ECWG

employer covenant working group

Employer Covenant Working Group

Integrated Risk Management

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ECWG is the trading name of the Employer Covenant Working Group, a Company Limited by Guarantee Number 9915768

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1. Introduction and scope

What is IRM?

Integrated Risk Management, IRM, is the concept of looking at defined benefit (DB) pensions financial risk “in the round” and understanding who takes what risk over what period and what can be done to manage and mitigate it. In its December 2015 Regulatory Guidance the Pensions Regulator (“TPR”) describes IRM as a risk management tool, a method that brings together the identified risks that a pension scheme and its employer face to see what relationships there are between them. The three fundamental risks to DB schemes are grouped in terms of employer covenant, investment and funding; IRM investigates the inter-relationships between these risks and seeks to understand how risk in one might affect the others and how these risks might be mitigated and managed.

Collaboration

TPR emphasises that it is not necessary to eliminate risk entirely and that trustees should engage with the employer to establish their respective risk appetites and tolerance for downside events. Trustees should adopt a proportionate and integrated approach to risk management when developing an appropriate scheme funding solution (see TPR Code on Funding).

In its Guidance on IRM, TPR notes that the benefits of IRM include better decision making.

In some cases IRM will pose challenges for the existing scheme governance framework which may, for instance, require changes in the way in which the trustee board and sub-committees operate in order to assess risk areas both individually and together.

In some cases IRM will also pose challenges to the way in which advisers operate, as it requires the trustees and their respective teams of advisers to work closely and constructively together.

Scope of this guidance

This Guidance has been developed by the Employer Covenant Working Group to assist covenant practitioners.

The Guidance is not prescriptive, rather it introduces IRM and ways in which covenant practitioners might address the challenges posed and the opportunities presented for them.

This Guidance examines in Section 1 the challenges presented by IRM. Sections 2 and 3 focus on the key cash flows of a pension scheme and how the core concepts of covenant, funding and investment risk are measured. Section 4 then looks at how these risks can be managed. Section 5 looks in more detail at ways in which covenant practitioners might approach the evaluation of these risks, with reference in Section 6 to default risk and changes to the covenant. Section 7 addresses governance and puts forward a possible IRM approach towards a scheme valuation.

Pension schemes also face a range of non-financial risks relating to matters such as governance, IT systems, administration and compliance, which are outside the scope of this document.

IRM and the role of the covenant practitioner

IRM presents opportunities for covenant practitioners since it requires specialist skills and experience in analysing financial and business risks, corporate cash flow forecasting and insolvency exposures.

It is also important to recognise that, just as covenant assessment requires specialist skills and experience, investment and actuarial advice and input should be sought and provided by appropriately qualified investment and actuarial specialists.

1. Introduction and scope

Monitoring changes in risks

Broad principles which underpin IRM

The following broad principles underpin IRM and the fundamental importance of the covenant within this.

- *Process as well as outcome*: the value of IRM lies as much about the thought *process* - about how risks are identified, evaluated and managed - as in the documented output.
- *Proportionality*: risk management is best focused on identifying and managing major potential issues – not micro-management or short termism.
- *Trustee-sponsor integration*: there should be transparency and an effective dialogue between the parties on risk appetite and risk management.
- *Advisory integration*: effective IRM requires advisory teams to work effectively together – not in isolation. Every adviser has a valuable part to play.
- *No "right answer"*: there is a variety of ways to evaluate how the risks to the different cash flows might play out over the life of a scheme. Risk cannot be eradicated and IRM does not give a single answer; but it should help identify priorities.
- *Documentation*: should be succinct, focused and actionable.

1. Introduction and scope

Challenges presented by IRM

The fundamental risk to security of member benefits

With respect to DB schemes, the fundamental financial risk is to the security of member benefits: i.e. the risk that pension payments will not be paid at the times and on the basis expected by members. The ultimate "back-stop" risk is the inability of the sponsor to make good any shortfall in the scheme.

Risks are defined and measured using different methodologies

Trustees have historically assessed risks using advice from different professional disciplines which have their own different perspectives and methodologies. This has in practice meant that the three core elements of the risk to the security of member benefits – funding, covenant and investment - have often been assessed in isolation from each other:

1. Funding: the projected value of member benefits and the funding needed to pay them is assessed by the scheme actuary by reference to a range of discount rate and other assumptions;
2. Covenant: the ability of the sponsor to put cash into the scheme when needed is assessed by the scheme's covenant adviser by reference to its measures of covenant "strength";
3. Investment: the ability of the scheme's investments to deliver expected returns, based on assumed funding contributions, is determined by the scheme's investment adviser, often with uncertainty addressed in terms of value at risk (VaR).

Risks should be addressed both individually and together

TPR's Guidance sets out a governance framework to help knit these three risks together but is not prescriptive as to how they should be analysed, measured and managed together.

Establishing the grounding for IRM in covenant

TPR has suggested that IRM needs to be grounded in a primary understanding of covenant, as this determines the funding path and extent of investment risk which can be taken by the scheme.

Risks change in relation to each other over time

IRM is a dynamic process: as covenants change over time so may funding and investment risks. TPR's Guidance suggests that covenant risks should be assessed over the short, medium and longer term. A range of approaches is being developed by covenant practitioners to inform this assessment.

This Guidance therefore considers the areas of focus for covenant practitioners implied by IRM: determining the sponsor's ability to put cash into the scheme when needed. Practitioners can do this by modelling cash flows, "worst-case" default scenarios and stress testing by reference to agreed scenarios and integrating the covenant with other risks.

We examine below how a pension scheme may first be "deconstructed" into cash flows and then how the risks relating to each of these cash flows may be examined.

2. How key cash flows of a pension scheme interact

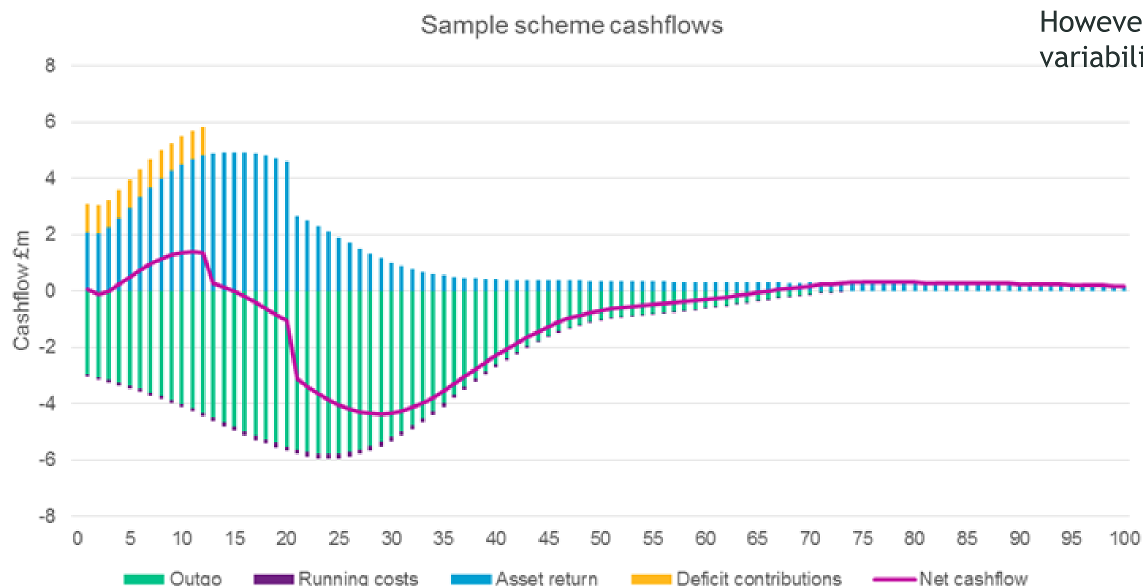
Deconstructing pension risks in terms of a scheme's cash flows

Key cash flows

One way to look at a scheme's funding, covenant and investment risk is in terms of key underlying cash flows:

1. Contributions received (accruals and deficit repair)
2. Net investment returns
3. Benefits paid (liabilities)
4. Administrative and other costs

The funding position of a pension scheme represents the extent to which contributions and net investment returns are projected to cover the payment of scheme benefits and costs.



Net investment cash flows can be further broken down into cash outflows and inflows as funds are invested and realised from time to time, as well as regular returns from dividends.

Administrative costs are arguably the most predictable and can usually be estimated based on some combination of per capita amounts together with historic patterns of scheme governance and advisory costs, and estimates of known costs which might arise (such as PPF levy costs). For some smaller schemes costs may be significant and employers can look to manage PPF levy costs to help reduce overall administrative costs.

These cash flows are represented schematically in the chart. In theory, the projected cash inflows from contributions and investment returns should cover projected cash outflows as benefits and costs are paid each year, as represented above. However, in practice, cash flows are subject to considerable variability and this is examined in more detail below.

Note:
This sample chart represents a scheme with an existing amount of funding. Hence the outgoing cash flows are greater than the asset return and contributions. It also assumes a single contribution schedule. It shows a finite series of deficit contributions. In practice such contributions will vary according to the agreement reached at each triennial valuation. Asset return includes both net returns from investment and dividends.

2. How key cash flows of a pension scheme interact

Variability in the cash flows and pension risk

DB scheme cash flows are exposed to three primary areas of uncertainty or risk:

1. **Liabilities and associated funding:** the present value of benefit cash flows will be determined by the scheme actuary by reference to scheme rules and building in assumptions about a range of financial, economic and demographic variables including inflation, mortality and retirement patterns to mention but a few. Some of these variables may have been matched or hedged. Benefit promises are also prescribed by law and regulation which may change over time. Liability management exercises may also change the profile of the projected liabilities.

2. **Investment returns** will depend on the actual investment returns given the investment strategy. The value of the scheme's assets and the expected returns generated from the scheme's portfolio of assets may be subject to varying degrees of future uncertainty.

3. **Contributions** will be determined by the cost of benefit accrual and the cost of repairing any deficits. The sponsor's ability to cope with variable demands over the life of the scheme is paramount.

For schemes that have not reached self-sufficiency, the payment of benefits may be at risk from a *sponsor's inability to repair deficits* either as a result of affordability issues or as a result of insolvency. (It should be noted that if sponsors can always be relied on to pay benefits, then scheme members will never lose benefits so in this sense covenant provides the important backstop for pension risk.)

None of these cash flows is linear and each will influence the other over time. By way of example, we show in the table below how funding contributions might be affected by changes in the liabilities and investment returns (all other assumptions such as demographics remaining equal):

Liabilities	Investment values	Funding contributions	Funding level
Increase	Worse than planned	Increased - but subject to affordability	Could fall behind plan
Increase	Better than planned	May still need to increase	Could be ahead or fall behind
Remain fixed	Better than planned	Decreased / maintained to fund reduced investment volatility	Remain on track
Remain fixed	Worse than planned	Increased - but subject to affordability	Might fall behind plan
Decrease	Better than planned	Decreased or maintained to fund reduced investment volatility	Should be ahead of plan
Decrease	Worse than planned	Increased - but subject to affordability	Might fall behind plan

It is evident from the table that these cash flows have to be considered together. For instance, contributions may need to increase if investments have performed better than expected but liabilities have increased, thus causing the funding to fall behind plan.

2. How key cash flows of a pension scheme interact

Interaction between these cash flows

Risk integration

IRM is concerned with evaluating and managing these risks in combination as a whole or "holistically". In doing so, the relationship between each of the areas of uncertainty need to be investigated with particular care taken to identify the extent to which risks are correlated or transferred.

Correlation

If risks are correlated (i.e. they move in tandem), then the scheme may have more or less risk exposure than presented by a separate analysis of individual risks.

Risk transfer

Some risks (such as sponsor risk and investment risk) may be in a defined relationship such that reducing risk in one area merely transfers it to another area. For example, in some cases a "de-risking" approach to investments may reduce exposure to volatility but also increase employer contributions or extend the time to "self-sufficiency", therefore increasing the expected reliance on the covenant.

Proportionality

Inherent in IRM is the principle of proportionality: understanding the scale of risks in relation to each other. If, for instance, scheme liabilities are relatively immaterial relative to the sponsor then the focus of the analysis will be different from the situation where the scheme liabilities are larger than the sponsor - in such a case IRM can be critical.

The role of the employer covenant in IRM

In the ECWG document entitled *"Principles for covenant assessment for scheme valuations"*, in addition to a consideration of the TPR definition of employer covenant, the strength of employer covenant is defined as "*the ability to put cash into a scheme (or assets which can be converted into cash) when needed"*.

In light of the above analysis of scheme cash flows, for the purposes of IRM this definition of the employer covenant might be further refined in terms of "the ability to put cash into a scheme (or assets which can be converted into cash) when needed to meet liabilities over an agreed period when expected investment *returns are insufficient to do so."*

This latter definition emphasises the explicit linkage between the employer covenant - as a source of cash into the scheme; the returns from a chosen investment strategy; and the liabilities of the scheme which need to be paid.

In this document, we will not be revisiting the fundamental principles of employer covenant assessment which have been set out in the ECWG document entitled "Principles for covenant assessment for scheme valuations". However, we will seek to describe how the employer covenant interacts with other key scheme cash flows - which in turn will inevitably have a bearing on assessing its overall strength.

2. How key cash flows of a pension scheme interact

Investment risk

Measuring investment risk

There is a range of metrics to be applied when considering investment risk, depending on the asset classes. This is a highly specialist area in which covenant practitioners will need to work closely with investment professionals.

A commonly used measure of investment risk presented by a portfolio of assets is “Value at Risk” (“VaR”) which looks at the potential change in value of an asset or portfolio over a defined period for a given confidence level. So “one year VaR95 of £10m” means that there is a 5% risk of the value of the asset in question changing by more than £10m in value over a 1 year period.

When considering the application of VaR or similar measures in IRM discussions, covenant practitioners should be aware of:

- The need to consider the likelihood and timeframes for asset values to recover and the extent of the recovery, for it is not necessarily the case that a portfolio VaR will represent a permanent diminution in value of a portfolio of assets and it may well be sensible to assume some degree of recovery over time.
- The limits of VaR as a risk management tool: it is a measure based on assumptions about investment return distributions, historical data periods and estimates of correlation that may significantly understate risk.

A common approach, working with the scheme investment consultant, is to compare (say) 1 or 3 year VaR with a measure of the ability of the sponsor to repair a poor VaR outcome through additional contributions or assets over a reasonable time period.

Measuring funding risk

VaR is sometimes also applied to the give a measure of the potential change in funding deficit.

The likelihood of the scheme reaching defined funding target levels over a pre-agreed period itself depends on a range of variables:

- the chosen funding target(s) and assumptions behind the targets (Technical Provisions, PPF s179, self-sufficiency, solvency) including those affecting the liabilities, such as mortality and the benefit structure,
- the time period to reach the agreed funding target(s) and likely re-setting of these through the triennial valuations.

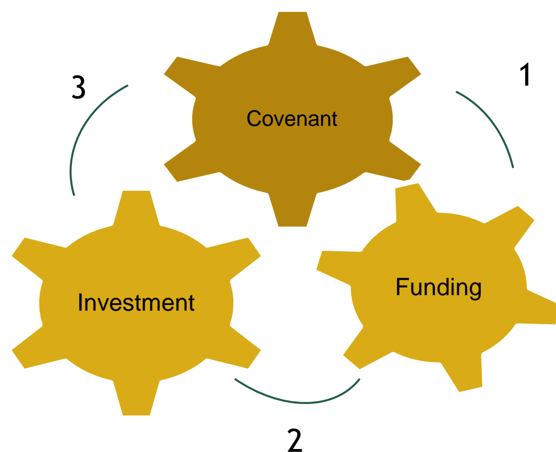
These are inherently bound up with the assumptions as to investment strategies to reach these targets and the covenant.

By way of example, the trustees of a scheme might choose to measure a range of pension key performance indicators (KPIs) which bring together scheme funding, sponsor and VaR based metrics.

3. Bringing the risks together

Assessing risks bilaterally and sequentially

TPR recommends that trustees look at risks bilaterally and sequentially. We consider here how this might operate in practice. Correlation of risks is important here and is considered further on pages 11 and 15 below.



1. Considering covenant and funding together should enable a range of questions and challenges to be explored, including:

- *How best to align the time horizon of the covenant assessment - funding and default risk - with the medium and longer term projections of the scheme's assets and liabilities? (For example how does the maturity of the business compare with the liability profile?)*
- *How best to assess covenant risk over the medium and longer-term, for example though judgements around the business model or though risk scenarios?*
- *What investment policy is determined by sponsor affordability and sponsor default risk?*
- *Whether contingent funding can deal with longer-term sponsor uncertainties (for example cash or asset based mitigation in the event of identified corporate risk events happening)?*

2. Considering funding and investment together should ensure that the funding plan reflects the investment strategy.

An example of this approach is a "funding corridor": based on an agreed risk appetite within the investment policy, a funding plan is agreed. Under-performance against plan triggers additional funding - and equally over-performance against plan allows further de-risking or adjustments to the funding.

3. Considering investment and covenant together should ensure that the investment strategy reflects the employer covenant and will enable a range of questions and challenges to be explored, including:

- *Is the investment VaR time horizon (e.g. 3 years) consistent with the period over which covenant risk is being measured?*
- *Do stress-tests lead to de-risking or can the covenant withstand a shift in investment policy (for example though more equity exposure)?*
- *What is the financial impact of underwriting investment underperformance and how is that balanced with a de-risking approach?*

3. Bringing the risks together

Assessing risks in the round

In addition to considering risks bilaterally and sequentially, it is also necessary to consider all the risks together. Some factors, for example interest rates movements, may impact the covenant, investment strategy and funding in different ways.

It is also important to be proportionate and focus on the key risk factors, because not every risk factor will "move the dial".

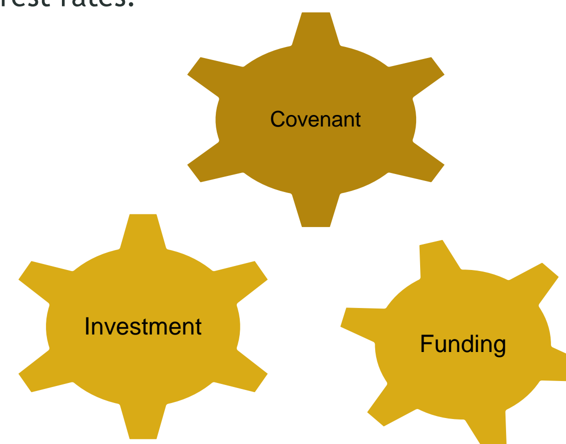
Case studies and scenario planning

Covenant practitioners might run case studies and scenario planning exercises with other advisers to draw out how one factor might flow though and whether it operates to correlate with, magnify or hedge other risks.

Scenario planning is an integral part of IRM. Specific factors which can reasonably be expected to affect the covenant, funding and investment balance (macro political or economic factors such as Brexit, currency risk, interest rate changes or risks to business sectors) are identified and their potential impact on each is assessed.

For example, a single macro factor such as currency rate or an inflation rate might be chosen with the covenant practitioner addressing how such a factor might affect the sponsor's business model and profitability. Such a factor might then be followed though in terms of its impact on investment and funding as described above.

So, for example, a scenario planning exercise might consider the "follow though" impact of a specified rise in interest rates.



- Funding: the scheme's investment and actuarial advisers can identify a range of economic scenarios associated with a specified rise in interest rates and the range of funding impacts;
- Covenant: the scheme's covenant adviser can assess the extent to which contribution cash flows are affected by such a rise in interest rates and whether they would be affordable;
- Investment: the investment adviser can assess the degree to which changes in affordability would affect the degree of investment risk taken.

4. Managing the risks

Key drivers of scheme funding

The two principal methods of reaching a given funding target such as "self-sufficiency" (where there is expected to be limited reliance on the covenant) are through sponsor contributions and investment returns.

Looking forward, particularly if scheme liabilities are valued on "expected returns" basis, then any downward revision to anticipated future investment returns is likely to increase liabilities – and, in turn, is likely to require additional contributions.

It follows that managing the risks of:

- investment returns falling short, requiring contributions to be raised or paid for longer; and
- contributions being constrained by affordability or indeed not coming in as projected through sponsor default

are central to Integrated Risk Management. Their relationship to each other will also change over time because neither moves in a linear fashion.

Risk-bearing versus matching assets

Although investments in assets such as equities might be anticipated to generate higher returns over the long term than investment in government bonds or similar assets, the returns on them are likely to be more volatile. Whilst measures can be taken to manage the risks of investment volatility for individual assets (such as shares) through appropriate diversification and the use of portfolio management techniques and hedging, there will almost always remain a degree of overall market volatility.

Liability driven investment (LDI) approaches seek to base the investment strategy by reference to the liability cash flows.

Risk-bearing assets such as equities, property and alternatives usually have higher expected returns but greater volatility than matching assets such as bonds and index linked gilts. Matching assets are used to reduce portfolio volatility and to manage the scheme's liability risk generated by movement in interest rates. LDI has been a major trend for many larger schemes.

Returns on assets such as government bonds are viewed as having an extremely low risk of default, but values can also be volatile, particularly in periods of substantial interest rate movements or the implementation of economic stimuli (e.g. quantitative easing).

4. Managing the risks

Investment strategies and the sponsor risk position

In its investment guidance, while TPR is not prescriptive about investment strategy choices by reference to the strength of employer covenant, it does give directional guidance and encourages a constructive dialogue between Trustees and employer(s), supported by advisers, to identify and manage risks – including the ability of the employer's covenant to meet an investment downturn.

For example, one approach to managing investment risk in the context of scheme liabilities might be to invest heavily or wholly in "low risk" or "risk free" assets - typically UK Gilts for a UK scheme.

This de-risking approach might be suitable where the employer covenant can sensibly and completely afford the contributions required for this strategy. This would need to be balanced against the opportunity cost to the employer in terms of growing the strength of the business (and, in turn, the covenant to support the scheme).

The importance of the covenant practitioner working with the investment consultant is underlined by such an example. For, on this basis, all other things being equal, and over a prolonged time horizon, there may be a considerable opportunity cost – and risk - for sponsors in funding their schemes entirely with low risk assets if they are foregoing returns which otherwise need to be met by additional contributions. However, if employers wish to contain the volatility (risk) of their pension scheme investments, and can afford to do so, de-risking the investment portfolio may be an entirely rational business decision.

A key function of choosing an investment strategy, therefore, is to identify a portfolio which is expected to deliver a sensible expected rate of return to meet scheme liabilities – alongside an underpinning employer covenant to address any material off-plan performance.

An additional feature of any investment strategy is to ensure that investments chosen have sufficient liquidity to meet scheme cash needs when required.

IRM seeks to ensure that the impact of key risk assumptions made in one area is followed though so that risk correlations and transfers can be identified.

For example, a change in long term gilt yields may affect in turn:

1) the value of gilts or bonds in a scheme's investment portfolio
2) the valuation of its liabilities (particularly when the scheme uses a "gilts plus" basis of valuation), and
3) In some cases, for example a property company or utility whose income is linked to yields, the value ascribed to the covenant.

Note: assessment and management of investment risk is also highly specialist and should be carried out by those qualified in the field.

5. Approaches to evaluating pension scheme cash flow risks

Constructing the IRM platform

Key variables and assumptions

To enable sponsors, trustees and practitioners to form a view, or even build a model, of key pension scheme cash flows, and in turn a platform for integrated risk management, they will need to understand a number of key variables and assumptions, notably:

- ***Covenant:*** cash flow available from the sponsoring employer(s) to meet pension obligations, whether through ongoing contributions for benefit accrual or deficit repair payments.

  This can be a highly complex and uncertain exercise, particularly where the employer's business is itself highly volatile or cyclical; or where it has a variety of other pension obligations which themselves have different investment strategy approaches and variable expected returns and risks. (See further at Page 17 below).

- ***Investment strategy***: possible investment strategies, the expected returns from those strategies and the likely variability of those returns. The variability may be modelled deterministically (e.g. a 1% shortfall over 10 years); or stochastically (using multiple scenarios to create a probability-adjusted series of outcomes).

- ***Funding the liabilities***: projected scheme liabilities and costs and potential variabilities to these - for example, the sensitivity of the liabilities to changes in investment market conditions, longevity, interest rates or inflation assumptions.

Modelling and stress-testing the cash flows

Once sponsors, trustees and practitioners have views of the key cash flows and associated assumptions, they can create an information platform to model and stress test the cash flows.

Challenges include:

Correlations in the model: factors such as the extent to which an employer's profitability (and cash flow generation) is correlated with wider macro-economic or business factors or the impact of multiple pension schemes sponsored by the same employer.

Time horizons: the extent to which the model should respond to short term investment volatility and the timescale over which any investment "shock" might be expected to recover. In turn, extended time horizons may create increased uncertainties around employer free cash flow.

Proportionality: in some cases a simple deterministic stress-testing model may be used which shows, for a given recovery plan period, the level of additional cash contributions needed from an employer to meet an identified investment shortfall. This can be compared to estimates of employer free cash flow to understand the extent of any "buffer" provided by the covenant. However, sponsor contributions may be constrained or renegotiated over the life of the scheme so a simple deterministic model may not always be appropriate.

These are explored further below.

5. Approaches to evaluating pension scheme cash flow risks

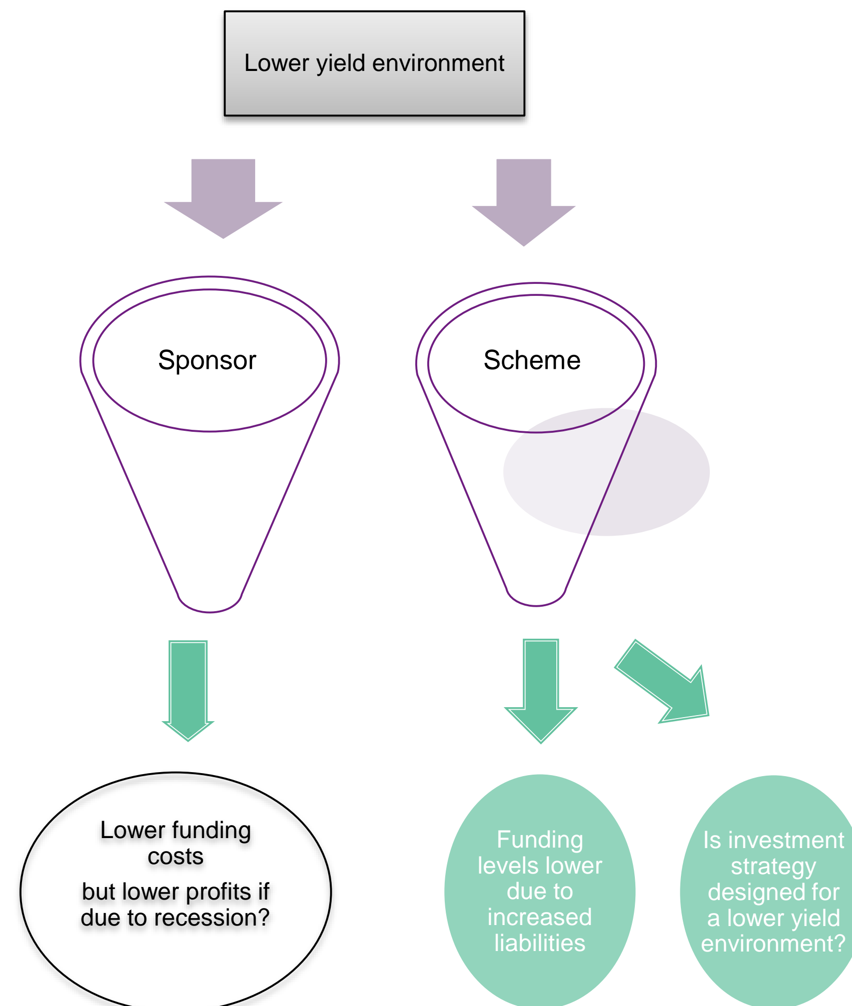
Evolution of approaches

Correlations in the model

Free Cash Flow generation will normally be impacted by a number of external factors, including market performance and the cost of finance. These external factors may also have a bearing on funding and investment risks. These risks should be considered in combination and the overall impact of potential scenarios on the security of the scheme evaluated. For example:

- A fall in UK GDP may adversely impact a domestic focused sponsor as well as a UK equity focused investment strategy
- An increase in inflation may impact sponsor costs, reducing free cash flow whilst also increasing scheme liabilities
- Improvements in mortality might adversely impact scheme liabilities but may represent a covenant improvement to a life insurer
- Falling bond rates might increase a scheme deficit but if linked with an interest rate cut it might reduce the cost of debt for the sponsor
- A falling pound may mean that higher input costs will impact on a sponsors profit margins, but the scheme's overseas investments may now be relatively more valuable.

By considering the combined impact of such external factors, trustees and sponsors can understand whether they represent a compounded risk across covenant, funding and investment or whether there may in fact be a natural hedging effect.



5. Approaches to evaluating pension scheme cash flow risks

Time horizons

Given the longevity of pension scheme funding and investment strategies, identifying a medium to long term working view of affordability and the sponsor's ability to pay contributions and underwrite risk is key to developing an IRM strategy.

Shorter and longer term affordability

Short term affordability is typically assessed by reference to Free Cash Flow (FCF) forecasts - operating cash flows less necessary costs to maintain the business (including capital investment, interest and tax, pre scheme contributions and dividends). However, forecasts are generally only available for a very limited period, depending on the nature of the company and market in which it operates. For example, in the technology sector there might be considerable variation from year to year in levels of business costs notably investment needed; while in more mature consumer products businesses these business costs might be more predictable; and in the utility sector regulated price controls enable cash flows projections to be made over longer periods.

Longer term affordability assessment typically requires assumptions about future performance to be extrapolated or modelled. Factors include industry sector and market growth assumptions as well as qualitative assessment of the sponsor's strategic position in its market. Cash flow forecasts can then be sensitised to reflect a range of feasible scenarios.

The key aim of this analysis is to understand directional trends in affordability - whether the sponsor's ability to support the scheme is expected to improve or decline over time. Some sponsors will expect affordability to improve, but some may be in cyclically fluctuating, declining markets or industries subject to major technological or political uncertainties (e.g. print, oil & gas).

The extremely difficult challenge is to try to make a reasoned assessment as to the viable lifetime of the sponsor and the expected profile of free cash flow consistent with the expected duration of scheme funding requirements and investment strategy – recognising that the lifecycle of many corporates may be shorter than the lives of their pension funds.

Proportionality

Variability and uncertainties in investment and funding risks are typically modelled using techniques such as VaR (see Section 2 above). Covenant risk is generally evaluated within a corporate accounting framework. Because the measures used to quantify investment, funding and covenant risks are different, it is challenging to calibrate or combine them into a single measure of overall pension risk.

A range of approaches may be used by firms to evaluate the risk and uncertainty of cash flows considered above, depending on the context. For instance covenant practitioner firms may differ in the duration of sponsor cash flows which are modelled and the techniques used to model them, as well as how sponsor cash flows are integrated with investment and funding cash flows.

6. Specific covenant considerations

Forming a view on affordability

The impact of other pension schemes

Whilst Trustees can undertake holistic risk analysis which reflects their scheme's specific investment and funding profile, it is important to consider the risks that other pension schemes sponsored by the same employer/group may have on a sponsor's FCF.

For example a Trustee Board considering an IRM approach with regard to the covenant of a small pension scheme which has a sponsor that also supports a larger scheme should also seek to understand how changes in the larger scheme will impact on its sponsor. If the smaller scheme liabilities increase by 10% the additional funding demand on the sponsor may be easily affordable. However if the same economic factors result in an increase in the larger scheme's deficit then this additional financial strain on the sponsor may not be sustainable or may significantly impair its ability to support the smaller scheme.

There may however be practical challenges in getting information about other group pension schemes. Open communication channels between trustees and sponsor are key.

Relative risks and returns: investment in the business or scheme?

With TPR's objective "to minimise any adverse impact on the sustainable growth of an employer" Trustees are encouraged to use flexibilities in the funding regime to set a recovery plan which reflects the requirements of both the scheme and the sponsor. However, faced with a deteriorating funding position, tPR still expects trustees to seek increased contributions where affordability allows and would not cause a material impact on the sponsor's sustainable growth plans.

Affordability is often a debate between sponsor and trustees as to how best to allocate resources between corporate investment and scheme funding. *An IRM approach might:*

- *make a comparative assessment of expected returns and opportunity costs from investment within the employer with those from investment in scheme assets*
- *address the question whether, and by how much, investment in the business should grow FCF to enable higher contributions and reducing the strain on investment performance, or whether that increases risk concentration.*

Where cash is severely constrained, the key consideration is understanding the investment requirements of the sponsor to ensure ongoing viability. If the resulting contributions to the scheme can cover variation in scheme deficit levels within an agreed timeframe, then supporting the sponsor in turning around the business is likely to be in the best interests of all parties.

6. Specific covenant considerations

Forming a view on default risk and changes to the covenant

Sponsor default risk
It is important that, as well as cash flow risk integration, an IRM approach takes into account the risk of sponsor insolvency or other default resulting in contributions not being paid into the scheme and invested as expected according to determined investment strategy. IRM should also address the risk of greater than expected cash strain on a weak or potentially distressed sponsor. See ECWG Guidance ‘Transactions in a Distressed Environment’.

A range of approaches will be taken by covenant practitioners in determining the probability of default and estimated loss on default (in terms of section 75 debt recovery).

6. Specific covenant considerations

Changes to the covenant and IRM

Given business and macro economic cycles, as well as changes in corporate strategy or events affecting the business from time to time, covenant will not be not static. There may be a number of reasons for the covenant available to a scheme to change, including:

1. Natural growth or decline of the sponsor referable to its liabilities
2. Transactions e.g. M&A or group restructuring
3. The provision of mitigation/additional support to the scheme.

Covenant should be regularly monitored and assessed and material changes considered in the context of the impact on funding and investment strategy. This would typically be done at each triennial valuation but increasingly this interplay is being reviewed more frequently, depending on the nature of the covenant and the funding and investment strategy. A weakening in the covenant may drive more prudent funding and investment strategies, whereas an improvement may enable some increased risk to be taken. Please also see ECWG guidance 'Transactions in a Non-Distressed Environment'.

When there is a change in the covenant as a result of a transaction, potential changes in funding and investment strategy will need to be considered alongside tPR's guidance on material detriment. Some form of mitigation may be necessary in these circumstances but additional support may also be provided in the normal funding cycle to reduce risk to the scheme and provide greater flexibility in the scheme's funding and investment strategies.

Valuing additional support can be challenging and its reflection in funding and investment decisions is often ultimately a negotiation and judgement call, and will be dependent on each scheme's specific circumstances and the risk appetite of the trustees and employer

Some forms of employer support will only trigger in an insolvency scenario and may not reflect changes to a Scheme's ongoing funding requirements. Other forms may better reflect the changing circumstances of the scheme.

For example the covenant support for the ongoing investment and funding structure may ascribe value to measures such as:

- a parental guarantee which underpins contributions may provide access to additional cash generation, extending sponsor affordability
- an undertaking to increase funding on certain investment or funding triggers (capped triggers may provide more limited comfort).

In a distressed or insolvency situation contingent assets such as security, a guarantee or subordination of competing intercompany debt may provide value. Support that results in the Trustees having a higher degree of confidence that the scheme will reach full funding even in a distressed or insolvency scenario will ultimately provide greater optionality in terms of funding and investment risk.

Questions in an IRM context are similar to those conventionally asked, for example: how long does this support last? How material is the support in the context of the scheme risks and the employer? Will it be available when needed (e.g. ability of guarantor to stand behind guarantee)? However, the answers are broader, will change over time and will raise other questions, for example how does it adapt to the changing needs of the scheme?

7. IRM and governance

IRM may offer a more streamlined valuation process

IRM provides the opportunity to improve the valuation process and DB pension scheme governance through integrating the main risk elements, collaboration with the employer, and sharing real-time analytics and valuation sensitivities.

The traditional approach typically involves a sequential, “silo based” process over an extended (often 15 month) period, with a series of meetings between the different parties and advisers - 10 or more not being unusual. There is therefore often limited integration *within* the respective trustee teams and *between* trustee and sponsor.

An IRM approach to the scheme valuation

In line with tPR guidance, the valuation should ideally start with a covenant assessment, although this is not always the case in practice. From a covenant practitioner perspective, IRM enables the debate to move away from different views on covenant “strength” to one about the respective risks being carried by the scheme in its reliance on the sponsor and vice versa.

Scheme Valuation - New IRM Approach – 3 Meetings

* Covenant = Covenant Advisor, Investment = Investment Advisor

An IRM approach to valuation might comprise three core stages:

Stage 1: Agreeing the approach and identifying key issues: all parties and advisors agree guiding principles around the valuation process and understand each side's desired outcomes.

Stage 2: Risk Appetite and Risk Capacity Setting: examination of the respective trustee and sponsor perspectives on risk. If the trustee focus is on securing member benefits it may be on gradually reducing reliance on covenant exposure towards “self-sufficiency”; while the employer may have a broader range of business priorities (e.g. operational, creditor) and a different view of risk.

There is then a joint examination of what levels and types of risk are being carried by each party, their risk capacities and risk appetites. This enables a range of possible valuation outcomes to be explored, understanding each other's priorities and constraints and finding acceptable compromises.

Stage 3: Integrated risk based funding solution: a mutually acceptable valuation outcome with a recovery plan, if appropriate, in a way that balances risks, using real-time analytics to test and refine a range of valuation outcomes.

Documenting Risks and Mitigations: the parties document pre-determined contingency plans that would cover changes in the risk balances presented by changes in funding progression, investment strategy, or covenant (with agreed metrics to be monitored). The Trustees set out their own “statement of integrated risk principles” which sets out their IRM approach.

7. IRM and governance

Monitoring changes in risks

Risk balance needs to be monitored

The risks considered in this paper and the interplay between them are not static and will change over time. So, while the IRM process and output should be set out in a reference document, that should be seen as a starting point only.

As a practical matter, IRM enables pension schemes and their corporate sponsors to work together to articulate their own and understand the other's business strategy, risk appetite and risk management. This should be carried out at periodic intervals (ideally on an annual basis and at least triennially).

8. Glossary of terms and abbreviations

Term	Definition
ALM	Asset Liability Management, an approach which models investment risk in conjunction with the scheme liabilities
Correlation	A statistical measure of the extent to which one observation occurs in coincidence with another observation
DB	Defined Benefit
ECWG	Employer Covenant Working Group Limited
FCF	Free Cash Flow
Guidance	This document – guidance on Integrated Risk Management for practitioners as published by the ECWG
IRM	Integrated Risk Management
TPR Guidance on IRM	The Pensions Regulator's December 2015 Regulatory Guidance "Integrated Risk Management"
TPR Code on Funding	The Pensions Regulator Code of practice 03 (in force July 2014) "Funding Defined Benefits"
TPR	The Pensions Regulator
VaR	Value at Risk, a measure of the potential loss in value of an asset or investment portfolio over a defined period for a given confidence level.

9. Disclaimer

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