THE WORRY INDEX:

HOW SAFE IS MY PENSION?

cardano

Lincoln
PENSIONS
Part of the Cardano Group

CONTENTS

Kerrin Rosenberg,
Chief Executive,
Cardano

Darren Redmayne,
Chief Executive,
Lincoln Pensions

If you would to discuss our findings or how The Worry Index might apply to your scheme, please contact:

K.Rosenberg@cardano.com

D.Redmayne@lincolnpensions.com

www.theworryindex.com

"IT IS NEVER TOO LATE TO BE WHAT YOU MIGHT HAVE BEEN." George Eliot

The Worry Index is a **single integrated risk measure** that gives guidance on the ability of FTSE 100 companies to support their pension promises. Our analysis[1] tests the robustness of these schemes in a **stress scenario**, such as an economic or market shock, providing schemes and sponsors with a key tool to help answer the critical question for members: **how safe is my pension?**

In 2017, our inaugural Worry Index revealed the scale of pension risk currently being run by FTSE 100 companies. The Worry Index considers defined benefit (DB) pension scheme risk in the context of an Integrated Risk Management approach (IRM), as advocated by the Pensions Regulator (TPR). It presents a warning on the health of DB pension schemes within the FTSE 100. It is useful for trustees as it flags those industries where concerns are heightened and action is required.

Last year, one in five companies were at risk of financial distress in the event of a major economic downturn, due to the materiality of their DB pension liabilities relative to the value of their business.

In this edition we're pleased to announce that UK blue chips have made some headway in tackling their pension risks. Whether this is the result of strong investment performance, improved sponsor health, or scrutiny by TPR spurring trustees to reduce levels of risk, the FTSE 100's aggregate Worry Score has decreased.

Given we are at a late stage in the economic cycle and against a backdrop of ongoing Brexit uncertainty, increasing geo-political tensions and rising inflation, it is encouraging to see this positive development.

However, based on our analysis, one in eight FTSE 100 companies with DB obligations could still struggle to meet their commitments to members in a distressed scenario.

Over the past 18 months, the high-profile failure of a string of UK retailers has pushed pension schemes into the spotlight. Due to the focus of intense parliamentary scrutiny, the fate of BHS pension scheme members' benefits became a topic of fierce debate and, in turn, of national concern.

Unfortunately, the collapse of BHS and the chain of events that followed cannot be viewed as an isolated incident. In the past year, tougher conditions on UK high streets have claimed retail stalwarts Maplin, Toys 'R' Us and, most recently, House of Fraser. These are businesses that appear to have failed to keep pace with the structural shifts currently sweeping the UK's retail sector and, in many cases, whose pension schemes are destined for the Pension Protection Fund (PPF).

In addition, although pension risk within the FTSE 100 has improved at a headline level, this year's analysis revealed concentrated pockets of risk within specific market segments. This has prompted us to extend the scope of our analysis to assess the position of retailers in the FTSE 350 index.

Our hope is that the Worry Index will help make the risks facing pension schemes more transparent for members. More importantly, we hope it will help trustees and sponsors assess the risks and challenges facing their schemes – and encourage them to take action where needed – before it's too late.

Kerrin Rosenberg,
Chief Executive, Cardano

Darren Redmayne,
Chief Executive, Lincoln Pensions

[1] *See methodology on next page.*

STRESS TESTING PENSION SCHEMES THE WORRY INDEX

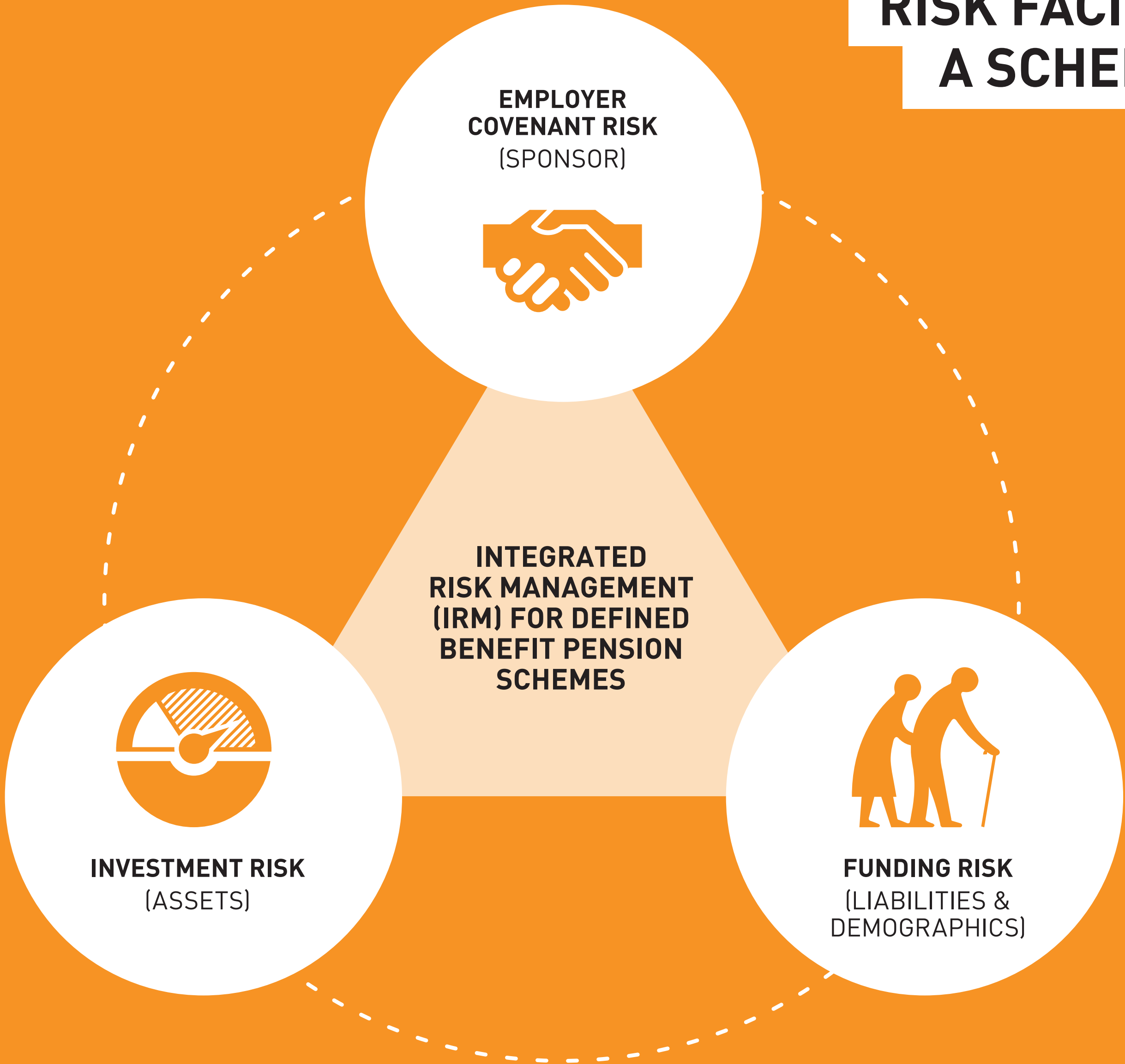
The Worry Index is our analysis of the overall health of FTSE 100 DB pension schemes and their ability to meet their pension promises to members. It's our version of a balance sheet stress test for pension schemes.

We have brought together publicly available information on funding, investment strategy and covenant to provide a single measure of the state of FTSE 100 DB pension schemes from an IRM perspective.

To date, most published work by the pensions industry focuses on current deficits rather than considering the three fundamental risks of: funding, investment and covenant. This has led to a debate that fails to consider adequately the risk that deficits (and, therefore, funding requirements) can, and will, vary over time. The Worry Index is an example of the practical application of the IRM guidance issued by TPR.

Using proprietary methodology and modelling tools, we have calculated a Worry Score for each company in the FTSE 100, which illustrates its ability to meet its commitment to members during times of stress. The average of these scores is the Worry Index which is measured relative to the position in 2015 (2015 = 100).

THE THREE ELEMENTS OF RISK FACING A SCHEME



WE ANALYSED THE DEFINED BENEFIT PENSION SCHEMES OF THE FTSE 100 AND FTSE 350 RETAIL COMPANIES

PENSION SCHEME INFORMATION

We applied a **STRESS SCENARIO**

COMPANY INFORMATION

WORRY SCORE

We calculated a Worry Score for each company by dividing the pension deficit by the total value of the company.

WORRY INDEX

We mapped the Worry Scores of the last four years onto the Index to find the change in risk levels.

WORRY ZONE

A company is in the Worry Zone if its Worry Score is 30 or more. This means their pension deficit is equal to 30 percent or more of the total value of the company.

WHAT IS STRESS?

For this particular analysis, we applied a reasonable, and not extreme, economic stress scenario. In this situation:

- The stocks that pension schemes invest in are likely to perform poorly, as businesses struggle to maintain the profitability required to support share prices; investment grade bonds are likely to increase in value as investors retreat to safer assets
- To stimulate economic growth, the Bank of England is likely to keep interest rates low (or even negative), pushing up the value of pension scheme liabilities; the economy might experience higher inflation as a result of monetary policies and/or weak currency

The ability and willingness for companies to plug growing deficits is also impaired as their business environment deteriorates and the value of companies fall. This creates competing demands for cash, whether through dividends to support share prices or to invest in improving performance.

For comparability we use the same scenario each year. The scenario is only one example of a stress event - clearly many different types and sizes of shock could happen. We are able to run constituent members through different scenarios to understand how specific events might impact them.

WHEN DO WE WORRY?

We consider a company as being in the Worry Zone if its pension obligations represent 30 percent or more of its market value. This is based on a company needing to be able to provide ongoing investment into the business, an appropriate return to shareholders, repaying debtholders and supporting the pension scheme. Beyond 30 percent can become challenging to meet all stakeholders' needs.

HEADLINE FINDINGS

1 THE WORRY INDEX IMPROVES, BUT POCKETS OF RISK REMAIN

OUR ANALYSIS HAS FOUND THAT:

- The Worry Score fell sharply by 23.5 percent in 2018 and is 9.4 percent below the 2015 level.
- However, in a stress scenario (see figure 1), one in eight FTSE 100 schemes with DB pensions obligations would still find themselves in a position where they might struggle to meet their commitments to members.
- Relative to the index as a whole, risks are more concentrated in the retail sector* and in the consumer services industry, where the Worry Score is 31 (relative to 15 for the FTSE 100 as a whole).
- 5 of the 11 FTSE 350 retail companies with DB schemes might face financial distress from their pension obligations in a downturn, with a Worry Score of 30 or above.
- Within this sector, Worry Scores are unevenly distributed, with traditional supermarkets overrepresented among those with high Worry Scores.

We believe The Worry Index represents a holistic analysis of FTSE 100 DB pension schemes. It provides an overview of the strength of FTSE 100 pension schemes and their ability to withstand shocks. A high Worry Score should provide a wake-up call for companies and a warning for members.

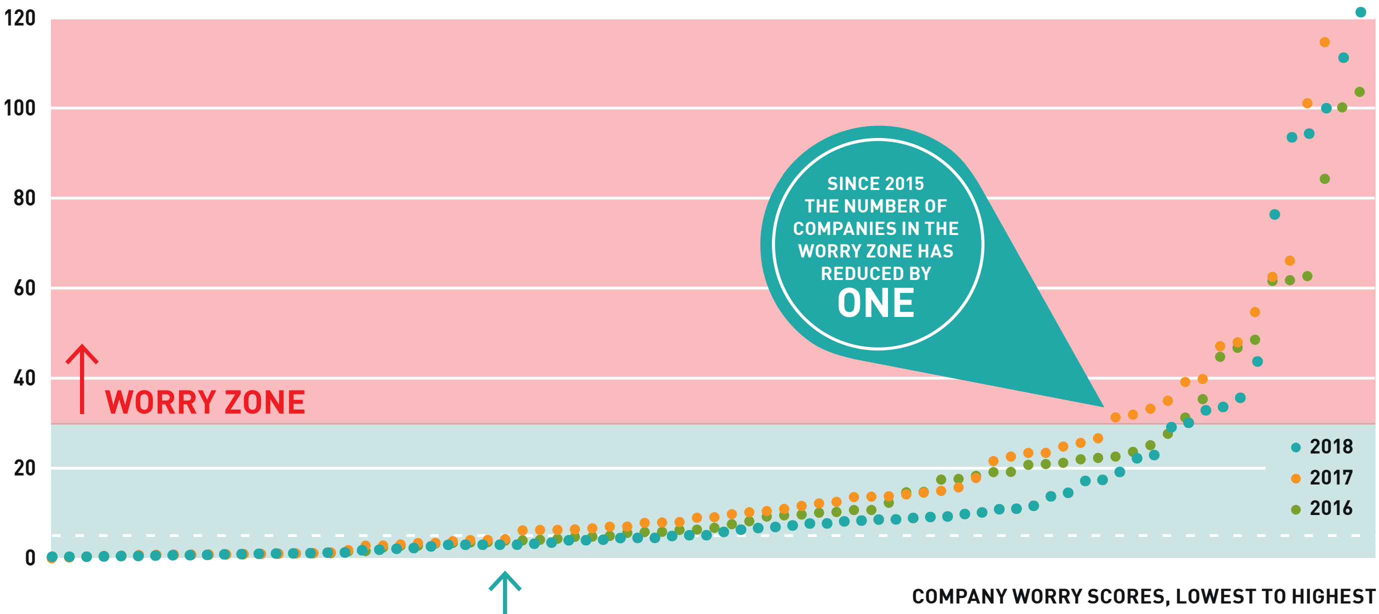
One third of the drop in Worry Score comes from increased covenant strength and the rest is due to investment returns and contributions. The large move illustrates how interconnected the investment portfolio and sponsor strength are – this amplifies the movements in both good times and bad times.

In addition, despite appearing to diversify investment strategies, many schemes are still positioned for a single scenario of continued growth with low inflation. This might happen, but what if it doesn't?

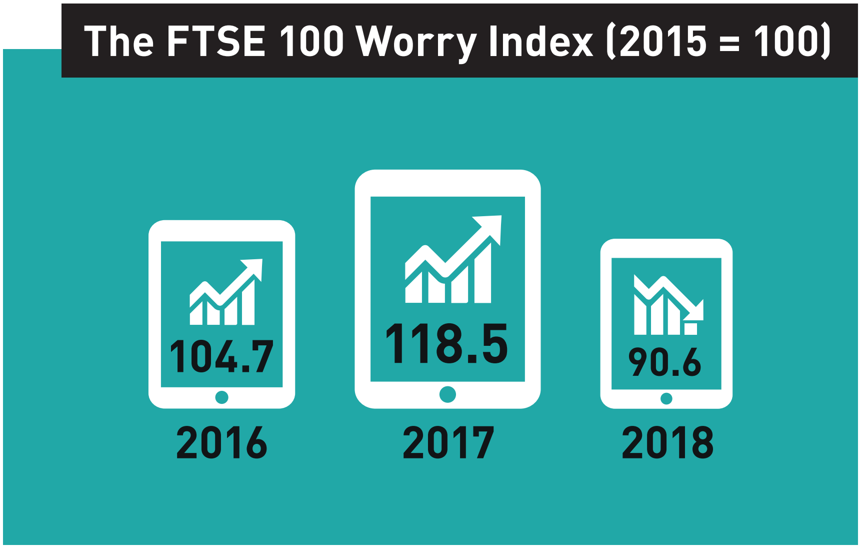
Starting from a more favourable position in 2018, now might be the time to begin or step up implementation of risk management (e.g. hedging certain risks such as interest rates) to protect the improved funding level.

While the FTSE 100 contains some of our best-known and largest companies, they need to stand behind pension schemes for decades and, over that timeframe, things can change. To illustrate, in 1984 the FTSE 100 contained constituents such as BHS and MFI.

THE WORRY INDEX Figure 1



A SCHEME WITH A SCORE OF FIVE OR LESS ON THE WORRY INDEX CAN BE CONSIDERED HEALTHY. 39 FTSE 100 COMPANIES HAVE A WORRY SCORE OF FIVE OR BELOW.



*This refers to the 5300 Retail supersector in the Industry Classification Benchmark

2 DESPITE HEADLINE IMPROVEMENTS, IN A STRESS SCENARIO, ONE IN EIGHT FTSE 100 COMPANIES WITH DB OBLIGATIONS REMAIN IN THE WORRY ZONE

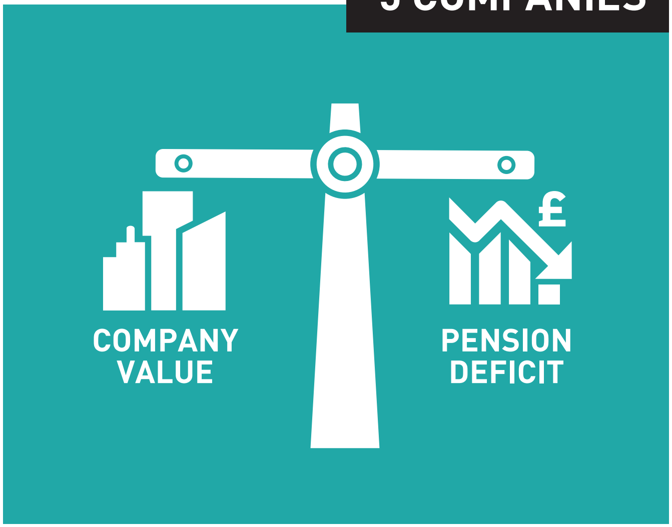
Despite the marked improvement in the Worry Score year on year, multiple schemes could be at risk in a stress scenario, when return-seeking investments are likely to perform poorly at the same time as businesses struggle to maintain profitability.

According to our analysis, one in eight schemes with DB obligations would be in the Worry Zone in a stress scenario. In a more extreme negative event, such as a repeat of the 2008 crash, or indeed, a significant market and economic response to Brexit, many more schemes could find themselves in a dangerous position.

To illustrate this, under the stress scenario our analysis suggests the pension deficit of the FTSE 100 would increase by £97bn. Several companies would find themselves with a pension deficit bigger than the value of their entire sponsor company in such a stress scenario. This would be a concerning position for some of the UK's biggest companies to find themselves in.

Later in this report we set out actions that trustees and sponsors can take to reduce this risk.

PENSION DEFICIT IS 90% OR MORE OF THE COMPANY VALUE FOR 5 COMPANIES



UNDER A STRESS SCENARIO

THE FTSE 100 PENSION DEFICIT INCREASES BY £97BN

TO £284bn

THIS WOULD TAKE

3 YEARS

PRE-TAX PROFITS

TO PAY OFF

3 SCHEMES' RISKS REMAIN LARGE IN RELATION TO THEIR SPONSORS' BUSINESSES

The fall in the Worry Index shows that schemes are in a better position relative to last year. However, with limited opportunities for future earnings growth and at a late stage in the economic cycle, many companies might find their ability to support their scheme's funding gap increasingly strained.

As this year's Worry Index indicates, the risks inherent to pension schemes remain. Headline improvements have predominantly been driven by higher market valuations, rather than the improved performance of the companies standing behind schemes.

Typically, the industry focuses on deficit figures and their scale – but this is just one measure of underlying risk. A large deficit might be tolerable if there is a large and robust covenant standing behind it; a pension is only as good as its sponsor. While some pension schemes have taken steps to reduce investment risk, the level of risk being run across many schemes remains high. We estimate that it could take FTSE 100 companies three years of profits to fund their pension deficits following a shock.

Schemes remain vulnerable to stress scenarios, particularly if faced with significant market corrections in a low interest rate environment, despite the availability of tried-and-tested techniques to mitigate this risk.

The current accounting method used across the industry to calculate pension deficits uses optimistic assumptions of future investment returns. It is perhaps the only area of accounting where you are still able to bank a profit (i.e. the assumed investment return) before it is made. We think sponsors need to disclose their position assuming lower future investment returns, which will improve transparency and provide an incentive for sponsors to build resilience to adverse economic conditions.

CLOUDS ON THE HORIZON?

Over the past decade, we have experienced an unusually long period of growth, driven by solid economic performance and extremely accommodative monetary conditions. While we could well see a few more good years, pension funds must not be complacent. Ten years into the current bull market, we are now at a late stage of the current economic cycle, raising the spectre of the next market correction.

Even in today's benign economic environment, which has been characterised by unusually low volatility in financial markets, there are clouds gathering on the horizon. Public and private debt levels continue to rise, financial leverage is high and ongoing geopolitical uncertainty threatens to recalibrate the market backdrop. Prolonged lows in discount rates have left Central Banks short of ammunition to respond to an abrupt economic contraction.

Combining these factors, it is likely that a negative surprise could prompt a significant market correction, which threatens to spill over into the real economy. In the context of extremely low market volatility, such a correction would come as a rude awakening to global markets, which have become used to steady growth.

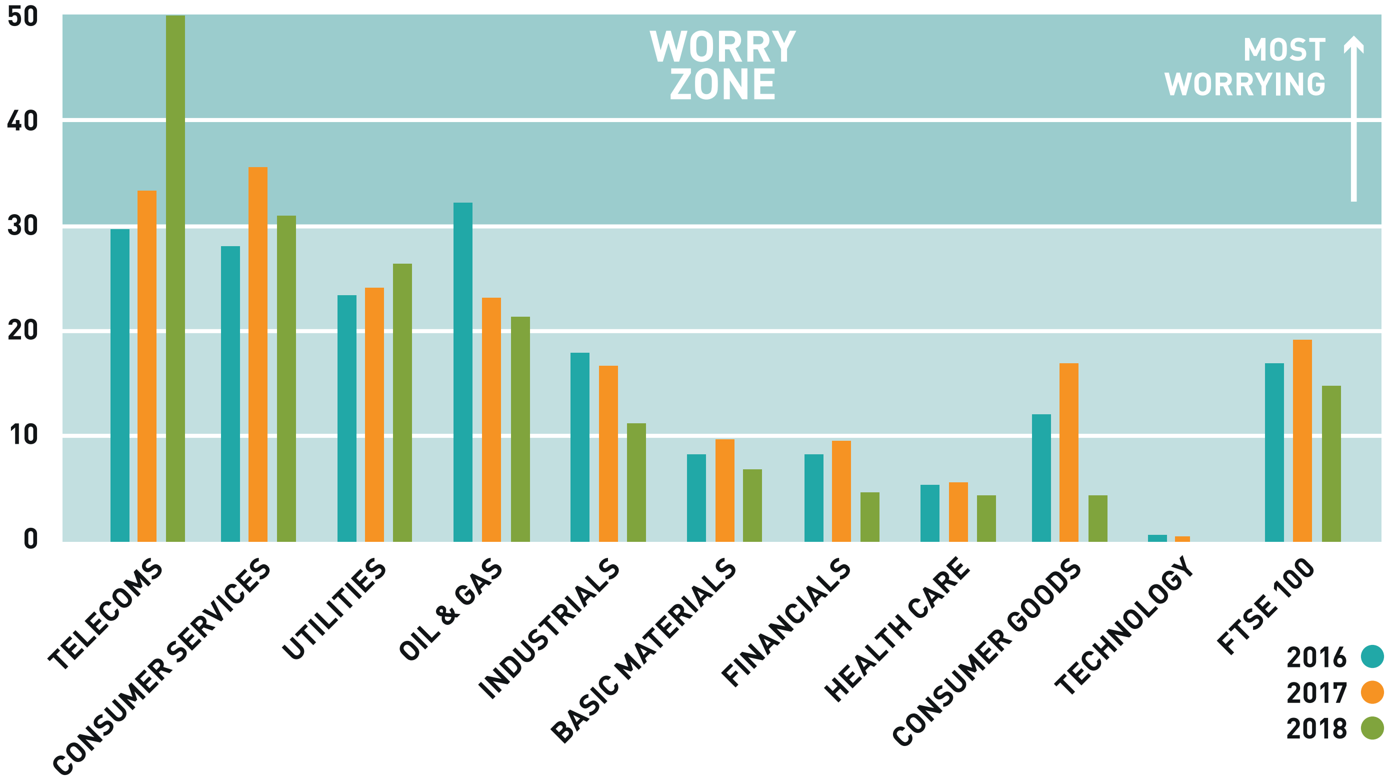
4 WHICH INDUSTRIES SHOULD BE MOST WORRIED?

One in eight FTSE 100 schemes with DB obligations are in the Worry Zone under a stress scenario.

The consumer services industry scores highest on The Worry Index, alongside capital-intensive and previously nationalised industries such as telecoms, oil & gas, utilities and industrials. These 'older' industries tend to have large legacy DB schemes. By contrast, 'newer' industries (including technology and healthcare) have relatively low risk scores, a reflection of the fact that many do not have legacy DB schemes.

Given recent failures of retailers, we extended our analysis across FTSE 350 retailers, to assess the Worry Scores of a larger sample within this market segment.

WORRY SCORE BY INDUSTRY



THE WORRY SCORE FOR THE RETAIL SECTOR IN FTSE 100 (AS PART OF CONSUMER SERVICES INDUSTRY):

YEAR	FTSE 100 WHOLE SCORE	AVERAGE WORRY SCORE
2016	17.0	46.5
2017	19.2	48.4
2018	14.7	51.8

A SECTOR DIVIDED

UK RETAILERS ARE IN THE MIDST OF A STRUCTURAL SHIFT WITH A WAVE OF AGILE NEW MARKET PLAYERS CHALLENGING INCUMBENTS TO ADAPT TO MEET CHANGING CONSUMER PREFERENCES.

TRUSTEES OF DB PENSION SCHEMES WITH A RETAIL SPONSOR MUST TAKE STEPS TO UNDERSTAND THE CHALLENGES FACED BY THEIR SPONSOR.

MARKET ANALYSIS

Despite robust economic growth, consumer retail spending is not increasing, as evidenced this year by muted retail sales growth year-to-date. The middle-class is spending less of their disposable income on retail, as real wages have failed to keep pace with inflation of energy, transport and housing costs. Many consumers are delaying big ticket items and other discretionary purchases.

Against this backdrop, the growth of digital distribution channels and changing consumer habits have driven a structural shift in the sector. In 2007, online volumes constituted just 2.7 percent of UK total retail sales; a decade later this has grown to 17.1 percent[2]. The rapid increase in market share can be attributed in part to consumers becoming more price sensitive and taking advantage of the convenience and time savings provided by online shopping. Specialist online retailers compete directly with supermarket and department stores on big ticket items and are unencumbered by the high business rates and rent paid for physical stores. Discounters, meanwhile, are increasingly moving upstream to attract squeezed middle-class buyers, encroaching on traditional supermarkets' and department stores' target market. Structural changes have resulted in an oversupply of retail space and while many well-known brands have taken steps to rationalise their store estate, this is yet to translate to a marked reduction in companies' physical footprint, despite falling footfall.

In parallel, operating costs for traditional bricks and mortar retailers have increased, but rising competition has made it difficult to pass on additional costs to their customers. Increases in labour costs and prolonged Sterling weakness have also dented domestic retailers' profit margins.

Corporate activities have included a couple of large-scale mergers and strategic partnerships, increasing the bargaining power towards the supply chain, while some struggling retailers have also been able to renegotiate the rent with landlords in Company Voluntary Agreement (CVA).

[2] *It was 17.1 percent in January 2018. The retail industry: statistics and policy, House of Commons Library.*

WORRY INDEX
FTSE 350 RETAIL

20 FTSE 350 companies can be classified under a broad retail umbrella, of which 11 have DB pension liabilities.

Applying the same calculation methodology, we looked at the FTSE 350 companies in the retail sector in 2018 and tracked how these 11 retailers have fared for the last three years.

Although the Worry Index for FTSE 100 has charted a solid improvement, the Worry Index for the FTSE 350 index retail sector remains broadly unchanged year-on-year.

By comparison, the value of the companies without DB pensions has increased roughly in line with the FTSE 100.

Within this sector, Worry Scores are unevenly distributed.

Beneath the headline Worry Score for FTSE 350 retailers, there is a high level of dispersion between the scores of underlying companies. The distribution of risks in this group remains highly uneven, with deep pockets of risk in specific sector segments. The five retailers with the highest Worry Score in 2017 saw that score deteriorate in 2018. The four companies with the lowest Worry Scores (i.e. the most robust companies) had an improved Score year-on-year. Traditional supermarkets were overrepresented among the group with high Worry Scores. Early adopters of online, companies with differentiated brands, and discounters have low and improving Worry Scores.

It is difficult to generalise, but traditional high-street retailers are facing big challenges and are under pressure from consumers, industry commentators and shareholders alike to accelerate investment in their digital channel, while sustaining and improving sales through traditional channels. Faced with historically low margins, servicing high and increasing DB pension liabilities in a low interest rate environment has become increasingly challenging. The ability to remain agile and adapt to structural changes in the market will determine the mid-term performance outlook for these companies and trustees need to remain aware of the risk of further market shifts.

When faced with structural change, we tend to overestimate short-term effects and underestimate the long-term effects[3]. If you are a trustee of a DB scheme with a sponsor that is a traditional high-street retail sector, our recommendation is to understand the strength of the sponsor and take action now; don't wait until it's too late.

RETAIL FTSE 350 WORRY INDEX

2016 (34.1) **2017** (36.3) **2018** (36.3)

[3]*Amara's law on the effect of technology.*

WHAT CAN THE PAST TEACH US?

To put the Worry Score in context, we analysed four formerly-listed retailers that have entered insolvency and tracked how their DB pension risk position evolved in the years prior to becoming insolvent. The frequency of high-profile insolvencies over the past ten years demonstrates the scale of the challenge facing the retail sector and the risks facing their pension schemes. The use of pre-pack administrations, enabling companies to off-load schemes onto the pensions lifeboat (the PPF)ahead of a sale, has put the retail sector under particular regulatory scrutiny. When tracking how the Worry Score shifted over the course of each company's demise, a clear trend emerges, with companies' Worry Score high and increasing as they approach failure. By assessing the route into past failures, what lessons can be learnt and what signals should trustees be alert to?

APPROACH AND METHODOLOGY

Although struggling retailers are often taken private for a few years prior to going into administration, we only investigated retailers that failed whilst they were public entities to ensure that the Worry Scores derived are directly comparable[4] with our wider FTSE 350 analysis.

The four companies we assessed are Woolworths, Jessops, HMV and Alexon. We calculated their Worry Score for the three years prior to insolvency.

[4] *It is possible to calculate a modified version of the Worry Score for privately held sponsors.*

THE JOURNEY TO INSOLVENCY

In line with expectations, our analysis shows a strong trend for companies' Worry Scores to increase sharply over the three years prior to insolvency. In the last annual report before insolvency, the Worry Score of three of the four companies analysed exceeded 100, which is evidence of the material and growing risks of pension schemes in the context of falling company value.

Among the companies analysed, some brands (such as HMV and Jessops) were able to restructure their businesses and recommence trading, but these phoenix firms were absolved of DB obligations in the process, with their schemes being transferred to the PPF. In the case of Jessops, attempts to rescue the business in 2009 involved transferring its trade to a new holding company, while its final salary scheme passed into the PPF.

In the last steps of the journey towards insolvency we typically observed, from the annual reports, that while the level of investment risk in these companies' pension schemes was relatively constant during this period, the sponsor covenant weakened to the point of failure. This suggests that the trustees of these DB schemes did not actively adjust their investment portfolio as the risk capacity of the scheme continued to deteriorate.

HIS MASTER'S VOICE

The once famous high street brand HMV went into administration in early 2013. At that point, £176m of debt was bought by the restructuring firm Hilco for £40m, giving Hilco control of the company. After restructuring, the brand and business was sold to Hilco for £50m, at which point the DB scheme and other unsecured creditors did not receive any payments from the Administrators. In May 2014, the DB Scheme was transferred to the PPF and HMV group was liquidated in July 2014. When a scheme transfers to the PPF, non-pensioners face a cut in benefits, particularly those who have accrued a higher level of benefit.

In the three years prior to entering administration, the HMV Worry Score soared from 50.0 in 2010 to 114.5 in 2012. The rapid growth of the Worry Score can largely be explained by the falling market value of its sponsor, since the size of assets and liabilities were stable during that period. However, although the asset allocations changed to make the portfolio more diverse, the total risk level in the investment portfolio does not appear to have been reduced during this period. In such a scenario, integrated risk management (IRM) guidance asks the trustees to consider reducing risk as the sponsor covenant weakens. However, we acknowledge that the trustees might also have been constrained from reducing investment return targets as the likelihood of funding from the sponsor reduced – this is a typical conundrum.

BLACK BOX THINKING – ARE THERE HELPFUL LESSONS TO LEARN?

If trustees had been able to take a more prudent investment approach as the company fell onto harder times, would they have secured a better deal for their scheme members?

This question is highly relevant today since the Worry Scores for one in three FTSE 350 retailers have continued to increase. Five schemes are in the Worry Zone (a Worry Score above 30) and two of these have a Worry Score above 100. Whilst a high Worry Score does not necessarily mean that sponsors are destined for insolvency, trustees must recognise the risk and consider the possible outcomes. But what can trustees do in practice?

For a scheme in the Worry Zone, it is critical that trustees have a granular understanding of the position and prospects for its sponsor covenant and monitor it on a regular basis. Given the well-flagged risks facing this segment of the UK market detailed on page 13, it is important to be realistic about the sponsors' longer-term viability when preparing recovery plans and determining risk capacity.

We recommend that trustees understand the impact of an insolvent scenario as part of their IRM strategy. This should include identification of, and monitoring for, triggers that indicate that the covenant has weakened and setting out actions that could be taken by trustees if this happens. Such contingency planning will help to prepare trustees for taking action in case the sponsor covenant continues to deteriorate.

If you are a trustee of a DB scheme that is in the Worry Zone, the time to act is now.

WORRY SCORES OF FAILING COMPANIES

COMPANY	WORRY SCORE 3 YRS BEFORE LAST REPORT	2 YRS BEFORE LAST REPORT	LAST REPORT	INSOLVENCY
HMV	50	72	114	2012
ALEXON	*	140	114	2011
WOOLWORTHS	155	60	172	2008
JESSOPS	17	41	50	2008

** Not meaningful*

HOW TO WORRY LESS TAKE ACTION!

Whilst our analysis shows that the collective outlook for DB schemes in the FTSE 100 might have improved, a significant proportion remain a concern.

As the 'true' state of the scheme's funding, and the risks it contains might be hidden "out of sight and out of mind", many trustees, sponsors, and investors might not fully appreciate the seriousness of their situation until it is too late. Our analysis is based on publicly available information disclosed in company accounts, typically based on IAS 19 figures. A more prudent assessment of pension obligations, on a technical provisions or buyout basis, would look materially different.

Whilst many CFOs ignore the buyout figure as irrelevant – often because they are not planning on buying out the scheme – this is a critical indicator of how much total DB pension risk companies are actually running as well as the scale of any potential claim on insolvency.

At a time when many sponsors have significantly increased returns to their shareholders, it would be an unforgivable mistake by trustees and sponsors to fail to put their pension scheme on a firmer footing based on a strong understanding of their sponsor's ability.

We believe there are a number of important steps that must be taken by various parties to improve the likelihood that members receive their pension benefits in full.

GUIDANCE FOR PENSION TRUSTEES AND SPONSORS

Much has been written about IRM since TPR published specific guidance in December 2015, but its adoption by the pensions industry has been patchy.

IRM is not simply about reducing investment risk. Trustees often need to maximise the return they can get for a covenant constrained risk budget. Generating the most return for every 'unit' of investment risk taken. The scheme should only take investment risk that the sponsor can demonstrate it is able to support – in effect, can it afford the extra contributions required if the investment strategy goes wrong?

Ultimately, it is sponsors who benefit from targeting higher investment returns (through a reduced funding requirement) rather than members. Therefore, the onus should be on sponsors to demonstrate to the trustees that the covenant can, and will, provide sufficient support to the scheme if the expected investment return doesn't materialise.

WE RECOMMEND THAT THE FOLLOWING ACTIONS ARE TAKEN:

1. Sponsors should provide information and access to the trustees to allow them to understand their covenant
2. Trustees should identify the level of investment risk that their covenant can underwrite, based upon whether the sponsor can afford to pay the increase in funding required after a shock, with specialist input from their advisors if required, and adjust their strategy accordingly
3. Trustees and sponsors should develop suitable monitoring arrangements and contingency plans, have binding commitments from the sponsor to improve funding to withstand the effects of an adverse event

GUIDANCE FOR INVESTORS

Despite recent high-profile failures of UK companies and pension schemes, we're surprised that more investors aren't demanding a greater level of information concerning pension risk from executive management given that it is their investment that will ultimately pay for pension mismanagement. For example, out of the 11 FTSE 350 retailers we reviewed, only one made reference to its pension obligations in its Viability Statement. In our experience, analyst coverage of listed company pension matters is relatively high-level and shows limited awareness of the funding process and risks.

As a minimum, we expect that investors should be demanding greater transparency over:

- Ongoing funding commitments, not simply the next year's contributions;
- Update estimates of the scheme funding position on a technical provisions and risk-free basis
- Details of the scheme's investment strategy, including measures of the level of investment risk

Read the report 'Give us a clue 2', in which we explore the level of transparency in pension scheme disclosure. The report is available at: **www.lincolnpensions.com**

GUIDANCE FOR REGULATORS

With the start of what is expected to be a steady stream of consultations on changes to TPR's powers, consolidation, and a new funding code, it's clear that TPR and the Department for Work and Pensions are looking to assert themselves more to influence schemes' funding and investment strategies.

Whilst this is a welcome development, we would encourage TPR to keep its focus on ensuring that trustees and sponsors are taking appropriate actions themselves given their situation, rather than seeking to impose standardised solutions that might not be effective for all schemes.

> **"IF SOME INSTITUTIONS FEEL PRESSURE TODAY, IT IS BECAUSE THEY HAVE DONE TOO LITTLE FOR TOO LONG, RATHER THAN BECAUSE THEY ARE BEING ASKED TO DO TOO MUCH, TOO SOON."** Mark Carney

As we move into an uncertain chapter of the UK's story, the risks facing schemes and sponsors will be magnified in the short- and mid-term. As our analysis demonstrates, many sponsors are facing both sector-specific and macro-economic risks and trustees must understand how prepared their sponsor is to deal with change. Does the sponsor even recognise the need for change? How is the sponsor responding to innovation in its markets? What negotiation power does the sponsor have in supply chain management? How does the sponsor differentiate and enhance its customer experience?

In the middle of structural shifts, there are more unknowns than usual. As a trustee, it is wise to hope for the best, but be prepared for the worst.

The Worry Index takes a holistic view of the risks facing pension schemes set against the value of their sponsors. It provides a much more integrated analysis of the problem than has previously been available and demonstrates clearly that the risks facing schemes can change over time.

However, the Worry Index is only a high-level analysis and more work is needed by each scheme to ensure that their risks really can be underwritten by their sponsors. It's essential, therefore, that trustees, sponsors, investors and regulators act now to protect pension entitlements by understanding and acting on the risks facing their schemes.

WE BELIEVE THAT, AS A MINIMUM, COMPANIES AND TRUSTEES SHOULD VOLUNTARILY STRESS TEST THEIR PENSION SCHEME

If you would like to discuss our findings or how The Worry Index might apply to your scheme please contact:

K.Rosenberg@cardano.com

D.Redmayne@lincolnpensions.com

APPENDICES

THE METHODOLOGY

The Worry Index combines in one single metric the three fundamental risks facing a DB pension scheme – funding risk, investment risk and covenant risk.

For each DB scheme sponsor in the FTSE 100, we calculated a Worry Score, which is the ratio of the size of the deficit to the value of the company in a stress scenario.

The Worry Scores for all the sponsors in FTSE 100 are averaged and then compared with the position in 2015 to create the Worry Index (2015 = 100).

We also analysed the value of the company standing behind the pension scheme and how it changes in a stress scenario, by applying consistent stress assumptions.

Deficit data is taken from public company accounts and adjustments are made to reflect a low risk position better, by removing the subjectivity and assumed higher investment returns in accounting methodology. We have used the yield on interest rate and inflation swaps when calculating the liabilities of a scheme as this better reflects the true cost of removing the pension problem from company balance sheets, by transferring to an insurance company.

Investment data is also taken from company accounts. These are categorised by asset classes and the stress scenario is then applied to illustrate potential risks within the investment strategy.

In addition to the main index for FTSE 100 sponsors, this year we reviewed the retail sector in the FTSE 350. We applied the same methodology to failed companies.

FIND OUT MORE AT:
www.theworryindex.com

ABOUT CARDANO AND LINCOLN PENSIONS

Founded in 2000, Cardano is an independent purpose-built risk and investment specialist, and financial pioneer. We are recognised as being a market leader providing integrated risk management services, including fiduciary management and investment advice.

Our mission is to build trust in an uncertain world by fighting for a robust financial system and a fair pension system that benefit everyone. We aim to achieve this by providing security and helping people achieve better, more secure financial outcomes in a realistic and responsible way.

Our long track record in fiduciary management demonstrates delivery of significant and stable returns since inception.

Lincoln Pensions, the sponsor covenant adviser joined forces with Cardano in 2016 to offer clients innovative, tailored, integrated risk management solutions.

Together, we believe an integrated consideration of different risks helps to understand the actions that need to be taken to make balanced decisions about risk and results in better outcomes for pension members, scheme trustees, corporate sponsors, and their shareholders.

Cardano employs 200 staff across three offices (London, Leeds and Rotterdam) and works on behalf of pension funds with assets of over £300 billion.

CONTACT US

If you would like to discuss our findings or how The Worry Index might apply to your scheme, please contact:

Kerrin Rosenberg,
Chief Executive, Cardano
K.Rosenberg@cardano.com

Darren Redmayne,
Chief Executive, Lincoln Pensions
D.Redmayne@lincolnpensions.com

Cardano Risk Management Limited is registered in England and Wales number 09050863.

Registered office: 9th Floor, 6 Bevis Marks, London EC3A 7BA.

Authorised and regulated by the Financial Conduct Authority.

Lincoln Pensions Limited is an appointed representative of Cardano Risk Management Limited, which is authorised and regulated by the Financial Conduct Authority.