dynamics of risk and reward. There *will* be increased risk; although this is mitigated across a portfolio where and several hundreds, or even thousands of underlying loans may exist. The Investment Panel believe that with careful selection, the increased returns can outweigh the increased risks (which are not significant) and are therefore justified.

- *Fixed-Income* investments can play some role in hedging the fund's liabilities as the drivers for their capital value are closely linked to the drivers of the fund's liabilities. However, it will be almost impossible to match this 'hedging effect' and seeking to do so would likely adversely impact investment returns by severely constraining the choice of investments available. In addition, increasing the investment in Fixed-Income securities at this point risks locking in the funding gap; foregoing the benefit from the reduction in scheme liabilities that would arise in the event that yields revert to former, higher levels.

2. BACKGROUND TO THE CREDIT AND FIXED INCOME INVESTMENT STRATEGY

2.1 The Fund's Position

Actuarial projections show the fund becoming cash-flow negative (i.e. benefits payable will exceed contributions being received) much more rapidly than has previously been forecast.

That cashflow shortfall (the gap between benefits and contributions) could be satisfied by the liquidation of investments; but this would be contrary to the principles of long-term investment for growth. The better alternative is for the cash shortfall to be met from investment income.

Equity investments can pay dividends, but these are not guaranteed and the typical yield is not substantial. In addition, and in common with most funds, the Fund's active management mandates provide for the re-investment of dividend income. Some types of equity investment in the portfolio (i.e. private equity and venture capital) have a specific investment expectation that returns will come almost entirely from capital gains, and generally at the end of a fairly long duration investment cycle, as a result of an event such as a flotation or buy out. In other words, Equity investment is seen by the Fund at this point in time as long-term investment for capital growth.

The rationale for property investment is that such investments should generate both rental yield and capital growth. The fund has recently increased its allocation to real estate to 15% of the portfolio and this level should be kept under review. Ultimately, though, rental yields typically lag behind yields from credit instruments due to the expectation of capital appreciation. In addition, property investment must be seen as long term as the entry and exit costs in terms of stamp duty and due diligence are proportionately high.

That leaves credit-based investments as the key method of generating cash yields to cover the cash-flow needs of the Fund and, through re-investment of excess yield, should lead to an increase in the overall value of the funds under management – thereby helping to close the funding gap in the long run.

2.2 Risks Associated with Credit Investment

The key risk when investing in credit is that the borrower defaults, leading to delays in receipt of income and potentially loss of capital.

The amount of loss in the event of default depends on position of the loan in the borrower's capital structure (i.e. whether any other creditors rank higher), the level of security associated with the lending and the ability to be involved in and influence the outcome in the event of administration and/or insolvency (achieving a higher recovery than other creditors).

The yield on a credit investment includes compensation for the risk of credit defaults and the 'risk' pricing for credit in theory predicts that the margin paid for borrowing would be driven by the probability of default and the expected loss in the event of such default. However, these figures cannot be calculated exactly (as they are effectively predictions of the future) and so their estimation, at least in part, relies on market 'sentiment'.

Where they are tradable, market values of credit instruments can also vary, giving the possibility of capital growth or depreciation. There are two key sources of this 'mark-to-market' volatility.

With Fixed Income assets (such as government bonds), absolute levels of interest rates will make the value of instruments fluctuate. The longer the term of the instrument, the higher this level of volatility or sensitivity to interest rates. This is this same effect that has led the valuation of the fund's liabilities to increase over recent years as long-term interest rates have dropped.

The second source, which has a relatively larger effect in a low-interest rate environment, is that of credit spreads – i.e. the amount of premium over and above the basic risk-free interest rate that any particular lender has to pay to secure credit. As described above, the credit spread of an instrument depends on the market perception of the probability of a default and the loss that would occur in such an event (and the second of these depends to some extent of the position of the debt in the borrower's capital structure).

The current economic situation might be categorised as one of historically low interest rates, but relatively high credit spreads. Ideally, therefore, the Fund would benefit from the current high credit spreads whilst not locking in the downside of low interest rates.

Policy makers are maintaining low interest rates in order to stimulate the economy because of the variety of downward pressures on economic growth. Indications are that the market 'believes' that rates will recover mildly in the medium term, but the opportunity exists for the Fund to take advantage of the current economic environment.

2.3 Why are credit spreads high?

The current depressed economic situation brings increased risk of credit defaults, both in reality and perhaps more importantly in the minds of investors. The market perceives that levels of losses through default might be higher in the coming cycle than they have been to date.

There are other ('technical') factors which are driving up credit spreads, many of them linked to the changing regulatory environment:

1. Liquidity crunch. Banks are having to manage capital ratios, in part by reducing their balance sheets, leading to the removal of leverage in the economy generally (which during growth periods was inevitably driving credit spreads down) and much tighter criteria for new lending / renewal of existing loans. This leaves existing borrowers struggling to refinance and new borrowers struggling to obtain finance in the first place unless they agree to pay a higher borrowing margin.

2. Credit crunch. Downgrading of credit ratings and of banks' assessment of the credit-worthiness of counterparties compounds the liquidity crunch by removing the availability of credit at certain key steps in the credit spectrum. An example would be the position of borrowers that pass the threshold from investment- to non-investment-grade, where the universe of potential investors suddenly shrinks dramatically.

3. Duration-fixation. New regulations for banks and insurers make long-term lending relatively more expensive from a capital perspective. In addition, some traditional long-term investors seem to want to keep their cash liquid to seize strategic opportunities and therefore are not committing long term funding.

4. Capital Rationing. The lower levels of gearing that banks will be allowed under the Basel III regulatory regime means that the breakeven credit spread to achieve a certain return on equity has increased.

5. Fight to Quality. High demand for high quality investments, which is driving down yields on Gilts, Bunds and US Treasuries (and to a lesser extent, Investment Grade Bonds) is balanced by a lack of demand for lower-quality (but still credit-worthy) assets.

The above factors result in a situation where the level of reward from the Fund's traditional, Investment Grade fixed income portfolio is not commensurate with the risks in holding such a portfolio; higher returns are available from investments which do not necessarily have significantly higher risk.

2.4 Strategy Development

Current credit spreads are at least in part driven by supply-side constraints which mean that a better-than-normal risk adjusted return should be available by investing in the credit markets at this point.

As well as the search for good risk-adjusted returns, it is an investment imperative (as discussed above) for the Fund to invest in assets which generate demonstrable and predictable returns. This will not only meet the Fund's medium-term cashflow needs, but also address in part the strategy required to close the funding gap currently being experienced by the fund.

The Fund is not alone in perceiving this situation and first-mover advantage is important to seize this opportunity before yields in relatively attractive areas are driven down by increased demand. Also, as demand (and hence the availability of credit) increases, then the implicit risks in the credit market also decrease, as the lack of availability of credit is as much a source of default risk as perhaps is the poor performance of the underlying entities. A virtuous circle can develop which leads to a further tightening of spreads.

A tightening of credit spreads will lead to capital appreciation of credit instruments and it can be argued is a necessary precursor to the sort of economic growth that will justify a sustained rally in the equity markets. Now would be the time, therefore, to be relatively overweight in credit instruments whilst being relatively underweight in equities.

However, simply investing in high-quality, publicly traded credit instruments will not give access to such attractive returns. The reasons for this are that high-quality investment-grade credit has not experienced the level of restriction in supply that has been the case for lower-quality credit; and that credit spreads have largely recovered in the Investment Grade market.

There are always a variety of credit-based strategies available and it would be wise to spread a portfolio of credit investments amongst them – to spread risk and also to balance out the likely cyclicality of the returns generated from each strategy.

Some strategies are unique to the current situation, whilst others tend to operate throughout the economic cycle. A mixture of these types of investment is recommended in order to provide the best balance of risk and return.

Annex 1 summarises various opportunities for taking credit risk currently available and some high-level 'pros' and 'cons' of each, whilst Annex 2 sets out the recommended allocations between the different credit strategies available.

2.5 Currency Risk

Credit opportunities present themselves in a variety of different economies and may be denominated in a currency other than Sterling.

Currency exposure strategy is not the subject of this paper; however it is clear that currency appreciation or depreciation relative to Sterling could be a constituent of any returns generated by any investment that the fund makes, whether in credit, equity, real estate, etc.

For the purposes of the credit investment strategy, it is assumed that the best credit opportunities globally should be the target investment universe. This is in line with the principles set out in the Investment Strategy of becoming a globally exposed Fund in order to reduce the risk inherent in a concentration of investments which are exposed to the dynamics of one particular economy.

The Fund needs to establish a view in relation to the relative levels of currency exposure it is willing to take and suitable hedges of exposure at a fund level can be put in place to the extent that the underlying portfolio make-up ever departs from the aspirational mix. Further work is required and is being undertaken on the ongoing management of the Fund's increased exposure to currencies other than Sterling and this will be reported back to the Investment Panel and Committee when completed.

2.6 Accessing Opportunities

Unlike equities, there are no large, open, public exchanges in the vast majority of credit instruments and investment opportunities are most likely to be accessed by LCFP via investment in pooled funds, although direct lending opportunities may arise from time to time.

Easily identifiable opportunities (often arising from investment managers with large marketing departments and good name recognition) will always generate more demand from investors and therefore the 'technical' factors will likely drive down the risk/reward or drive up the level of reward that passes to fund administrators.

It is likely, therefore, that better risk/reward investments will be found by LCPF in areas that are less actively marketed and accessing these opportunities must form part of investment strategy through active scanning of the investment environment.

In addition, larger investments will usually command better terms, both from borrowers in the event of a direct investment and from fund administrators where an investment in a pooled fund is made.

LCPF will therefore consider 'clubbing' together with other pension funds and investors with the intended benefit (a) that a wider investor group will become aware of a wider range of off-market investment opportunities; and (b) that by combining investment resources to make larger individual investments, better terms can be negotiated from fund administrations and borrowers.

2.7 Governance

After the Council's Pension Fund management team have identified possible investments or funds that fit within the Fund's Strategy, the Investment Panel will assess their suitability before detailed due diligence on the fund managers is undertaken in line with the agreed investment process.

A final investment recommendation will then be made by Investment Panel to the County Treasurer in line with the agreed Governance Framework.

2.8 Sources of Funding and Implementation Approach

The current allocation to credit and fixed income is concentrated in two funds, being a passive Sterling Investment Grade Credit fund managed by Legal and General and an actively managed portfolio of Investment Grade Bonds and Gilts managed by UBS.

Implementation of the new strategy will mean that these mandates are terminated in order to fund the revised allocations when suitable investments have been identified and approved.

The timing and order of the transfer will be overseen by the Investment Panel in line with the agreed Governance Framework and managed by a third party transition manager in order to ensure an orderly process and to minimise the costs of the reallocation.

In addition, the valuation of the Fund’s investments in equities has grown to be in excess of the upper allocation limit (60%) in the Investment Strategy. A portion of the passive equity allocation will therefore be liquidated to perform the joint purposes of remaining within Strategy and funding the increase in credit investments.

Allocating the Fund’s credit investments will be an ongoing process, however it should be anticipated that a least 20% of the Fund (i.e. all of the current Investment Grade portfolio) will be invested in the new strategy over the next six months.

Annex 1

Summary of Credit Investment Opportunities

Opportunity	Description	Pros	Cons	Strategic View
Gilts / Government securities	Virtually risk-free lending to governments in developed markets..	Regarded as very safe Could provide a hedge to fund liabilities if durations are matched. Can provide a degree of inflation protection. Can be used to generate additional margin through stock lending activity. Very liquid.	Safety probably at its most questionable level for many years and in some cases returns are negative. 'Flight to quality' has depressed absolute yields. Risk of currency instability if non-UK Gilts. Interest rate increases could erode capital value.	Whilst theoretically safe, the low yield and current high demand dynamics make this look like a poor constituent of the fund for the moment. **Exit now but retain potential allocation as safe haven investment.**
Investment Grade Bonds	Low-risk lending to large international corporates through traded instruments.	Relatively safe. Provides return margin over Gilts. Some credit spreads are relatively wide at present giving potential for capital appreciation. Very liquid under normal circumstances.	Remain a volatile investment with a non-zero risk of default. Recoveries on default are typically lower than direct lending. Publicly traded markets imply little chance of outperformance, so management fees likely to damage rewards.	Higher yields can be obtained in this asset class for similar levels of risk to Gilts. Liquidity is attractive if a short-term home for credit allocation is needed but can dry up in times of market stress. **Exit now but retain potential allocation.**

Non-Investment Grade (High Yield) Bonds	Lending to non-investment grade corporates through traded instruments.	Offer more attractive yields that Gilts or Investment Grade Bonds. Possibility of capital gains in improving credit conditions.	Higher risk of default. Much deeper market in US than UK/EU. Publicly traded markets imply little chance of outperformance, so management fees likely to damage returns.	Whilst yields are more attractive, there is little to suggest that, except in certain special cases, it is possible to achieve outperformance or an outstanding risk/reward analysis. Higher management fees than Investment Grade Credit further damage the analysis. **No current allocation recommended.**
Senior-Secured Loans	Lending on *a secured* basis to relatively highly leveraged counterparties / private equity buyouts. Instruments not typically traded but can be bought and sold on secondary market.	Yields are very attractive and whilst default risk remains, recoveries are expected to be higher due to secured nature of lending. Market not fully public meaning that excess returns may be available.	Relatively illiquid. Wide range of situations requires deep analysis to identify value. Less publicly available information about investments & investment valuation.	A well established market which runs throughout the cycle. Good cash yields. Historic risk/reward performance excellent. **Minimum 5% Allocation.**

Direct Lending – SME	Direct lending to SME entities though loans, either syndicated, club or bilateral.	Current banking system deleveraging is creating supply/demand dynamics which should deliver good yields. Typically secured at least in part giving better recoveries in the event of default. Historic default and recovery experience implies excellent risk/reward attributes. Smaller individual positions create portfolio effect.	Deep credit analysis required and significant risk of individual defaults; likely high level of costs therefore. Potential for reputational risk in the event of default / workout. Limited secondary market, meaning loans could be illiquid and difficult to value with less publicly available information.	Definitely worth consideration in the current environment if good managers / originators can be partnered with. **Potential Allocation along with Senior Secured Loans.**
Emerging Market Local Currency Debt	Lending to governments and occasionally large corporate in second-tier economies, in local currency.	High margins available for what is sovereign risk with default probability sheltered from the traditional risks of currency depreciation. Relatively liquid and possibility of capital appreciation as economies emerge and credit spreads drop. Successful investments likely to show currency appreciation. Adds diversity to portfolio.	Unfamiliar investment conditions require specialist knowledge to analyse. Risk of rapid depreciation of currencies or country default. Higher risks of corruption or conflict which bring reputational risks and the possibility of capital losses / illiquidity.	An improving market which is likely to see significant inflows in coming years and where credit risk is perhaps better than investors' intuition. Capital upside from currency appreciation versus Sterling considered likely, as is tightening of credit spreads which will also lead to appreciation. **Minimum 5% Allocation**

Impaired Credit Opportunities	Investment in situations created by economic situations such as problem refinancing, distressed credit, forced sellers of positions, illiquid situations etc.	High yields available because of the implicit riskiness of thesituations and the relatively strong negotiating position of the investor. Yields are driven by relatively uncorrelated factors giving diversity to the fund. High quality identification and analysis of opportunities likely to yield excellent risk/reward dynamics due to relatively limited investor population and lack of a public market.	Clear risk of some capital losses and reputational risk. Specialist origination and analysis of difficult situations required. Uncertain return horizons and low liquidity. Obscure and uncertain valuation of investments until realised, high monitoring and diligence cost.	The uncorrelated nature of these investments and the fact that they offer higher returns throughout the cycle make the area interesting for investments where there is a compelling and differentiated case for a strategy. Generic 'recovery' funds are less attractive. **<u>Minimum 5% allocation combined with other regulatory opportunities below.</u>**
Long-Maturity Debt – Housing / Commercial Real Estate 1st mortgage lending	Long-term loans secured on real estate.	Sensibly underwritten, these loans should offer virtually no risk of loss, even in default situations. Shortage of long term funding in the current market means that returns are at historically attractive levels.	Limited liquidity in the current market and possible reputational risk associated with enforcement of security. Yields are stable but not outstandingly high.	A stable and low-risk investment which nonetheless offers better yields than gilts. The current credit shortage may provide some historically very attractive opportunities in the short-medium term. **<u>Minimum 5% allocation combined with other secured debt as below.</u>**

Long-Maturity Debt – Infrastructure & Project Finance	Long-term loans to public or private infrastructure projects such as roads, public facilities and buildings, energy and waste projects.	Theoretically secure as source of repayment is cashflows from the public purse and ultimately the loans are secured on assets. The yield is therefore attractive for the risk involved and government incentives may further shift the risk/reward profile. Current illiquidity and shortage of funding sources should provide attractive risk/reward characteristics. May provide returns that match Fund requirements – long maturity and also RPI-linked.	Definitely not risk-free and defaults have occurred historically. Detailed and realistic due-diligence required before investments are made, therefore. The illiquidity that drives current yields also means investments could be difficult to exit. Ability to have effective work-out of distressed positions may be compromised by local reputational risks or central government interference.	Attractive in theory due to term and yield characteristics; however selection of projects is incredibly important. Good current political and supply/demand dynamics means that there will be attractive opportunities available although there will also be those best avoided. **<u>Minimum Allocation of 5% combined with Real Estate.</u>**
Ground Rents	Purchase of real estate freeholds in order to collect long-term ground-rent and renewal income.	Incredibly secure as default leads to automatic reversion of the lease. Yield versus risk is excellent and may have RPI-linkage. Very long term matches fund maturities. Probability of capital appreciation as investor universe grows and yields are driven down.	Whilst returns are secure, the analysis is complex and there is some variability to the timing of cashflows. Very granular pool gives relatively high servicing complexity and entry costs. Large pools hard to come by / take time to build up.	A very secure investment yielding excellent risk/reward characteristics if a large enough pool can be constructed. Term and RPI-link also very attractive. **<u>Potential Allocation along with Real Estate and Infrastructure.</u>**

Regulatory Driven Opportunities	Investments that are driven by changes in bank / insurance / investment regulation, where regulatory rather than risk management considerations drive behaviour.	'Forced Seller' environment creates strong negotiating position and therefore likelihood of excess returns for investors. Pricing can be driven by the level of regulatory benefit rather than amount of risk being taken on, therefore improving risk/reward characteristics.	Complex analysis and likelihood of risk transfer may lead to volatile returns if a portfolio is poorly constructed or not granular. The investment is likely to be illiquid. Possible reputational risk.	Current regulatory environment implies excellent current opportunities although that may not persist. **Potential Allocation along with Impaired Credit.**
Hard Asset Financing / Leasing	Investment in hard assets (trains, planes, automobiles) for leasing to corporate or individuals.	Well secured and typically relating to assets that are of strategic importance meaning that repayment will be prioritised. 'Off-Balance-Sheet' treatment for borrower makes the route attractive to borrower for non-risk reasons and therefore there may be excess returns available.	Risk of re-leasing or realising asset values can make returns variable. Needs good quality origination, underwriting and asset management capabilities, which can make costs high.	A possibility if a good quality origination / asset management partner can be found. **Potential Allocation along with other secured lending categories.**

Annex 2

CREDIT AND FIXED INCOME SRATEGY – BROAD ALLOCATIONS

The table below sets out proposed strategic allocation ranges to the various categories of investment which make up the credit and fixed income universe. The ranges set out are in line with the Investment Strategy range of 20% to 40% for Lower Volatility Strategies (defined as including but not exclusively, Fixed Income, PFI, Credit strategies, Infrastructure, Currency, Commodities, Absolute Return, Cash, funds and index, Local development/PPP type allocations).

The broad allocations below imply that at a minimum, 20% of the fund allocation will be to credit and fixed income (compared to a current exposure to such strategies of 26.1% of the Fund), leaving up to 20% available for investment in other lower volatility strategies. Flexibility remains within the allocations below for the entire lower volatility allocation to be invested in credit should it be considered appropriate.

Credit Investment Area	**Allocation (as %age of Fund)**	**Current Allocation (31 January 2013)**
Long Dated Secured Lending – Real Estate, Infrastructure and Asset Finance	5%-10%	2.7%
Senior Secured Loans and Direct Lending to SMEs	5%-10%	2.6%
Emerging Market Local Currency Debt	5%-10%	0%
Impaired Credit and Regulatory Driven	5%-10%	0%
Balanced / Club Credit Opportunities Funds (may incorporate the above allocations)	0%-20%	0%
Investment Grade Bonds, Gilts and Cash (safe haven / interim holdings only)	0%-20%	20.8%