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What does *Lloyds/HBOS* tell us about ss 90 and 90A of FMSA?

"Cost of Funds" fallbacks

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KEY POINTS

- A bank typically will not have mechanisms available to it for *evaluating* the actual cost of funds for a particular transaction viz "that Loan" under the LMA's draft cl 11.4.
- The provision confers on a lender a discretion but there must be some ascertainable facts/data against which the reasonableness of a "selection" and decision may be assessed.
- The authors consider that the draft LMA costs of funds fallback in its present form, while attractive in appearing to offer a means of avoiding frustration, is likely to be unworkable in practice, both in the short and in the long-term.

Authors Hanif Virji and Paul Marshall

Facing the end of LIBOR Addendum: a "Cost of Funds" fallback?

A reader suggested that insufficient regard was had in our article 'Facing the end of LIBOR: the financial and legal implications' (2019) 11 JIBFL 715 to the provision under the Loan Market Association's (LMA's) "cost of funds" draft ultimate fallback provision. Because of a widely held perception that "cost of funds" provisions provide a mechanism to save agreements, otherwise at risk of frustration upon the cessation of LIBOR, we provide a summary explanation for our view that contractual "cost of funds" fallback provisions in these (and similar) terms are unworkable, both in the short and long-term – the latter being recognised by some.[1]

Clause 11.4 of the current LMA draft 'Multicurrency Term and Revolving Facilities Agreement' provides that the rate, in the event of LIBOR not being published, is: "to be that which expresses as a percentage rate per annum the cost to the relevant Lender of funding its participation in *that Loan* from whatever source it may reasonably select" (our emphasis).

BANK BALANCE SHEETS

Despite the obvious point that a bank makes money by lending at a rate higher than it borrows,[2] a bank balance sheet is complex. Reasons for this include:

- that a bank borrows money for different periods of time, from overnight to long-dated – as much as 30 years;
- that a bank has diverse sources of capital at different interest rates, eg corporate bonds at a rate reflecting the tenor, structure and currency of the loan and – importantly – its own credit-rating.

It will also have deposits from retail clients – effectively loans, typically at a rate substantially below LIBOR and in the case of UK current accounts[3] mostly at zero rates; further; (iii) some bank liabilities will be hedged by currency and interest rate derivatives such as swaps, futures, options and forward rate agreements.

"... COST TO THE RELEVANT LENDER"

When any borrower draws down a loan facility from a bank, the major concern is margin over LIBOR. In a *cost of funds* world, there is another concern – deterioration of the bank's own credit-worthiness. As credit quality declines, say, as a result of a rating agency downgrade, bank cost of funds increase – an increase passed on to the customer. Such changes in costs are by no means necessarily small. Further, the effective additional margin can be volatile. Apart from greater cost to it as a result, a customer will become more likely to infringe against its interest cover covenant[4] *as a result of the bank's* (rather than its own) lower credit position.

"... WHATEVER SOURCE IT MAY REASONABLY SELECT"

The key problem here is what source may reasonably be selected – and on what basis? One source of bank finance, as noted, is customer deposits. The bank pays a very low rate of interest on these – well below LIBOR, even for substantial sums. For some types of accounts, the rate may be zero. To illustrate the point, the Lloyds Banking Group 2018 accounts[5] show:

Balance Sheet	At 31 December 2018 (£ billions)
Loans and advances to customers	444
Customer deposits	416
Wholesale funding ≥ 1 year	90
Wholesale funding < 1 year	33

Customer deposits account for over 77% (416 ÷ 539) of its total funding.[6] Short-term wholesale funding comprises a mere 6% (33 ÷ 539) of total funding. If customer deposits are excluded, then £33bn of funding will set the cost of £444bn of loans.

All else being equal (which, as we explain, it is not), a "cost of funds" calculation should produce a result below LIBOR. We estimate that for Lloyds Banking Group in 2018 it was approximately LIBOR – 0.86%.[7]

The word "reasonably" in draft cl 11.4 presents fertile scope for disagreement – including for reasons outlined in this addendum. The provision confers on a lender a *discretion* as to how to act in the circumstances – constrained only by the requirement that, in acting, it does so "reasonably". In recent years concepts of good faith and "rationality" (in the sense of reasonableness) have made some inroads into English contract law where a contractual discretion is provided for, particularly in "relational" contracts: *Yam Seng Pte Ltd* [2013] EWHC 111; *Braganza* [2015] 1 WLR 1661 and *Property Alliance Group* [2018] EWCA 355 – but there must be some ascertainable facts/data against which the reasonableness of a "selection" and decision may be assessed.

Biog box

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THE ISSUE WITH "THAT LOAN"

Consider a simple £1m loan with a maturity date of 31 March 2022 at three-month GBP LIBOR plus 2.0% (the loan margin). The LMA "cost of funds" fallback requires that three-month GBP LIBOR be replaced with *cost of funds* on 1 January 2022 when three-month LIBOR would normally be fixed – but is not published. With a wide variety in sources of funds, *evaluating* the cost of lender funds for three months on 1 January 2022 for a bank is like untangling the Gordian Knot. For example, as in any industry, cost varies with volume – the interest rate will vary with the amount of capital lent. If, as is usual, on a particular date a bank borrowed various amounts each at a different interest rate, how would the cost of funds for a *particular transaction* be calculated? One method is to use *weighted average* – the arithmetic mean of the borrowing rates weighted by the amount borrowed. Assume a bank borrows £10m at 5.00% and £1m at 4.50%. The un-weighted average would be 4.75% ((5.0 + 4.5) ÷ 2), but the weighted average would be 4.95% ((10m x 5.0% + 1m x 4.5%) ÷ 11m). A weighted average[8] is usually preferred because it puts more weight on the rate with the highest volume; but in this instance that may be incorrect – what is required is the cost of funding a *particular loan* with a loan amount of £1m – 4.50% would be the correct calculation. The knot gets tighter still when other complexities such as derivatives, mis-match in amount and tenor, funding subordination, amortisations, etc are considered.

The central difficulty is that a bank, typically, will not have mechanisms available to it for *evaluating* the actual cost of funds for a particular transaction – *viz* "that Loan" under the LMA's draft cl 11.4. To reconstruct these costs will be both complex (and therefore expensive) and liable to be both inaccurate and arbitrary. Accordingly, we consider that the draft LMA *cost of funds* fallback in its present form, while attractive in appearing to offer a means of avoiding frustration, is likely to be unworkable in practice, both in the short and in the long-term. Further, if capable of being undertaken, the calculation will also, for reasons we suggest, very likely be loss-making for the bank under a given transaction and produce a rate lower than LIBOR would have produced – creating a strong commercial incentive to minimise such losses in exercising the discretion to select source of funds. As was rightly observed by Baroness Hale (then Deputy President of the Supreme Court) in *Braganza v BP Shipping Ltd*, (Lord Kerr agreeing) (para [18]):

> "Contractual terms in which one party to the contract is given the power to exercise a discretion, or to form an opinion as to relevant facts, are extremely common … *the party who is charged with making decisions which affect the rights of both parties to the contract has a clear conflict of interest.*"

The exercise of a contractual discretion, in circumstances where the holder of it is subject to a conflict of interest and there exists a data/information desert, offers fertile ground for subsequent dispute. ■

Disclaimer: this addendum is not advice and the authors accept no liability for reliance upon any of the facts or matters stated. Financial and legal advice on the issues discussed should be sought in the ordinary way.

1 Eg Clifford Chance LLP https://financialmarketstoolkit.cliffordchance.com/content/micro-facm/en/financial-markets-resources/resources-by-type/thought-leadership-pieces/libor---loan-market-update--november-2019-/_jcr_content/parsys/download/file.res/libor-loan-market-update.pdf

2 Market risk-taking businesses, for example equity and currency trading, aside.

3 In the US, "checking accounts".

4 Interest Cover is typically calculated as the ratio of the borrower's income (rent if a property company) and the interest cost of the loans. A high interest cover implies income that can more easily pay the interest.

5 Lloyds Banking Group, Annual Report and Accounts, 2018, p 39. https://www.lloydsbankinggroup.com/globalassets/documents/investors/2018/2018_lbg_annual_report_v2.pdf

6 These figures have not been adjusted for different variable rates such as LIBOR, Base Rate, etc.

7 This is calculated from the figures at p 194 of Lloyds' 2018 accounts: weighted average effective interest rate paid on bank deposits was 1.39% whereas that paid on customer deposits was 0.53% giving a difference of 0.86% (assuming bank deposits are at LIBOR).

8 The *weighted average* method is referred to in another part of cl 11.4.

Further Reading:

- Facing the end of LIBOR: the financial and legal implications (2019) 11 JIBFL 715.
- Transition away from LIBOR: where are we now? (2019) 8 JIBFL 520.
- LexisPSL: Banking & Finance: Practice note: LIBOR transition.

Feature

KEY POINTS

- The Retail Prices Index (RPI) is not fit for purpose and is no longer an official UK statistic, nonetheless, millions of payments continue to be linked with RPI as the specified index.
- From not later than 2030 RPI will be superseded by the Consumer Prices Index including owner occupiers' housing costs (CPIH).
- It is foreseeable that well before 2030 RPI will be "brought into line" with CPIH by a change in methodology in its calculation. "Alignment" of RPI with CPIH will impact the value of every RPI-indexed contract.
- We consider that to maintain value, an "Extra Spread" of approximately + 0.80% should be added to CPIH.
- The legal analysis is complex and to some extent uncertain, being critically dependent upon the interpretation of specific contractual terms.
- The public consultation by the government and UKSA will launch on Budget Day on 11 March this year and will be open for responses for a period of six weeks, closing on 22 April.[1] It is vital to engage in the consultation and that holders of long-term RPI-indexed products review these.

Authors Paul Marshall, Arif Merali and Hanif Virji

UK inflation indexation and the end of RPI: some financial and legal considerations

The Retail Prices Index is not fit for purpose and is likely to be "replaced" by the Consumer Prices Index including owner occupiers' housing costs (CPIH) by not later than 2030. The prevalence of the adoption of RPI, from index-linked Gilts to pensions, means that any change will be problematic, both legally and financially. The authors discuss various mechanisms for the change and some legal and financial implications.

THE IMPORTANCE OF INFLATION INDICES

The Retail Prices Index (RPI) measures the change in the cost of a representative sample (basket) of retail goods and services calculated using "the *Carli* method"[2] developed in 1764 by the Italian economist Gian Rinaldo Carli.

In recent years, RPI has widely been acknowledged as not conforming to international standards and is no longer suitable for its intended purpose (further below, *Time to abandon RPI in favour of CPIH*). While RPI continues to be published, from 21 March 2017 it has no longer had the status of an official UK statistic. As the official measure of inflation in the UK it has been replaced by the Consumer Prices Index including owner occupiers' housing costs (CPIH).[3] CPIH is calculated by "the *Jevons* method"[4] after the nineteenth century British economist William Stanley Jevons. CPIH[5] became the leading inflation index in UK official inflation statistics from 21 March 2017.

The origins of CPI lie in Europe. The Maastricht Treaty of 1992 required member states to develop a harmonised measure of consumer price inflation. This led to the Harmonised Index on Consumer Prices (HCIP), first published in 2007, that evolved into CPI. (For some important differences see Appendix A.)

While RPI does not conform to international standards for measuring inflation, it continues to be widely used as an inflation index, including:

- for RPI index-linked securities and on RPI index-linked gilts;[6]
- for inflation swaps and other inflation-indexed derivatives where RPI is the contractual index;
- for private sector defined benefit[7] pension schemes;
- for both private sector and social housing rent increases;
- for annual rail fare increases;
- as the baseline for industrial wage negotiation;
- for divorce maintenance calculations;
- for some damages awards/settlements of legal disputes.

Inflation indexation in the UK that adopts RPI requires to be brought into line with international standards, but one measure of inflation cannot simply be substituted for another for the obvious reason that doing so will impact upon value because RPI and CPIH produce different results. However RPI is replaced, questions arise as to the effect of a change and how it is to be calculated so that it does not result in an arbitrary change in the value of contracts/products.

CARLI v JEVONS: VALUE DIFFERENTIAL RPI/CPIH

Chart 1 opposite shows the annual percentage change in each index calculated monthly from the beginning of 2010.

RPI is consistently higher than CPIH over the period.[8] The difference, known as "the Wedge", has been reasonably stable from 2011 onwards.[9]

It can be seen that the Wedge has varied between (effectively) 0.5 and 1.3 percentage points over the period. We calculate

CHART 1: RPI V CPIH

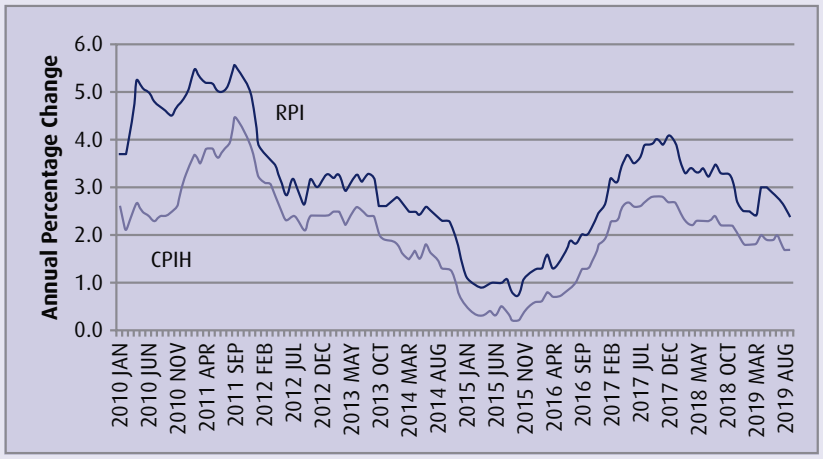
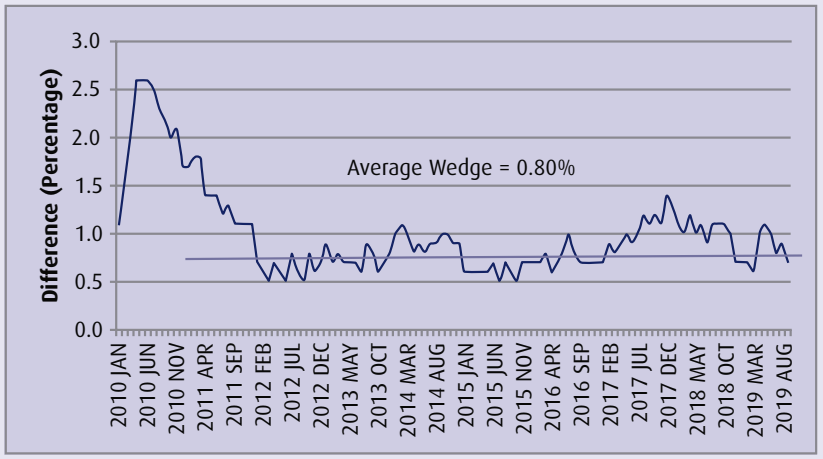


CHART 2: DIFFERENCE BETWEEN RPI AND CPIH



the current average of the Wedge to be approximately 0.8% or 80 basis points.[10] Given that RPI is greater than CPIH, if it is to be replaced, in principle an *Extra Spread* should be added to CPIH to ensure equivalence of value.[11] Using historical statistical analysis of the Wedge, we calculate that:

RPI=CPIH+0.80% (Extra Spread)

The main reason for the difference is the calculation methodologies; the Carli method (RPI) uses an arithmetic mean, whilst the Jevons method (CPIH) uses a geometric mean. This leads to a "formula effect" in which RPI is higher than CPIH usually by just under one percentage point.

The arithmetic mean of a set of figures, A, is equal to the sum of those figures divided by the number of figures. For example, the arithmetic mean of the first 10 even numbers is 11.00, and calculated:

$$A = \frac{(2 + 4 + 6 + 8 + 10 + 12 + 14 + 16 + 18 + 20)}{10} = 11.00$$

The geometric mean of this set of figures, G, is equal to the 10th root of a product of the 10 figures.[12] As an example, the geometric average is the square root of a product of two figures or the cube root of a product of three figures, etc:

$$G = \sqrt[10]{(2 \times 4 \times 6 \times 8 \times 10 \times 12 \times 14 \times 16 \times 18 \times 20)} = 9.06$$

If the prices of, say, clothes rise vary sharply and then come back to where they were, one would expect the inflation index to show no overall change. Jevons would behave as expected whilst Carli would show some inflation even though prices are unchanged (see Appendix B).

We agree that, from a technical perspective, RPI should be abandoned in favour of CPIH.

THE EFFECT OF THE EXTRA SPREAD

Assuming, that RPI and CPIH are equal on a start date, then what is the effect of the Wedge on the two indices after 20 years? Table 1 below illustrates the increase of RPI in excess of CPIH for different assumptions of the Wedge.

In other words, 10 basis points of the Wedge is equivalent to circa 2.3% outperformance of RPI relative to CPIH over a period of 20 years. With a Wedge of 80 basis points, RPI will outperform by 17.1%. It will be apparent that this difference in value is likely to be substantial in long-dated inflation linked assets and liabilities such as index-linked gilts, pensions and swaps (see "Examples" below).

TIME TO ABANDON RPI IN FAVOUR OF CPIH

In 2012, the National Statistician's Consumer Prices Advisory Committee (CPAC) concluded that "the use of the Carli formula was no longer appropriate" because of the weak axiomatic properties of

TABLE 1:

Wedge (basis points)	RPI Outperformance
60	+12.5%
70	+14.8%
80	**+17.1%**
90	+19.4%
100	+21.8%

the Carli method.[13] Following consultation on options for improving RPI, in 2013 the then National Statistician,[14] Jil Matheson, decided to de-classify RPI as a "national statistic".[15] However, it was recommended that RPI should be maintained in its current form so that it could continue to be used for long-term indexation and for index-linked gilts.[16] The main conclusions of a subsequent UK Statistics Authority[17] (UKSA) commissioned review in January 2015[18] were that the ONS should move towards making CPIH the main measure of inflation and that RPI should be considered a "legacy measure" only, with no further changes being made to it. Further, RPI should cease to be used. In January 2018, the Governor of the Bank of England recommended that RPI should be abandoned.[19] In the light of that recommendation, the House of Lords' Economic Affairs Committee launched a review of the use of RPI. The Committee published its report "Measuring Inflation"[20] in January 2019. One of its conclusions was that the UKSA risked failing in its statutory duties by publishing an index that is flawed. The report recommended moving to a single measure of inflation and suggested that the government should stop issuing RPI-linked gilts.

The Committee's report additionally gave rise to an exchange of correspondence between the Chair of the UKSA, the Chancellor of the Exchequer (the Chancellor) and the Chair of the Committee (the Three Letters).

THE THREE LETTERS

The UKSA has a statutory duty to produce and publish RPI. Further, s 21 of the Statistics and Registration Service Act 2007 provides that the UKSA must consult with the Bank of England before making any change to the coverage, or the basic calculation, of RPI. Where proposed changes to RPI are deemed by the Bank of England *material and detrimental* to relevant gilt holders, changes cannot be made without the consent of the Chancellor.[21] Following the House of Lords' review, on 4 March 2019 Sir David Norgrove, the Chair of the UKSA, wrote to the Chancellor:[22]

- recommending that the publication of RPI should cease at a point in the future; and
- recognising that cessation in the publication of RPI would require primary legislation and would give rise to substantial implementation issues that would take time;
- recommending that, in parallel, RPI should be aligned with CPIH to address the shortcomings of RPI. This is to say, the methodology for calculating RPI be changed by bringing the methods used for CPIH into it,[23] – crudely "keep the packaging, change the contents".

On 4 September 2019 the Chancellor responded to both the UKSA[24] and the Committee.[25] He observed that RPI is widely used and ceasing publication of it would be highly disruptive to the economy and public finances. He declined to agree to promote legislation to remove the requirement for the UKSA to publish RPI.

The Chancellor nevertheless recognised the statistical arguments for the proposal to fix RPI by aligning its methodology with CPIH. He noted that there would be significant effects on users of RPI who would need time to prepare for such a change. As a result, he would not consent to any change before February 2025. The government from March to April 2020 will consult publicly on whether the change should happen before 2030, and if so, when between 2025 and 2030. UKSA will consult on technical matters regarding the alignment of RPI with CPIH.

The consultation will launch on Budget Day on 11 March this year. It will be open for responses for a period of six weeks, closing on 22 April. The government and UKSA will respond to the consultation before the Parliamentary summer recess.

SOME LEGAL ISSUES: CPIH AND RPI "ALIGNED" WITH CPIH

For present purposes and in the interests of brevity, where RPI is the contractually specified index for a particular product, three eventualities fall to be considered: (i) that RPI ceases to be published; (ii) that an express contractual discretion is provided to change the index; (iii) that (as contemplated by the UKSA and Chancellor of the Exchequer) a change is effected to the *meaning* of RPI in circumstances where, say, it is brought "into line" with CPIH by a revised methodology. For the purpose of this discussion (i) is not considered further because there is no immediate prospect of it; were it to happen, it would give rise to issues analogous to those consequent on the forthcoming cessation of the publication of LIBOR discussed in *Facing the End of LIBOR*.[26]

Contractual discretion to change index: some considerations

A number of recent decisions have considered the existence of a contractual *discretion* to substitute, and in some instances, a *duty* to consider the substitution of, another index for RPI. Several of the leading decisions are in the context of pension schemes. The reason for this is that since the 1990s statutory requirements have existed for occupational pensions in payment to be increased to take account of inflation and, from 2004, the Pensions Act 1995 required that the annual increase be by reference to the "revaluation percentage", itself being referable to RPI. Until 2010, RPI was used as the measure of the increase in the level of prices under the Social Security Act 1990 and later the Pension Schemes Act 1993. From 2011, the increase in the general level of prices has been determined for *statutory* revaluation purposes by CPI, following an announcement by the Minister of State for Work and Pensions in July 2010.

In *Arcadia Group Ltd v Arcadia Group Pension Trust Ltd*[27] the schemes provided that the maximum pension could be "increased whilst in payment at 3% p.a. compounded or (if greater) in line with RPI". "Retail Price Index" was defined as meaning "the Government's Index of Retail Prices *or any similar index satisfactory for the purposes of HM Revenue and Customs*".[28] Questions that fell to be decided included whether CPI would be "similar" to RPI and "satisfactory" for the purposes of HMRC within the given definition of "Retail Prices Index". One issue was whether the trustees of the pension schemes could choose to adopt CPI *in preference* to RPI or whether, in order to do so, RPI required to be discontinued or replaced. Newey J held that it was open to the

company with the consent of the trustees of the scheme, or the trustees of the scheme, to replace RPI and that it was not necessary for RPI to have been discontinued to do so. In doing so the judge placed reliance upon IR 12 and the "Pensions Schemes Office Manual" that the Inland Revenue formerly published. The 1979 version of IR 12 allowed pension schemes to take account of increases in the cost of living as measured "by the index of retail prices published by the Department of Employment or by any other suitable index agreed for the particular scheme by the Superannuation Office". Later editions of the manual adopted the expression "retail prices index" and, by 2001, "Retail Prices Index", which was defined as "the index of retail prices compiled by the Department of Employment *or any other index for use by a particular scheme by IR SPSS*" (of which the Pensions Scheme Office had become part). Newey J inferred that the draftsman of the schemes would have had in mind the provisions of IR 12 and the "Pension Schemes Office Manual" in preparing the schemes' documents. Because those materials showed that the Inland Revenue would potentially be willing to permit a scheme to adopt an index other than RPI, the schemes' documents could be expected to cater for that circumstance also.

The reason for adverting to Newey J's reliance on the provisions of IR 12 is that precisely that circumstance was relied upon by Sir Geoffrey Vos, Chancellor of the High Court, in his dissenting judgment in *Barnardo's v Buckinghamshire and ors*.[29] where the scheme rule (53) provided that: "Retail Prices Index" "(i) means the general Index of Retail Prices published by the Department of Employment *or any replacement adopted by the Trustees without prejudicing Approval* and (ii) where an amount is to be increased 'in line with the Retail Prices Index' over a period, the increase as a percentage of the original amount will be equal to the percentage increase between the figures in the Retail Prices Index published immediately prior to dates when the period began and ended, with an appropriate restatement of the later figure if the Retail Prices Index has been *replaced* or re-based during the period."[30]

On appeal to the Supreme Court, the court unanimously dismissed the employer's appeal and upheld the majority in the Court of Appeal (Lewison and McFarlane LJJ) holding that the italicised words in: (i) did not confer on the trustees a power to adopt a different index whilst RPI has not been discontinued. Instead the words meant the same as "the RPI or any index that replaces the RPI and is adopted by the trustees". Like the Court of Appeal, the Supreme Court had accepted that the meaning of the wording was ambiguous.[31] However, the Supreme Court, like Warren J at first instance,[32] was particularly influenced by the use of the word "replaced" in the second sentence as well as the grammatical construction used in the phrase "a replacement adopted by the trustees", which the court considered suggested that RPI must first be replaced and that the trustees should adopt the replacement.

In a cogent dissenting judgment that merits reading in full – not least because it highlights the surprising difficulties to which seemingly simple points of contractual construction may give rise, Sir Geoffrey Vos had said:

> "I do, however, find the context … indicating clearly that the draftsman would have been likely to have wanted to provide a meaningful discretion to the Trustees to choose another index other than RPI. Other such indices were known about and available at the time. IR12 contemplated a choice between RPI and other indices, as did the Pension Schemes Office Manual. Moreover, the introduction of a discretion in the Trustees and of the need for the exercise of that discretion not to prejudice Revenue approval points to an intentional change in the effect of the definition from that contained in the 1978 Rules .... It is, I think, far-fetched to think that the drafting changes were made just in case RPI was replaced by more than one index. That was hardly a likely possibility. It is, in my judgment, far more likely that the draftsman using his own drafting style was seeking to follow the suggestion made in IR12 to the effect that the Trustees might wish to choose a replacement index other than RPI and to submit it for approval to the Pension Schemes Office."[33]

In reaching that conclusion, rejected by the Supreme Court, he was adopting an approach informed by considerations very similar to those that influenced the similarly permissive construction adopted by Newey J in *Arcadia*.

Improvements as such, not sufficient reason for substitution

In *Thales UK Ltd v Thales Pension Trustees*[34] the facts were complicated by the requirement of the court to consider two sets of pension scheme rules as a consequence of company mergers. The principal issues considered were:

(1) Whether the provision: "If the Government retail prices index for all items is not published or its compilation is *materially changed*, the Principal Employer, with the agreement of the Trustees, will determine the nearest alternative index to be applied" was engaged by a change in the compilation of RPI that gave effect to a change of a component of RPI from the house price index (HPI) to the House Price Index (UK HPI); and

(2) Whether RPI had been "otherwise altered" under a provision that the normal rate of increases under the scheme was to be the lesser of 5% pa and the amount of the increases, if any, in the Relevant Retail Prices Index at the date of calculation over the Relevant Retail Prices Index 12 months earlier, subject to the *proviso* that: "if the Retail Prices Index is revised … or if that Index is *otherwise altered* …, all subsequent variations in that pension will be on a basis *determined by the Trustees having regard to the alteration made to the Retail Prices Index*".

One of the reasons for these issues arising was that, because the house price element of RPI accounts for more than 10% of the components of RPI by weight, the adoption from 30 June 2008, by the ONS of a newly published house price index (UK HPI) for what was previously the House Prices Index

(HPI) was recognised by the ONS to be a "non-routine" change to the index. Warren J held that under the (CARE) scheme:

> "A change is material, … if it results in the RPI functioning and operating in a way which either does not fulfil its original purpose (to provide a measure of inflation for the typical household) or does so in a way which is materially different from the way in which it did so before the change."[35]

It is important, in the context of the present discussion, that Warren J observed that "an alternative index cannot be adopted simply because it is perceived as a 'better' index"[36] (it being the evidence of one of the experts that RPI was "deeply flawed"). More particularly, the company could not, in its own interests, determine an alternative measure. The judge considered that, in the circumstances, RPI with UK HPI was the nearest alternative index and considered that the company could not reasonably adopt any other index – despite it being contended that CPI was a far "better" measure of inflation. For the second scheme, Warren J held that RPI *had been* "otherwise altered" by the change to HPI, but that the trustees were not free to select, in the exercise of their discretion, an alternative or substitute index.

These decisions shed some light on how the courts approach the question of whether and how substitution for another index may be effected, where there appears to be a discretion to change the index but, critically, there is ambiguity. The decisions are also of importance in suggesting that generally, but, more particularly, in the context of long-term agreements that may affect the interests of those other than original parties, the exercise of contractual construction may tend to linguistic literalism rather than a purposive and contextual analysis – reflecting in the Supreme Court's decision in *Barnado's* the observable swing away from *Rainy Sky SA v Kookmin*[37] to *Arnold v Britton*[38] and more especially *Wood v Capita Insurance Services Ltd*.[39]

Swaps and rent review provisions

Derivative contracts, though regulated, are not subject to the same kind of statutory control as pension schemes. For a typical bilateral inflation swap transaction the confirmation will refer to the index, for example: "Index: GBP Non-revised Retail Price Index (UKRPI)" with a reference to the relevant set of ISDA definitions. The 2008 ISDA Inflation Derivatives Definitions provide that "GBP – Non-revised Retail Price Index" means the "Non-revised Retail Price Index All Items in the United Kingdom or relevant Successor Index, measuring the all items rate of inflation in the United Kingdom expressed as an index and published by the relevant Index Sponsor. The first publication or announcement of a level of such index for a Reference Month shall be final and conclusive and later revisions to the level for such Reference Month will not be used in calculations". Such specification of an index and definition ought not to give rise to the kind of ambiguities seen in the pension cases. "Successor Index" provides no scope for substitution in the absence of UKRPI being superseded. Similarly, rent review clauses, where RPI linked, quite often provided a definitional provision such as "the Index means the Index of Retail Prices published by the Office for National Statistics or any successor ministry or department substituted for it". Here again, there is little scope for ambiguity, the *substitution ex facie* meaning the publisher of the index, not the index itself. A difficult question nonetheless arises as to what happens when the *meaning* of the Retail Price(s) Index (as defined) changes.

Changing meanings: "bringing into line'

An initial point is that RPI itself has evolved over time. After 1914 the government started collecting data on prices, but it was only after 1947 that what was previously the Cost of Living Index was superseded by the Interim Index of Retail Prices – itself replaced by the Index of Retail Prices that later *evolved* into (rather than was replaced by) the Retail Prices Index. Further, as RPI developed, certain categories of the population were excluded, such as pensioners dependent on state benefits, and the composition of the basket, and the relative weightings given to the different goods and services was changed from time to time.

As a matter of principle in the interpretation of contracts in English law, there is a presumption that a contract must be interpreted as at the date when it was made and that words must be given the meaning that they bore at that date (though for a remarkable exception see the very recent decision by the Supreme Court, reversing a unanimous Court of Appeal, in *Sequent Nominees v Hautford Ltd*[40]). Where the meaning has changed, evidence is admissible to prove the original meaning. But where a contract is intended to endure for a long period, that presumption is capable of being rebutted. Where a meaning has changed there is an evidential burden on the party who asserts that it has changed from its original meaning when the contract was made (*meaning* being an issue of fact). There is sometimes a choice to be made between a "static", and therefore fixed, interpretation and giving an expression a "mobile" or "dynamic" meaning. For example, it is generally unexceptionable that a grant of right of way to carriages made in the nineteenth century should extend to motor vehicles in the twentieth. Nevertheless the New Zealand Court of Appeal has said that where there is a choice between a static and mobile interpretation, the result is not to change the scope of the underlying contract[41] and the court must "promote the purposes and values which are expressed or implicit in the wording" and there are limits upon the flexibility afforded: *St Marylebone Property Co. Ltd v Tesco Stores Ltd*.[42]

No doubt it would be unwise in a discussion of this kind to venture anything like a firm view upon what approach to interpretation is likely to be adopted by the court to a long-tenor inflation swap, were the calculation of RPI to be "brought into line" with CPIH, especially given that the approach of the English courts to questions of contractual interpretation appears over time to oscillate between ascertained purpose and linguistic literalism (a subject all of its own). It is nevertheless hard to see how RPI could be "aligned" with CPI without the Jevons method being adopted – as it was with the "RPIJ" (that is to say RPI calculated adopting (substantially) a geometric (Jevons), rather than arithmetic

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(Carli), mean), an index that was published by the Office of National Statistics until March 2017.[43] There are grounds for the view, given the well-known differences both in the original purposes of CPI and RPI and, in particular, the clear present differences in their respective bases of calculation,[44] that bringing RPI "into line" with CPIH should suggest that a static interpretation of RPI be adopted – that is to say, a meaning be attributed to RPI that it would have had at the date of contracting. Were a "static" rather than dynamic interpretation of the meaning of RPI to be adopted, in circumstances where RPI was otherwise aligned with CPIH in methodology and, accordingly, payments reduced (in comparison with RPI apart from alignment) for reasons that we have discussed, this would suggest that the receiving party should be entitled to payment of the difference between *contractual* RPI and RPI as aligned with CPIH (calculated by Jevons etc), that is to say, the "Extra Spread" to which we have referred elsewhere in this discussion. Should such a construction be likely, it suggests a powerful argument against RPI being brought "into line" with CPI because of the legal risk to which alignment would give rise. A mobile or dynamic interpretation would avoid the requirement for Extra Spread but would result in a significant loss to the receiving party.

POTENTIAL OUTCOMES OF THE CONSULTATION

Ahead of the consultation, it is difficult to have a strong view of its outcome. However, since the replacement of RPI is a very sensitive and contentious issue, we think it unlikely that there will be any change before 2030. The UKSA does not require approval from the Chancellor for a change implemented after 2030, so we think that it is likely then to push ahead with the alignment of RPI to CPIH. This leaves three possible outcomes:

(1) That legislation is introduced for the abolition of RPI. We think that this outcome is unlikely, given the indication from the Chancellor (and see a similar reluctance to legislate in the face of the forthcoming cessation of the publication of LIBOR).
(2) The UKSA continues to publish what will continue to be called "RPI" but calculated using a methodology that is similar to CPIH. This appears to be the likely outcome if the Three Letters are taken at their face value. However, this will mean that there will be winners and losers from the difference in value, that we consider in more detail below, and there are potentially significant legal implications (above).
(3) RPI becomes calculated effectively on the basis adopted for CPIH plus Extra Spread in the order of 0.80%. In our view this will be the "fairest" outcome while allowing the UKSA to comply with its statutory duty to publish RPI.[45]

WINNERS AND LOSERS

Were RPI to be replaced with CPIH from 2030 without compensation, ie an Extra Spread of zero, then there will be winners and losers. Who are they? Put simply, the losers are those who benefit from high inflation (in market parlance "receivers of RPI"), among these are holders of index-linked gilts,[46] pensioners and inflation-swap counterparties who receive inflation and pay a fixed return. The winners will be those who benefit from low inflation (also known as "payers of RPI"), for example, pension funds (because the liabilities will be lower) and inflation swap counterparties who pay inflation and receive a fixed return. But, in practice, the situation is much more complex than this.

Pension funds are the biggest holders of index-linked gilts to hedge inflation-linked liabilities. Most pension funds are under-hedged, ie their liabilities (pension payments) exceed their assets. So, although they may lose on their assets (index-linked gilt holdings, because the coupons will be lower given CPIH is less than RPI), this will be more than offset by gains on their liabilities (uplift of pension payments will be at a lower rate – CPIH rather than RPI). A detailed analysis of any pension schemes exposure in both its assets and liabilities should be made ahead of the consultation.

Example 1: Holder of 30-year index-linked gilt

We calculate that on a change from RPI to CPIH (without an Extra Spread) in 2030 the price of the generic 30-year index-linked gilt[47] would fall by almost 24%. In other words, a holder of £100m of the gilt would lose approximately £24m pounds. This loss would occur immediately on the announcement that CPIH is to replace RPI, that is to say, the market prices would incorporate the information immediately and not in 2030. We have assumed a Wedge of 80 basis points in conducting the calculation.

Example 2: Buyer of 30-year zero coupon inflation swap

A zero-coupon inflation swap is a derivative under which the buyer receives the realised inflation over the period of the swap, say, 30 years. The seller receives a fixed rate. For example, the fixed rate might be, say, 2% per annum. If the realised inflation is greater than 2% per annum over 30 years than the seller pays the buyer the difference. Conversely, if it is less than the fixed rate then the buyer pays the seller. The actual payments are governed by a formula explained at Appendix C. If CPIH replaces RPI without an Extra Spread, the buyer of a zero-coupon inflation swap is at a disadvantage because the realised inflation will be lower over the period from the date of change, say 2030, until the maturity date of the swap.

We calculate that a buyer of a £100m 30-year zero coupon inflation swap would incur a loss of approximately £26.6m pounds (or 26.6% of the notional value of the swap). Once again, we have assumed a Wedge of 80 basis points.

MARKET REACTIONS AND IMPLICATIONS

There were significant moves in the market following the publication of the Three Letters (on 4 September 2019). The price of the generic 30-year index-linked gilts fell by almost 12%. Inflation swap prices also moved substantially. However, these moves largely reversed themselves in the days after the announcement. Nonetheless, depending on the outcome of the consultation and the way in which it is implemented, there remains considerable uncertainty as to the

Feature

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fair value of long-dated linkers and inflation swaps.

CONCLUSION

It is inevitable that RPI, as now calculated, will cease to be published. Bringing RPI into line with CPIH by altering the methodology in calculation will result in a loss to receiving parties and a corresponding gain to paying parties. In the absence of legislation, any such change will raise the issue of what "RPI" in any given contract means. A "static" contractual interpretation would suggest that, in circumstances where the basis upon which RPI is calculated has changed fundamentally from its meaning at the date of contracting (from Carli to Jevons etc), payment calculated on a changed basis would require payment of an increment of + 0.80% to reflect what otherwise would be a loss to the receiving party. Adoption of a "mobile" or dynamic meaning of "RPI", so that it means RPI *as calculated from time to time*, will result in winners and losers of the kind that we have discussed. Given the nature of the discussions about replacement of RPI and the difficulties to which it gives rise, such an outcome would on the face of it be unfair and would resonate with the following exchange, the meaning of which has itself been judicially considered at the highest level:[48]

> *"'I don't know what you mean by "glory"',* **Alice said. Humpty Dumpty smiled contemptuously.** *'Of course you don't – till I tell you. I meant "there's a nice knock-down argument for you!"' 'But "glory" doesn't mean "a nice knock-down argument"'* **Alice objected.** *'When* **I** *use a word',* **Humpty Dumpty said, in rather a scornful tone,** *'it means just what I choose it to mean – neither more nor less'."*[49]

The issue may have some political, not merely legal, implications. ■

APPENDIX A

Differences between RPI and CPI/CPIH

Key differences between RPI and CPI include:

- basket components: The basket of goods and services used in each calculation are different but the main difference is that council tax and owner-occupied housing costs are not included in CPI; they are included in CPIH.
- population coverage:
  - RPI and RPIX exclude the highest income houses and pensioners.
  - CPI and CPIH include these subsets as well as counting institutional households and foreign visitors.
- aggregation methodology:
  - CPI and CPIH calculate the average price increase as a percentage for a basket of 700 different goods and services. Around the middle of each month, it collects information on prices of these commodities from 120,000 different retailing outlets.
  - RPI uses the Living Costs and Food Survey.

The biggest difference is between the arithmetic (RPI) and geometric (CPI) means that the indices adopt.

APPENDIX B

Carli Method used to calculate RPI

In this formula P_C is the arithmetic mean of the relative price between a period t and a base period 0.

$$P_C = \frac{1}{n}\sum_{i=1}^{n}(p_{t,i}/p_{0,i})$$

where n is the number of items, p_t is the price at time t and p_0 is the price at the base period (of the i^{th} item in the basket). (The upper case "Σ" (sigma) in the formula is the mathematical shorthand for the addition of many terms).

The Carli method tends to overstate inflation, especially when the prices of goods rise and then fall.

Example: In January 2017, there are two dresses which cost £20. In January 2018, the price of dress 1 rises to £30 whilst the price of dress 2 remains at £20. In January 2019, the price of dress 1 drops back to £20 whilst the price of dress 2 remains at £20. In this example *n* is 2 as there are only two items.

Under the Carli method, the average price change from January 2017 to January 2018 would be 25%:

$$P_C = \left(\frac{1}{2}\right) x \left(\left(\frac{20}{20}\right) + \left(\frac{30}{20}\right)\right) = \frac{1}{2} x\ 2.5 = 1.25 = +25.0\%$$

From January 2018 to January 2019, the average price change would be a 16.5% reduction:

$$P_C = \left(\frac{1}{2}\right) x \left(\left(\frac{20}{20}\right) + \left(\frac{20}{30}\right)\right) = \frac{1}{2} x\ 1.67 = 0.835 = -16.5\%$$

When these price change ratios are multiplied together, the increase in price recorded by the Carli index from January 2017 to January 2019 is 4.4% (1.25 x 0.835=1.044), even though both shirts cost £20 in January 2017 and January 2019. One would expect the change to be zero.

Jevons Method used to calculate CPI

In this formula P_J is the geometric mean of the relative price between a period t and a base period 0.

$$P_J = \sqrt[n]{\left(\prod_{i=1}^{n}(p_{t,i}/(p_{0,i})\right)}$$

where *n* is the number of items, p_t is the price at time t and p_0 is the price at the base period (of the i^{th} item in the basket). (The Π (upper case "pi") in the formula is mathematical shorthand for the multiplication of many terms).

Using the two dress example above, the Jevons method returns a price change of zero from January 2017 to January 2019, as expected. The price change from January 2017 to January 2018 would have been:

$$P_J = \sqrt{\left(\frac{20}{20}\right) x \left(\frac{30}{20}\right)} = 1.225 = +22.5\%$$

From January 2018 to January 2019, the average price change would be a 18.4% reduction:

$$P_J = \sqrt{\left(\frac{20}{20}\right) x \left(\frac{20}{30}\right)} = 0.816 = -18.4\%$$

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The cumulative change is zero (1.225 x 0.816 = 1).

APPENDIX C

A Zero-Coupon Inflation Swap (ZCIS) is a common inflation derivative. Unlike interest rate swaps where there are periodic cash flows during the life of the swap, with a ZCIS there is a single exchange of cash on its maturity date.

The inflation buyer receives an amount linked to the actual change in inflation from the transaction date and the maturity date. The inflation seller receives a fixed rate. The amounts so calculated are netted and one party pays the other the net amount on the maturity of the ZCIS.

$$\text{Inflation buyer receives} = \text{Notional} \times \left(\frac{RPI_{maturity}}{RPI_{start}} - 1\right)$$

$$\text{Inflation buyer pays} = \text{Notional} \times ((1 + R)^T - 1)$$

where R is the fixed inflation rate agreed at inception between the parties and T is the term of the swap in years. ■

1 https://www.gov.uk/government/publications/a-letter-from-sajid-javid-to-lord-forsyth-on-the-launch-date-of-the-upcoming-joint-consultation-on-the-retail-prices-index.
2 See Appendix B.
3 https://www.ons.gov.uk/economy/inflationandpriceindices/articles/cpihcompendium/2016-10-13.
4 See Appendix B.
5 CPIH also includes council tax, a local authority tax.
6 Gilts are bonds issued by the UK government. Index-linked gilts or "linkers" differ from conventional gilts in that the coupon and principal payments are adjusted in line with inflation as measured by RPI.
7 A "defined benefit" pension plan is one in which an employer/sponsor promises a specified payment or lump sum on retirement often based on salary, age and tenure of service – in contrast to a "defined contribution" pension plan in which employers and employees contribute and invest funds over time.
8 RPI has been noticeably lower than CPIH during periods of negative inflation or deflation.
9 There was a distortion in 2010 because of how clothing was accounted for.
10 We exclude the effects of the treatment of clothing in the calculations. The average between 2005 and 2010 is 50 basis points (Peter Levell, J R Statistical Society, February 2015, Vol. 178, pp 303-336.)
11 The same principle was adopted by the authors when considering the change from GBP LIBOR to SONIA: Virji, Merali and Marshall, *Facing the end of LIBOR: the financial and legal implications*, (2019) 11 JIBFL 715.
12 The two averages can be conveniently calculated in Microsoft Excel using the functions *AVERAGE* for the arithmetic mean and *GEOMEAN* for the geometric mean.
13 The weak property is the fact that after a price bounce and a subsequent full return to original prices, the Carli method shows positive aggregate inflation.
14 The National Statistician is the chief executive of the UK Statistics Authority.
15 https://webarchive.nationalarchives.gov.uk/20160108030655/http://www.ons.gov.uk/ons/rel/mro/news-release/rpirecommendations/rpinewsrelease.html.
16 322 out of 406 respondents to the consultation preferred no change citing concerns about the effect in index-linked gilts and pensions.
17 The UKSA is a non-ministerial government department responsible for oversight of the ONS, the code of practice of official statistics and "National Statistics".
18 https://www.statisticsauthority.gov.uk/archive/reports---correspondence/current-reviews/uk-consumer-price-statistics---a-review.pdf.
19 http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/economic-affairs-committee/governor-of-the-bank-of-england-2017/oral/77776.html.
20 https://publications.parliament.uk/pa/ld201719/ldselect/ldeconaf/246/246.pdf.
21 The last old-style index-linked gilt that contains a contractual term to this effect matures on 22 July 2030.
22 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829170/20190304_SirDavidNorgrove_to_Chancellor__RPI_.pdf.
23 Press release UKSI https://www.statisticsauthority.gov.uk/news/uk-statistics-authority-statement-on-the-future-of-the-rpi/.
24 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829168/Letter_Cx_Norgrove__4_sept_2019_.pdf.
25 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/829169/Letter_Cx_Forsyth__4_sept_2019_.pdf.
26 (2019) 11 JIBFL 570.
27 [2014] EWHC (Ch) 2683.
28 Until 2006 occupational schemes were required to be *approved* by the Inland Revenue. From 2006 under the Finance Act 2004 schemes merely require to be *registered* and no longer require approval and are not subject to detailed scrutiny – see below and the *Barnado's* decision.
29 [2016] EWCA Civ 1064 (Court of Appeal), [2018] UKSC 55 (Supreme Court).
30 Emphasis supplied.
31 Lord Hodge, para [20].
32 Paragraph [32].
33 Paragraphs [88], [89].
34 [2017] EWHC (Ch) 666.
35 Paragraph [84].
36 Paragraph [97].
37 [2011] UKSC 50.
38 [2015] UKSC 36.
39 [2017] UKSC 24.
40 [2019] UKSC 47 (31 October 2019) in particular see the dissenting judgment, and orthodox view, of Lady Arden.
41 *Big River Paradise Ltd v Congreve* [2008] NZCA 78.
42 [1988] 2 EGLR 40, Hoffmann J.
43 As noted by Lewison LJ in *Barnardo's v Buckinghamshire and ors*. [2016] EWCA Civ 1064 at para [20].
44 Warren J in *Thales* expressed his view that the arithmetic (Carli) and geometric (Jevons) means were the single most important differences: para [29(vi)].
45 See the letter from the Chancellor of the Exchequer dated 4 September 2019 referred to above.
46 When inflation falls, prices of index-linked securities fall too so that buyers or holders incur a loss.
47 The Index Linked Gilt maturing in 2047 is the generic 30-year linker.
48 *Investors Compensation Scheme v West Bromwich Building Society* [1998] 1 WLR 896 (House of Lords), Lord Hoffmann, disagreeing with Leggatt LJ's interpretation.
49 *Through the Looking Glass*, Lewis Carol.