

21 August 2020

RPI Consultation Team HM Treasury 1 House Guards Road London SW1A 2HQ

By Email to: <u>RPIConsultation@hmtreasury.gov.uk</u>

Dear RPI Consultation Team,

CFA UK Response to the HMT & UKSA Joint Consultation on the Reform to Retail Prices Methodology

The CFA Society of the UK (CFA UK)¹ is pleased to respond to the above joint consultation paper ("JCP") on RPI reform from Her Majesty's Treasury ("HMT") and the UK Statistics Agency ("UKSA").

You will be aware from our letter of 6th March to the Rt. Hon. Rishi Sunak², Chancellor of the Exchequer, that this matter is of significant interest to our members. We are pleased that the JCP does extend to cover the broader topics of market practice and market impact which were our greatest concern. Nevertheless we have sought to answer all of the eight questions in the consultation.

Executive Summary:

CFA UK recognises and agrees with the consensus which has formed to support the UKSA's view that CPIH would be a more robust method of calculating inflation than RPI. CFA UK would support a transition from the existing calculation of RPI to one referencing CPIH if it were implemented without market disruption or an impairment to existing RPI asset values.

CFA UK would point to the recent LIBOR-SONIA fall-back mechanism utilising a historically referenced spread, as a good precedent for structuring such a transition.

Existing IL gilt securities extend out to 2068 and CFA UK estimates that an unadjusted transition from RPI to CPIH would impair the intrinsic value of securities, increasing with duration, by up to c.35% for the longest duration bonds.

The negative impact of an unadjusted change would also spread to many other markets which make extensive use of contracts based on RPI.

¹ For further details on CFA UK and our global umbrella organisation CFA institute please see Appendix I

² For the text of the full letter, please see Appendix III



UK pension funds and UK pensioners and annuitants would be most impacted by an unadjusted switch from RPI to CPIH. Pension funds and individual pensioners would both be negatively impacted in different ways, depending on their precise circumstances.

Other RPI stakeholders include regulated utilities; retail holders of national savings certificates; investors owning billions of pounds of RPI-linked derivatives and assets ranging from real estate leases, ground rents, student loan assets, corporate bonds to infrastructure loans and bonds. We note that a shift to CPI is already underway for National Certificates³, but that crucially no existing contract is being amended and that CPI will only apply to new certificates issued. We note also that a shift to CPIH is also underway for National Grid⁴ and how in section 3.6 (p32) OFGEM seeks to establish an RPI-CPIH spread for the maturities 2022-2026 of c.80bp.

Whilst contractual payments arising under the above assets are documented in standard contracts, wording varies by asset type and within asset type may have been individually negotiated. The documentation is far from uniform in its provision for the change in calculation methodology of the RPI index, or its replacement with a substitute index. CFA UK therefore believes that an unadjusted switch from RPI to CPI may create the conditions for widespread legal disputes between contractual buyers and sellers of RPI assets, including index-linked gilts, as well as the disruption of many RPI-linked asset markets.

CFA UK advises strongly that an unadjusted switch from RPI to CPIH should be avoided.

Questions:

1. Do you agree that this proposed approach is statistically rigorous?

We have not consulted our members on this topic; however, the clear (but not unanimous) majority of the working group are willing to accept that CPIH, based on a geometric averaging method, is more consistent with practice in other leading countries and probably a more robust calculation and should therefore form the basis of the UK's most widely used calculation for inflation.

However, those members of our working group that support a move away from the arithmetic RPI calculation still feel it is essential to recognise that the market does not look to RPI so much as the leading indicator of inflation, but rather as a well-understood index that was the contractual basis of many financial agreements. Furthermore, all members of the group were unanimous in the view that any reform had to recognise and cater for existing contractual commitments and ensure RPI-linked markets remained orderly.

Our working group is therefore in principle happy to support a well-implemented transition to a CPIH referenced calculation, but if, and only if, it is one that keeps all RPI-based markets orderly and ensures in principle that existing RPI-based assets are worth as much after the change as they were before it (i.e. they are 'grandfathered').

³ This change to inflation-linked National savings Certificates only affects renewals and not outstanding contracts (<u>https://www.nsandi.com/index-linked-savings-certificates</u>)

⁴ This switch to CPIH from RPI affects the assets, cost of debt and cost of equity calculations for National Grid and should therefore prove neutral for the company

⁽https://www.ofgem.gov.uk/system/files/docs/2020/07/draft determinations - finance.pdf)



With this in mind, CFA UK would urge the UK government to consider implementing the transition by finding a way to grandfather existing RPI contracts, such that they have a spread to CPIH. The working party would be comfortable if the spread is determined along similar lines to the recent LIBOR-SONIA transition's fallback mechanism; already the UK government has nearly 10 years of data to evidence that RPI has historically exceeded CPIH by c.1%⁵. By the potential implementation dates of 2025 or 2030 this will be 15 or 20 years of data. The working party also notes that the OFGEM's draft determination for National Grid shows how adjusted forward curves for RPI and CPIH can be calculated based on current market prices to determine a fair spread. If, at the point when it ceased to calculate RPI, the UK government were to announce that going forward, for the purpose of legacy contracts, RPI would equal CPIH plus a spread-differential (based on a 15-20 year historical average between RPI and CPIH or the RPI and CPIH forward curves at the time), that should allow for all existing RPI-based contracts to continue. This would avoid both significant losses for holders of RPI assets and the consequential widespread market disruption and legal disputes.

2. What will be the impact on the interests of holders of 'relevant' index-linked gilts (i.e. 2½% IL 2020, 2½% IL 2024 and 4 1/8% IL 2030) of addressing the shortcomings of the RPI in a) 2025 b) 2030 or c) any year in between?

In the absence of any provision to grandfather existing RPI assets and ignoring the impact of the suggested tender offer by the UK government for the 4 1/8% Il 2030 gilt or the possibility of legal action from those holders, we estimate a straight transition from an RPI calculation methodology to a CPIH based index should:

- In respect of the interest of holders of the 2.5% IL 2020 and the 2.5% 2024: (in all three scenarios) have no impact, as both these bonds will have matured;
- In respect of the interests of holders of the 4.125% IL 2030, and if RPI was replaced with CPIH with no adjusting mechanism:
 - a) If the change occurred in 2025, it would negatively impact holders in two ways:
 - First, it would impair the bond's intrinsic / fundamental value, based on a discounted valuation of its future cash-flows, by c.4% in valuation⁶. This impairment would be expected to be reflected in a day-1 fall of the bond's market price, either fully or partially depending on (i) the degree to which this change had been anticipated in the market already and (ii) the extent of other market influences on the day;
 - Second, the holder would lose an estimated 1% of income on its holding for the next 4 years. This is cash-flow which the holder could have used to re-invest or to meet liabilities as they fell due.

⁵ CFA UK note that mathematically, an arithmetic average on the same inflation data as a geometric average will be still higher than this. CFA UK notes also that, whilst the gap between RPI and CPIH has been relatively stable over the last 10 years, it may be sensitive to a rise in absolute inflation levels should that occur in the future

⁶ Our illustrative calculations, which assume a discount rate of 1% and CPIH and RPI inputs of 2% and 3% respectively) are attached as Appendix II



- b) If the change occurred in 2030, it would have no impact, even if it occurred before the bond's maturity date of 22 July, due to the fact that the final January and July coupons will have been set already in 2029;
- c) If the change occurred between 2025 and 2030, it would negatively impact holders in two ways as explained in our answer to 2a) above:
 - First, it would impair the bond's intrinsic / fundamental value, based on a discounted valuation of its future cash-flows. The amount of the impairment would fall in a parabolic fashion from c.4% in valuation in 2025 down to zero in 2030. Again, we have assumed a 1% discount rate and inputs of 2% and 3% for CPIH and RPI respectively in this calculation;
 - Second, the holder would lose an estimated 1% of income on its holding for each year remaining of the bond. This is cash-flow which the holder could have used to re-invest or to meet liabilities as they fell due.

3. What will be the impact on the interests of holders of all other index-linked gilts of addressing the shortcomings of the RPI in a) 2025 b) 2030 or c) any year in between?

As noted in our letter of 6th March, simply replacing RPI with CPIH (without any grandfathering) would deprive holders of IL gilts of c.1% per annum of coupon and capital accretion <u>compounded</u> for each year in the remaining life of the asset. This estimate is based on the fact that RPI has exceeded CPIH by c.1% on average in the period of their co-existence since 2010. It is also evidenced by the fact that the real yield on the UK index-linked curve is noticeably lower than the real yield on IL bonds issued by other governments using an inflation measure more akin to CPIH. A materially higher level of RPI can also be observed in forward curve calculations such as that performed by OFGEM in its draft determination for National Grid.

As set out in our answer to question 2c) above, the longer the remaining life of the relevant RPI asset at the point of transition, the greater the impact the transition will have on the asset's price.

The IL gilt market has maturities out almost to 50 years (the longest is the 48-year, $\pounds 12.6$ bn 0.125% 2068). Consistent with our calculation in question 2 above we calculate⁷ the negative impact on this bond would be a value erosion of c.31%. If a transition without grandfathering were to occur in 2030 these losses rise progressively in a parabolic fashion to c.34% if it occurred in 2025.

4. What will be the impact on the index-linked gilt market or those dependent on it of addressing the shortcomings of the RPI in a) 2025 b) 2030 or c) any year in between?

The impact of a straight transition from RPI to CPIH (without any grandfathering) in any year would be for a profound drop in IL gilt prices across the curve with progressively steeper declines for the longer and ultra-long maturities in line with a yield reduction of 1% p.a.

⁷ Our illustrative calculations, which assume a discount rate of 1% and CPIH and RPI inputs of 2% and 3% respectively) are attached as Appendix II



UK pension funds are the main stakeholder investors in the IL gilt market. They have been actively encouraged to reduce risk by purchasing ultra-long-dated IL bonds to match their liabilities and their asset values will be most profoundly impacted if there is no grandfathering.

Many pension schemes have responsibly managed costs in recent years by switching their pension benefits to increase with a lower CPI (instead of RPI) rate of return. These CPI-linked liabilities will not change due to the proposed change to RPI, but the RPI-linked assets will drop, in many cases significantly. In turn this will impact their funding levels and cause calls for increased company contributions and/or put member benefits at risk.

Where the pension scheme funding level is more resilient to this change, because both the pensions promised and the assets remain RPI- linked, both would fall in value due to this change and the losses would simply be passed straight on to the pensioners to bear through lower future pensions.

As referenced in our letter of 6th March, in round numbers, the hit to UK defined benefit pensions could be as much as 6% of their c. £1.6 trillion assets – i.e. c. £100bn. A more recent estimate taking into account price movements in IL gilts since the government's announcement of the coronavirus related fiscal and monetary stimulus has put this at £120bn⁸

In terms of the knock-on impact of this on individual pensioners, this will vary:

- Many investors own IL gilts in their DC pensions and they will suffer the same asset price falls. In the case of DC pensioners, they will see this income lost and value wiped permanently from their pension pots;
- For pensioners in DB schemes, they will see their scheme possibly move into a funding deficit or the existing deficit grow. They will be looking to their corporate sponsor to make good the deficit created over time or, in more extreme cases, the scheme may have to look to the Pension Protection Fund and in those circumstances individual pensioners could also lose out;
- For those with pensions in payments, they may have bought RPI linked annuities to provide them with good growth of their income in retirement – in simple terms they will have paid for an annual growth rate of, say, 3% and yet, if this transition is not implemented carefully, despite having earlier paid for 3% annual growth (RPI) they will only get 2% annual growth (CPIH);
- We note that pensioners who are in receipt of RPI-linked annuity payments are unable to sell their annuity holding when an annuity is in payment. Consequently, annuity holders will be unable to respond when they learn that the value of their annuity and future pensions has been detrimentally affected by the switch from RPI to CPIH. It is possible that some annuitants may claim that an annuity was mis-sold to them if this risk was not brought to their attention at the point of purchase;
- UK defined benefit pensioners now drawing on their final salary pensions currently see their pension currently growing by RPI (usually between a cap and a floor); the change to CPIH could reduce the aggregate value of their lifetime pension payments by c.10-15% depending on their age at the time of the change and their longevity. Many purchasers of annuities will face the same issue.

⁸ Insight Investments (<u>https://www.pensionsage.com/pa/RPI-CPIH-consultation-extended-until-August-2020.php</u>)



5. What other impacts might the proposed changes to address the shortcomings of the RPI have in areas or contracts where the RPI is used?

This question is far harder to answer with precision than the previous questions. There are many facts that are not fully known.

We do know that significant nominal amounts of RPI-referenced assets exist in many different and sizable markets besides gilts. Many of these assets are owned outside of the UK. Asset classes which we are aware of include:

- UK Infra-structure and PFI loans and bonds
- RPI-linked swaps and other derivatives
- Corporate bonds and private placements issued by utilities e.g. Network Rail and Severn Trent
- Real estate leases and ground rent contracts
- Holders of student loan assets

We do not know the nominal amount of RPI-referenced assets held in this form, but they are each measurable in 'billions' not 'millions' of pounds.

We also do not know the documentation language used in all contracts to deal with an event such as a transition away from RPI. Crucially, we know that the language varies both across and within asset type. This means that it is conceivable that some owners of an RPI-hedge, in the form or an RPI-asset and an RPI-liability, will find themselves no longer properly hedged. Some clauses, such as the Network Rail corporate bond referenced in our letter of 6th March, bestows on the holder the requirement for the issuer to make good any shortfall as a result of an index change; other clauses are more vague and reference a right to arbitration; it is possible that other documents are completely silent on the point (many existing contracts will date back to the 1980s when RPI was first published and may not conceive of this ceasing).

Thus, we are concerned that a straight switch from RPI to CPIH (without 'grandfathering') could lead to wide-scale disruption in many markets besides gilts. Private contracts may be relatively easily re-negotiated (though we note on this issue the interests of parties will probably be diametrically opposed to one-another), but market-based contracts could become volatile and a matter attracting media scrutiny.

6. Are there any other issues relevant to the proposal the Authority is minded to make of which the Authority or the Chancellor ought to be aware?

As an issuer, the UK Government will of course wish to set the highest standards of behaviour in markets, acting with fairness and transparency with investors. Whilst the UK Government has the power to unilaterally impose a solution onto the index linked gilt market, such an action could have damaging consequences for its future status as an issuer in world markets if it was seen to be acting to unilaterally reduce its existing contractual debt payments. We would be concerned if such a move then attracted legal action against the Government. Investors have bought IL gilts in the past at prices based on the referencing to RPI and not CPIH or a vague, undefined concept of 'UK inflation'.



CFA UK would also note that whilst CPIH will lead to a lower headline inflation rate it does not follow that the UK government will be able to borrow at a lower cost in index-linked format going forward. Major institutional investors in the index-linked market purchase index-linked gilts to match liabilities and are likely to pay less / demand higher coupons for the same nominal index-linked gilt investment in order to achieve this.

7. Which lower level or supplementary RPI indices are currently used, and what are they used for?

We note that one-person and two-person pensioner RPI are helpful sub-indices when designing new DB and DC pension schemes. This is helpful to target the newly formed sustainable retirement living standards for pensioners

(https://www.retirementlivingstandards.org.uk/) given that their inflation baskets are so different to the average person. Given that the UK basic state pension remains one of the lowest amongst developed nations despite improvement in recent years, and that it is becoming less affordable, private sector pension schemes and investment products will need a reliable pensioner inflation measure to help redress this need going forwards.

8. What guidance would users of lower level or supplementary RPI indices find most useful for the ONS to provide?

We would welcome guidance as to what indices will more accurately reflect pensioner price inflation going forward. As both RPI and CPIH have high basket weightings for both housing (one-third) and recreation/leisure they do not reflect the spending pattern of a typical pensioner which either owns their own home outright or pays no rent and who also 'goes out' less than younger citizens.

Yours sincerely,

Will Goodhart, Chief Executive CFA Society of the UK

Andrew Burton Professionalism Adviser CFA Society of the UK



With thanks to contributions from:

Natalie Winterfrost, FIA CFA Jean-Pierre Charmaille, CFA Paul Evans, CFA Bill Harer Alistair Jones

and for overview from the CFA UK Pensions Expert Panel and the CFA UK Professionalism Steering Committee



Appendix I: About CFA UK & the CFA Institute

CFA UK: serves nearly 12,000 leading members of the UK investment profession. Many of our members work with pension funds, either managing investment portfolios, advising on investments or as an in house employee responsible for pension investment oversight.

- The mission of CFA UK is to build a better investment profession and to do this through the promotion of the highest standards of ethics, education and professional excellence in order to serve society's best interests.
- Founded in 1955, CFA UK is one of the largest member societies of CFA Institute (see below) and provides continuing education, advocacy, information and career support on behalf of its members.
- Most CFA UK members have earned the Chartered Financial Analyst® (CFA®) designation, or are candidates registered in CFA Institute's CFA Program. Both members and candidates attest to adhere to CFA Institute's Code of Ethics and Standards of Professional Conduct.

CFA Institute: is the global association for investment professionals that sets the standard for professional excellence and credentials.

- The organization is a champion of ethical behavior in investment markets and a respected source of knowledge in the global financial community. Our aim is to create an environment where investors' interests come first, markets function at their best, and economies grow.
- It awards the Chartered Financial Analyst[®] (CFA), and Certificate in Investment Performance Measurement[®] (CIPM) designations worldwide; publishes research; conducts professional development programs; and sets voluntary, ethics-based professional and performance-reporting standards for the investment industry.
- CFA Institute has members in 162 markets, of which more than 170,000 hold the Chartered Financial Analyst[®] (CFA) designation. CFA Institute has nine offices worldwide and there are 158 local member societies.
- For more information, visit <u>www.cfainstitute.org</u> or follow us on Twitter at @CFAInstitute and on Facebook.com/CFAInstitute.



Appendix II:

NPV Calculations of Impact of Switch from RPI to CPIH with No Adjusting Mechanism on the Valuation of the 4.25% IL 2030 Gilt in a) 2030 and b) 2025

A). NO CHANGE ASSU	MED/RPI SWI	ГСН ТО СРІН	IN 2030				B). RPI SWITCH TO CPIH IN 2	2025						
Gilt Coupon	4.125%		ASSUMPTIC	N			Gilt Coupon	4.125%		ASSUMPTIO	N			
Maturity 2030			INPUT				Maturity	2030		INPUT				
RPI growth rate	PI growth rate 3.0% Par		Par on 28h.	ar on 28h July 2020			RPI growth rate to 2024	3.0%		Par on 28h July 2020				
CPIH growth rate	N/A						CPIH growth rate from 2025	2.0%						
Date of change	2030						Date of change	2025						
Discount rate	1.00%						Discount rate	1.00%						
Nominal	£ 100.00						Nominal	£ 100.00						
Year	Accreted Par	Indexation	Cash-Flows	Discount	NPV		Year	Accreted Par	Indexation	Cash-Flows	Discount	NPV		
2020	215.40%	3.00%	£ 8.89	1.00	£ 8.89		2020	215.40%	3.00%	£ 8.89	1.00	£	8.89	
2021	221.86%	3.00%	£ 8.89	0.99	£ 8.80		2021	221.86%	3.00%	£ 8.89	0.99	£	8.80	
2022	228.51%	3.00%	£ 8.89	0.98	£ 8.71		2022	228.51%	3.00%	£ 8.89	0.98	£	8.71	
2023	235.37%	3.00%	£ 8.89	0.97	£ 8.62		2023	235.37%	3.00%	£ 8.89	0.97	£	8.62	
2024	242.43%	3.00%	£ 8.89	0.96	£ 8.54		2024	242.43%	3.00%	£ 8.89	0.96	£	8.54	
2025	249.70%	3.00%	£ 8.89	0.95	£ 8.45		2025	247.28%	2.00%	£ 8.89	0.95	£	8.45	
2026	257.19%	3.00%	£ 8.89	0.94	£ 8.37		2026	252.22%	2.00%	£ 8.89	0.94	£	8.37	
2027	264.91%	3.00%	£ 8.89	0.93	£ 8.29		2027	257.27%	2.00%	£ 8.89	0.93	£	8.29	
2028	272.86%	3.00%	£ 8.89	0.92	£ 8.21		2028	262.41%	2.00%	£ 8.89	0.92	£	8.21	
2029	281.04%	3.00%	£ 8.89	0.91	£ 8.12		2029	267.66%	2.00%	£ 8.89	0.91	£	8.12	
2030	289.47%	3.00%	£ 298.36	0.91	£ 270.10		2030	273.02%	2.00%	£ 281.90	0.91	£ 25	5.20	
					£ 355.10	1						£ 34	0.20	
DIFFERENTIAL (£ per £	100 nominal)	£ 14.90												
DIFFERENTIAL (NPV)		4.20%												



NPV Calculations of Impact of Switch from RPI to CPIH with No Adjusting Mechanism on the Valuation of the 0.25% IL 2068 Gilt in a) 2030 and b) 2025

A). NO CHANGE ASSUMED							B). RPI SWITCHED TO CPIH IN 2025								C). RPI SWITCHED	O CPIH IN 2	030		
	Coupon	0.125%		ASSUMPTIC	DN			Coupon	0.125%			ASSUMPTIO	N		Coupon	0.125%		ASSUMPTI	NC
	Maturity	2068		INPUT			1	Maturity	2068			INPUT			Maturity	2068		INPUT	
	RPI growth rate	3.0%		Par on 28th	July 202	20		RPI growth rate	3.0%			Par on 28th	July 2020		RPI growth rate	3.0%		Par on 28th	July 202
	CPIH growth rate	N/A						CPIH growth rate	2.0%						CPIH growth rate	2.0%			
	Date of change	N/A					1	Date of change	2025						Date of change	2030			
	Discount rate	1.00%						Discount rate	1.00%						Discount rate	1.00%			
	Nominal	£ 100.00						Nominal	£ 100.00						Nominal	£ 100.00			
Year	Accreted Par	Indexation	Cash-Flow	s Discount	NPV		Year	Accreted Par	Indexation	Ca	sh-Flows	Discount	NPV	Yea	r Accreted Par	Indexatio	Cash-Flows	Discount	NPV
2020	117.04%	3.00%	£ 0.15	1.00	£ 0.1	5	2020	117.04%	3.00%	£	0.15	1.00	£ 0.15	2020	117.04%	3.00%	£ 0.15	1.00	£ 0.15
2021	120.55%	3.00%	£ 0.15	0.99	£ 0.1	4	2021	120.55%	3.00%	£	0.15	0.99	£ 0.14	202	1 120.55%	3.00%	£ 0.15	0.99	£ 0.14
2022	124.17%	3.00%	£ 0.15	0.98	£ 0.1	4	2022	124.17%	3.00%	£	0.15	0.98	£ 0.14	202	2 124.17%	3.00%	£ 0.15	0.98	£ 0.14
2023	127.89%	3.00%	£ 0.15	0.97	£ 0.1	4	2023	127.89%	3.00%	£	0.15	0.97	£ 0.14	202	3 127.89%	3.00%	£ 0.15	0.97	£ 0.1/
2024	131.73%	3.00%	£ 0.15	0.96	£ 0.1	4	2024	131.73%	3.00%	£	0.15	0.96	£ 0.14	2024	4 131.73%	3.00%	£ 0.15	0.96	£ 0.14
2025	135.68%	3.00%	£ 0.15	0.95	£ 0.1	4	2025	134.37%	2.00%	£	0.15	0.95	£ 0.14	202	5 135.68%	3.00%	£ 0.15	0.95	£ 0.1/
2026	139 75%	3.00%	f 0.15	0.94	£ 0.1	4	2026	137.05%	2.00%	f	0.15	0.94	£ 0.14	202	5 139 75%	3.00%	£ 0.15	0.94	£ 0.1
2027	143 95%	3.00%	£ 0.15	0.93	£ 0.1	4	2027	139 79%	2.00%	f	0.15	0.93	£ 0.14	202	7 143 95%	3.00%	£ 0.15	0.93	£ 0.1
2029	148.25%	3.00%	£ 0.15	0.92	£ 0.1	A	2029	1/2 50%	2.00%	e	0.15	0.55	£ 0.14	202	1/18 26%	3.00%	£ 0.15	0.00	£ 0.1
2020	152 710/	3.00%	£ 0.15	0.92	£ 0.1	3	2020	145 449/	2.00%	£	0.15	0.52	£ 0.19	2020	153 710/	3.00%	£ 0.15	0.92	£ 0.1
2023	152.7170	3.00%	£ 0.15	0.91	£ 0.1	3	2023	140.44%	2.00%	£	0.15	0.91	£ 0.13	202	102./170	2.00%	£ 0.15	0.01	£ 0.1
2030	157.29%	3.00%	£ 0.15	0.91	£ 0.1	3	2030	148.35%	2.00%	£	0.15	0.91	£ 0.13	203	1 150.7/%	2.00%	£ 0.15	0.91	£ 0.1
2031	102.01%	3.00%	£ 0.15	0.90	£ 0.1	2	2031	101.32%	2.00%	£	0.15	0.90	£ 0.13	203	153.66%	2.00%	£ 0.15	0.90	£ 0.1
2032	100.8/%	3.00%	£ 0.15	0.89	L U.1	2	2032	154.34%	2.00%	t.	0.15	0.89	L U.13	203	162.06%	2.00%	L 0.15	0.89	r 0.13
2033	1/1.88%	3.00%	L 0.15	0.88	£ 0.1	3	2033	157.43%	2.00%	E C	0.15	0.88	E 0.13	203	105.30%	2.00%	L 0.15	0.88	E 0.13
2034	177.04%	3.00%	E 0.15	0.87	E 0.1	3	2034	160.58%	2.00%	E C	0.15	0.87	E 0.13	2034	+ 168.61%	2.00%	E 0.15	0.87	r 0.13
2035	182.35%	3.00%	± 0.15	0.86	± 0.1	3	2035	163.79%	2.00%	£	0.15	0.86	r 0.13	203	1/1.98%	2.00%	r 0.15	0.86	r 0.13
2036	187.82%	3.00%	£ 0.15	0.85	£ 0.1	2	2036	167.07%	2.00%	£	0.15	0.85	£ 0.12	203	5 175.42%	2.00%	£ 0.15	0.85	£ 0.12
2037	193.45%	3.00%	£ 0.15	0.84	£ 0.1	2	2037	170.41%	2.00%	£	0.15	0.84	£ 0.12	203	7 178.93%	2.00%	£ 0.15	0.84	£ 0.12
2038	199.25%	3.00%	£ 0.15	0.84	£ 0.1	2	2038	173.82%	2.00%	£	0.15	0.84	£ 0.12	203	8 182.50%	2.00%	£ 0.15	0.84	£ 0.12
2039	205.23%	3.00%	£ 0.15	0.83	£ 0.1	2	2039	177.29%	2.00%	£	0.15	0.83	£ 0.12	203	9 186.16%	2.00%	£ 0.15	0.83	£ 0.12
2040	211.39%	3.00%	£ 0.15	0.82	£ 0.1	2	2040	180.84%	2.00%	£	0.15	0.82	£ 0.12	2040	189.88%	2.00%	£ 0.15	0.82	£ 0.12
2041	217.73%	3.00%	£ 0.15	0.81	£ 0.1	2	2041	184.45%	2.00%	£	0.15	0.81	£ 0.12	204	1 193.68%	2.00%	£ 0.15	0.81	£ 0.12
2042	224.26%	3.00%	£ 0.15	0.80	£ 0.1	2	2042	188.14%	2.00%	£	0.15	0.80	£ 0.12	204	2 197.55%	2.00%	£ 0.15	0.80	£ 0.17
2043	230.99%	3.00%	£ 0.15	0.80	£ 0.1	2	2043	191.91%	2.00%	£	0.15	0.80	£ 0.12	204	3 201.50%	2.00%	£ 0.15	0.80	£ 0.17
2044	237.92%	3.00%	£ 0.15	0.79	£ 0.1	2	2044	195.74%	2.00%	£	0.15	0.79	£ 0.12	204	4 205.53%	2.00%	£ 0.15	0.79	£ 0.17
2045	245.06%	3.00%	£ 0.15	0.78	£ 0.1	1	2045	199.66%	2.00%	£	0.15	0.78	£ 0.11	204	5 209.64%	2.00%	£ 0.15	0.78	£ 0.1.
2046	252.41%	3.00%	£ 0.15	0.77	£ 0.1	1	2046	203.65%	2.00%	£	0.15	0.77	£ 0.11	204	5 213.83%	2.00%	£ 0.15	0.77	£ 0.1
2047	259.98%	3.00%	£ 0.15	0.76	£ 0.1	1	2047	207.73%	2.00%	£	0.15	0.76	£ 0.11	204	7 218.11%	2.00%	£ 0.15	0.76	£ 0.1
2048	267.78%	3.00%	£ 0.15	0.76	£ 0.1	1	2048	211.88%	2.00%	£	0.15	0.76	£ 0.11	204	3 222.47%	2.00%	£ 0.15	0.76	£ 0.1
2049	275.81%	3.00%	£ 0.15	0.75	£ 0.1	1	2049	216.12%	2.00%	£	0.15	0.75	£ 0.11	2049	226.92%	2.00%	£ 0.15	0.75	£ 0.1
2050	284.09%	3.00%	£ 0.15	0.74	£ 0.1	1	2050	220.44%	2.00%	£	0.15	0.74	£ 0.11	205	231.46%	2.00%	£ 0.15	0.74	£ 0.1
2051	292.61%	3.00%	f 0.15	0.73	f 0.1	1	2051	224.85%	2.00%	f	0.15	0.73	f 0.11	205	236.09%	2.00%	f 0.15	0.73	£ 0.1
2052	301.39%	3.00%	f 0.15	0.73	f 0.1	1	2052	229.35%	2.00%	f	0.15	0.73	f 0.11	205	240.81%	2.00%	f 0.15	0.73	£ 0.1
2053	310.43%	3.00%	f 0.15	0.72	f 0.1	1	2053	233.93%	2.00%	f	0.15	0.72	f 0.11	205	3 245.63%	2.00%	f 0.15	0.72	f 0.1
2054	319.74%	3.00%	f 0.15	0.71	f 01	0	2054	238.61%	2.00%	f	0.15	0.71	f 0.10	205	4 250 54%	2.00%	f 0.15	0.71	f 0.1
2055	329 2/14	3.00%	£ 0.15	0.71	£ 0.1	0	2055	243 28%	2.00%	f	0.15	0.71	£ 0.10	205	5 255.54%	2.00%	£ 0.15	0.71	£ 0.10
2055	329.34%	3.00%	£ 0.15	0.71	£ 0.1	0	2055	245.30%	2.00%	f	0.15	0.71	£ 0.10	205	5 260 66%	2.00%	£ 0.15	0.71	£ 0.10
2057	349 30%	3.00%	f 0.15	0.50	f 0.1	0	2057	253 27%	2.00%	f	0.15	0.70	£ 0.10	205	7 265.99%	2.00%	£ 0.15	0.50	£ 0.10
2057	350 000/	3.00%	£ 0.15	0.09	£ 0.1	0	2057	255.22%	2.00%	£	0.15	0.09	£ 0.10	205	203.08/0	2.00%	£ 0.15	0.09	£ 0.10
2038	333.88%	3.00%	£ 0.15	0.09	£ 0.1	0	2038	230.28%	2.00%	£	0.15	0.09	£ 0.10	205	2/1.19%	2.00%	£ 0.15	0.69	£ 0.10
2029	370.07%	3.00%	£ 0.15	0.08	£ 0.1	0	2039	200.40%	2.00%	L C	0.15	0.08	£ 0.10	205	2/0.02%	2.00%	£ 0.15	0.08	E 0.10
2000	202.79%	3.00%	£ 0.15	0.07	£ 0.1	0	2000	200.72%	2.00%	L C	0.15	0.07	£ 0.10	200	202.15%	2.00%	£ 0.15	0.07	£ 0.10
2001	393.25%	3.00%	L 0.15	0.67	£ 0.1	0	2001	274.09%	2.00%	L	0.15	0.67	L 0.10	206	287.79%	2.00%	L 0.15	0.67	L 0.10
2062	405.04%	3.00%	L 0.15	0.66	£ 0.1	0	2062	2/9.5/%	2.00%	E C	0.15	0.66	E 0.10	206	2 293.55%	2.00%	L 0.15	0.66	E 0.10
2063	417.19%	3.00%	E 0.15	0.65	£ 0.1	0	2063	285.16%	2.00%	£	0.15	0.65	L 0.10	206	299.42%	2.00%	E 0.15	0.65	E 0.1
2064	429.71%	3.00%	£ 0.15	0.65	£ 0.0	9	2064	290.87%	2.00%	£	0.15	0.65	± 0.09	206	4 305.41%	2.00%	± 0.15	0.65	£ 0.0
2065	442.60%	3.00%	£ 0.15	0.64	£ 0.0	9	2065	296.68%	2.00%	£	0.15	0.64	£ 0.09	206	311.52%	2.00%	£ 0.15	0.64	£ 0.0
2066	455.88%	3.00%	£ 0.15	0.63	£ 0.0	9	2066	302.62%	2.00%	£	0.15	0.63	£ 0.09	206	b 317.75%	2.00%	£ 0.15	0.63	£ 0.09
2067	469.56%	3.00%	£ 0.15	0.63	£ 0.0	9	2067	308.67%	2.00%	£	0.15	0.63	£ 0.09	206	7 324.10%	2.00%	£ 0.15	0.63	£ 0.0
2068	483.64%	3.00%	£ 483.79	0.62	£ 300.0	8	2068	314.84%	2.00%	£	314.99	0.62	£ 195.38	206	330.58%	2.00%	£ 330.73	0.62	£ 205.14
					£ 305.6	9 A							£ 200.99	В					£ 210.75
								DIFFERENTIAL (£ PE	R £100 NOMIN	AL	.)	104.70	A-B		DIFFERENTIAL (£ PE	R £100 NOM	/INAL)	94.94	A-C
								DIFFERENTIAL (NPV)			34.25%	A/B		DIFFERENTIAL (NP)	/)		31.06%	A/C



<u>APPENDIX III:</u> <u>CFA UK LETTER TO THE CHANCELLOR OF THE EXCHEQUER (</u>6 March 2020)

By Email to: <u>Action.Chancellors@hmtreasury.gov.uk</u>

Dear Chancellor,

CFA UK Perspective on Potential Reform of UK Index-linked Gilt Market

The CFA Society of the UK (CFA UK) is looking forward to contributing to the consultation on RPI reform, anticipated on 11 March.

The maintenance of an orderly market and proper market standards are important components of our Society's mission to create a better investment profession for the ultimate benefit of society. Therefore, we believe that in issuing that consultation the UK Government needs to seek input that will enable it to make a balanced assessment of whether a change of index is necessary and beneficial for society. In doing so, the consultation should both (i) cover why RPI might be considered sub-optimal and (ii) evaluate the cost versus the benefit to society of using [and changing to] a replacement index (CPIH or CPI).

We believe that your consultation should include an explanation of, and an invitation to comment on, how drawbacks of various reform approaches may be nullified or at least mitigated. We recognise that this has the potential to be a very material change at a time of regulatory uncertainty, particularly in UK financial markets, and we believe therefore that the approach needs to be thoroughly considered.

To this end, we suggest that input should be sought not only from index-linked gilt investors but also from other financial market participants and beneficiaries holding contracts that reference RPI to ensure that the UK Government can fully evaluate the costs and any otherwise unforeseen consequences of such a change. Clearly, this includes a wide range of stakeholders ranging from recipients of the state pension, holders of national savings certificates through to utility companies whose revenue is linked to the RPI+X formula.

If the UK Government is to proceed with a reform replacing the existing RPI calculation with a CPI-based calculation it needs to do so in full knowledge of the direct and indirect consequences across all financial markets and within a framework that provides a fair and transparent outcome for all stakeholders in RPI-based assets and contracts. We are mindful that many investors hold RPI-based assets because they have been encouraged to do so_as a hedge for their inflation-linked liabilities (CPI or RPI) as part of a prudent risk management approach.

As an issuer, the UK Government will of course wish to set the highest standards of behaviour in markets, acting with fairness and transparency with investors. Whilst the UK Government has the power to unilaterally impose a solution onto the index linked gilt market, such an action could have damaging consequences for its future status as an issuer in world markets if it was seen to be acting to unilaterally reduce its debt payments.



We would be concerned if such a move then attracted legal action against the Government.

If it were decided that RPI should be replaced by CPIH in future without any adjustment, as proposed by Sir David Norgrove, Chair of the UK Statistics Agency (UKSA) in March 2019ⁱ, this could result in the novation of any existing contracts that lack grandfathering provisions, and may be open to legal challenge. It is likely to represent a material reduction in expected income for millions of investors, particularly UK pensioners and UK occupational schemes. Unless measures can be implemented to ensure that the contractual payments are of equivalent value before and after the change, some investors will lose out and that is a serious drawback to this proposal.

Defined benefit pension scheme assets had exposures to UK index-linked gilts of over £1 trillion as at the end of 2018ⁱⁱ. Published estimates of the value of the losses UK pension funds would incur as a result of receiving lower payments from the Government on its index-linked gilts, should the indexing switch to CPIH, vary but are substantial^{iii,iv,v}. With potential losses of this scale (and higher when other RPI-linked assets held by UK pension funds are taken into account), we believe the UK Government needs to look to consult on mechanisms for the fair treatment of investors as part of a change in reference index. One approach to consult on would be the application of a spread over CPIH that would compensate existing investors for the lower rate of adjustment implied in the CPI versus the RPI index, akin to the fall-back mechanism agreed in relation to the Libor to Sonia switch. However, we believe the consultation should seek input on the pros and cons of other approaches too, so that the best solution for this transition can be found.

The RPI index affects not only domestic and foreign investors in the index-linked gilt market; it also affects pension payments and it drives contractual payments in multitrillion pound derivative markets, in certain corporate bonds, within infra-structure debt, real estate leases and ground rent contracts. Many of these contracts are long-term; some with maturities out to 30-years and beyond. Some of these contracts contain provisions that allow for re-indexation costs to be passed on^{vi} - but equally many of these contracts do not - and a step-change in the expectations of future RPI (if it was taken to equal CPIH), or the abolition of RPI publication altogether, creates the potential conditions for widespread market disruption.

We accept that opinion amongst statisticians leans towards CPIH being a better measure of inflation than RPI, however, CPIH has been consistently c.1% per annum lower than RPI since 2010. The c.1% gap between CPIH and RPI is partly a function of the two indices having different baskets of goods, but the main source of differential lies in the mathematical certainty derived from their respective methods of calculation - RPI using an arithmetic averaging method and CPIH using a geometric averaging method. Based on the historic data available, a material differential can be expected to continue into the future, with CPIH expected to be materially lower than RPI. Terms for a surrender of RPI gilts for CPI gilts would be further complicated by the fact that the precise differential in value cannot be calculated. It depends on both the future basket inputs of the two indices and, importantly, the variability in future inflation.

We look forward to participating in a consultation that seeks appropriate input on how to address all of these challenges and would be happy to discuss this in further detail.



Yours sincerely,

ИM

Will Goodhart, Chief Executive CFA Society of the UK

Andrew Burton Professionalism Adviser CFA Society of the UK

With thanks to contributions from:

Natalie Winterfrost, CFA Jean-Pierre Charmaille, CFA Paul Evans, CFA Bill Harer Alistair Jones

and for overview from the CFA UK Pensions Expert Panel, the CFA UK Professionalism Steering Committee and the CFA UK board



ENDNOTES:

ⁱ Letter to the Chancellor, Rt Hon Philip Hammond MP, dated 4 March 2019 (Link: <u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment</u> <u>data/file/829170/20190304 SirDavidNorgrove to Chancellor RPI .pdf</u>);

The Liability Driven Investment Annual Survey 2019, XPS Investment (Link: <u>https://www.xpsgroup.com/media/1940/ldi-april.pdf</u>);

^{III} The Pension Protection Fund's ("PPF") 2019 Purple Book reports (Page 7, Figure 2.2) UK Defined Benefit schemes' total liabilities of c.£1,600 billion on a S179 basis. Page 32 shows a 0.1% increase in real yield (equivalent to 0.1% drop in inflation indexation) would result in a £9 billion reduction in these liabilities. Extrapolation produces a £90 billion loss from a 1% drop in indexation (Link: <u>https://www.ppf.co.uk/sites/default/files/2020-</u> 01/Purple%20Book%202019.pdf);

^{iv} Insight Investments - "We estimate that the impact of the proposed RPI reform on the total value of the index-linked gilt market would be a reduction of c.£90bn" (Link: <u>https://www.insightinvestment.com/globalassets/documents/regulatory-updates/uk-proposed-changes-to-rpi.pdf</u>);

 $^{\rm v}$ Bank of America Merrill Lynch (BAML) estimate a £94bn loss using a February 2025 change date in a report of 21 November 2019 entitled: "The right way to decommission RPI";

^{vi} For one leading example, see page 101, paragraph 9 (c)(iii) of Network Rail's Debt Issuance prospectus (Link: <u>https://cdn.networkrail.co.uk/wp-</u> <u>content/uploads/2016/11/Infrastructure-Finance-Multicurrency-Note-Programme-</u> <u>Information-Memorandum.pdf</u>).