

# Funerals Market Investigation

## Cost of capital analysis

**20 February 2020**

This is one of a series of consultative working papers which will be published during the course of the investigation. This paper should be read alongside the [Issues Statement](#) published on 8 April 2019 and other working papers published. These papers do not form the inquiry group's provisional decision report. The group is carrying forward its information-gathering and analysis work and will proceed to prepare its provisional decision report, which is currently scheduled for publication in April/May 2020, taking into consideration responses to the consultation on the Issues

Statement and responses to the working papers as well as other submissions made to us. Parties wishing to comment on this paper should send their comments to [Funerals@cma.gov.uk](mailto:Funerals@cma.gov.uk) by 19 March 2020.

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The Competition and Markets Authority has excluded from this published version of the working paper information which the inquiry group considers should be excluded having regard to the three considerations set out in section 244 of the Enterprise Act 2002 (specified information: considerations relevant to disclosure).  
The omissions are indicated by [✂].

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## Introduction

1. The approach to assessing profitability, as set out in the Guidelines,<sup>1</sup> is to compare the profits earned with an appropriate cost of capital. In this working paper, we set out our estimates of the nominal pre-tax weighted average cost of capital (WACC) for funeral directors and crematoria in the United Kingdom based on data for the period 01 January 2014 to 31 December 2018.
2. For the purposes of our initial analysis, we have estimated a single WACC for both funeral directors and crematoria, in large part due to the limited availability of data from comparable companies and the fact that most of our comparators undertake both activities. As a result, it is not possible to clearly identify funeral director-specific or crematoria-specific asset betas or gearing levels. However, we consider that these two activities are likely to have different risk profiles and hence different asset betas and sustainable gearing levels. For example, we note that crematoria appear to share a number of characteristics of infrastructure or utility assets, such as relatively large fixed asset bases and stable volumes/revenues. In contrast, funeral directors are relatively asset light, albeit this is likely to result in lower operational gearing.
3. We invite submissions of evidence and/or reasoning on the asset betas and gearing of crematoria and funeral directors, in particular.
4. Our initial estimate of the WACC for funeral directors and crematoria is between 5.3% and 8.8% (Table 1). For the purposes of our profitability assessment, we have taken a point estimate of 8%, which is towards the upper end of this range.

**Table 1: CMA estimates of WACC**

	<b>Low</b>	<b>High</b>
Real RFR	-0.5%	0.5%
Real TMR	5.0%	6.5%
ERP	5.5%	6.0%
Asset beta	0.5	0.8
Equity beta	0.8	1.1
Real CoE	3.7%	7.0%
CPI	1.5%	1.5%
Nominal CoE	5.3%	8.6%
Nominal CoD	3.50%	4.50%
Gearing	40%	30%
<b>Nominal pre-tax WACC</b>	<b>5.3%</b>	<b>8.8%</b>

Source: CMA analysis

<sup>1</sup> [Guidelines for market investigations: Their role, procedures, assessment and remedies \(CC3\)](#).

5. Some funeral and crematoria firms provided the Competition and Markets Authority (CMA) with WACC estimates. These are set out in detail in the 'Parties' submissions on their WACCs' section. We make reference to these estimates as appropriate in this paper.
6. The remainder of this section sets out our methodology and the analysis we have conducted. As set out in the Guidelines,<sup>2</sup> we generally look to the capital asset pricing model (CAPM) when considering the cost of capital, and this is the approach we have adopted in estimating the cost of equity for the crematoria and funeral director firms. We have estimated the cost of debt with reference to corporate bond yields over the period, as well as evidence gathered from the parties on their own costs of debt.

### **General approach to estimating the WACC**

7. There are several factors that we have taken into account in estimating an appropriate benchmark cost of capital for the various activities undertaken within the funeral and crematoria sector. These include:
  - (a) how to estimate the WACC – use of the capital asset pricing model (CAPM);
  - (b) which cost of capital provides an appropriate benchmark – specification of the basis of the WACC; and
  - (c) over which time period should the cost of capital be measured – at the start of the relevant period, or an average for the relevant period?

#### ***Capital asset pricing model***

8. The Guidelines highlight that we generally use the CAPM when considering the cost of equity since this is a widely understood technique with strong theoretical foundations.<sup>3</sup>
9. The CAPM relates the cost of equity  $E[R_i]$  to the risk-free rate ( $R_{rf}$ ), the expected return on the market portfolio ( $R_m$ ), and a firm-specific measure of investors' exposure to systematic risk (beta or  $\beta$ ) as follows:

$$E[R_i] = R_{rf} + \beta(R_m - R_{rf})$$

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<sup>2</sup> CC3, Annex A, paragraph 16.

<sup>3</sup> CC3, paragraph 116.

10. If a business were entirely funded by equity, the expected return on equity could be considered to be its 'cost of capital'. However, most firms are funded by a combination of both debt and equity, such that the appropriate cost of capital to consider is the weighted average cost of debt and equity. The WACC is given by the following expression:

$$WACC = E[R_i] \times E/(D+E) + K_d \times D/(D+E)^4$$

11. Finally, the cost of capital must take into account the effects of tax on returns to capital providers. The returns to debt holders take the form of interest payments which are usually tax-deductible. The returns to equity holders (dividends), on the other hand, are taxed. Hence, where the cost of capital is expressed 'pre-tax', the cost of equity used must reflect the fact that the actual return to shareholders will be reduced by the rate of tax. We have estimated the cost of capital on a nominal pre-tax basis:<sup>5</sup>

$$\text{Pre-tax WACC} = [(1/(1-t)) \times E[R_i] \times E/(D+E)] + [K_d \times D/(D+E)]$$

### ***Specification of the basis of the WACC***

12. Our profitability analysis measures the returns earned by all sources of capital on the capital employed by the business. As these returns are measured before interest and/or tax is paid, they are not affected by the capital structure of the business.<sup>6</sup> The WACC of an individual business, on the other hand, is affected by its capital structure, i.e. the proportion of debt and equity used to finance the business. These financing choices may be driven by a number of factors, including the ability of the business to raise debt, the risk appetite of equity holders and the relative costs of debt and equity financing. In our analysis, we use the WACC as a benchmark for the level of 'normal' profits. As a result, we consider that it is appropriate to use the same WACC as the benchmark for all providers, rather than estimating a firm-specific cost of capital for each provider.<sup>7</sup>
13. In coming to a view on this benchmark WACC, we have sought to reflect a level of gearing, cost of equity and cost of debt that a hypothetical stand-alone provider in GB would incur when undertaking the relevant activities. Where possible, therefore, we have used GB (or UK) benchmarks and tailored the variable elements<sup>8</sup> of the cost of capital to reflect both the nature of the activities under consideration and the fact that some of the benchmarks we

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<sup>4</sup> Where D is debt, E is equity and K<sub>d</sub> is the cost of debt.

<sup>5</sup> This avoids the need to adjust nominal financial information to remove the effects of inflation.

<sup>6</sup> The capital structure affects how earnings before interest and tax is divided between the various providers of capital.

<sup>7</sup> This approach ensures that all firms in an industry are treated equally.

<sup>8</sup> These are the beta value, gearing and cost of debt.

have used to estimate the WACC relate to large firms ie may face different cost of debt from a small firm.

14. We have measured the WACC of crematoria and funeral directors based on a sample of firms with crematoria and funeral director activity.

***Relevant time period***

15. We are analysing the profitability of the firms over the period between 2014 and 2018 (firms’ results for FY14 to FY18). When a cost of capital is set for regulatory purposes, it is generally forward looking. In a market investigation, in contrast, we are looking backwards to understand whether the profits made by the firms have exceeded the cost of capital over the relevant period. Since each of the component parameters of the WACC should reflect the reasonable expectations of the firms over the relevant period and not an ex-post assessment of the actual outturn, we have not sought to estimate the WACC at a particular point in time but rather we have considered the average cost of capital for the relevant period as a whole.

**Parties’ submissions on their WACCs**

16. This section sets out the submissions of funeral director and crematoria firms on their WACC. Table 2 shows the WACC estimates of two crematoria businesses (Dignity and Memoria) and three funeral directors’ businesses (Dignity, Co-op and Funeral Partners).

**Table 2: WACC estimates for crematoria and funeral directors**

	Dignity	Memoria	Coop	Funeral Partners
<b>Nominal WACC</b>	[redacted]	[redacted]	9.3%	[redacted]

Source: Dignity, Memoria, Coop and Funeral Partners submissions to the CMA.

17. Dignity submitted a group nominal pre-tax WACC range between [redacted] and [redacted]%. However, no breakdown and assumptions were provided. Dignity told us that this estimate had not been updated for some time.
18. Memoria has submitted two nominal pre-tax WACCs to the CMA. During the market study, it estimated a WACC of [redacted]. More recently, Memoria submitted a WACC of [redacted]% as a forward looking WACC for new funding, based on:
  - a) a cost of debt between [redacted] and [redacted]%;
  - b) a cost of equity between [redacted] and [redacted]%; and
  - c) a gearing level of [redacted]%.



19. Co-op provided bottom-up estimates for a nominal post-tax WACC for each division. It estimated a WACC for Funerals in 2014 of 9.3% based on:
- a) an RFR of 2.8% based on 3-month average of 30-year UK Government Debt;
  - b) an ERP of 5% based on KPMG analysis;
  - c) an equity beta of 0.94 and gearing level of 43% derived from a number of comparator companies;
  - d) a company specific premium of 4% to be added to the CoE;<sup>9</sup>
  - e) a gearing level of 30%;
  - f) a cost of debt of 5% from the interest expense on company's listed debt; and
  - g) an RFR adjustment of 1% to be added to the WACC to reflect their view that UK's RFR was at a historical low as a result of the global financial crisis so they expected RFR to increase in the future.
20. Funeral Partners told us that it did not estimate a WACC for internal purposes during the Relevant Period. However, it submitted that a WACC of [X]% was an appropriate estimate for the 2014 to 2018 period. This was based on:
- a) a cost of debt of [X]%,
  - b) a cost of equity of [X]%; and
  - c) a gearing level of [X]%.
21. Other companies did not submit a WACC but did provide their cost of debt. In particular:
- a) Westerleigh submitted an estimate of its cost of debt in investment appraisals of [X]%; and
  - b) LCC told us its cost of debt was [X]%.

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<sup>9</sup> Co-op did not provide an explanation for the inclusion of this company specific premium.

## CMA approach for identifying comparator companies

22. This section sets out the CMA's methodology to select an appropriate comparator sample of funeral director and crematoria firms as the basis for our calculations of beta.
23. We used Bloomberg to look for all listed companies with funeral and crematoria activity in the United Kingdom, the United States and Australia. This search yielded six companies (Figure 3).<sup>10</sup>
24. Ideally, given the potential variations of beta and gearing across crematoria and funeral firms, we would estimate one WACC for each activity, so one WACC would be calculated from a sample of funeral directors and another from a sample of crematories. However, there is no such firm in our sample: all firms provide both activities and, on average, 60% of their revenues come from funeral director services and 40% from cemetery and crematoria activities (Table 3).

**Table 3: Sample of funeral director and crematoria firms**

Company	Ticker	Country	Revenues	
			Funeral director	Cemetery & Crematoria
Service	SCI	US	59%	41%
Invokecare	IVC	Australia	74%	25%
Carriage Services	CSV	US	79%	21%
Dignity	DTY	UK	75%	25%
Propel Funeral	PFP	Australia	n/a	n/a
Stonemor	STON	US	17%	83%

Source: Bloomberg and CMA analysis.

## CMA estimation of WACC

25. This section sets out the analysis that we have undertaken to estimate the components of the WACC calculation, which includes both generic and industry-specific components. The former comprises the risk-free rate (RFR), the equity risk premium (ERP), tax rate and cost of debt; the latter comprise beta and gearing.

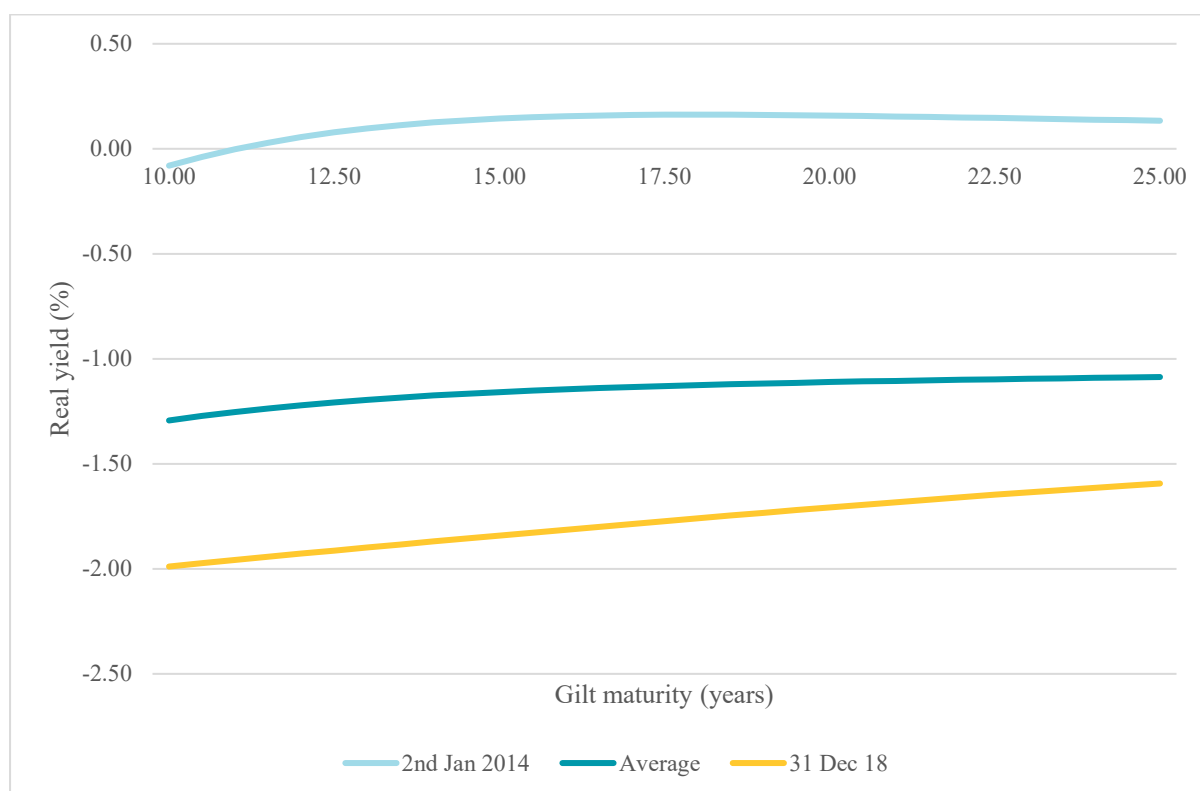
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<sup>10</sup> Dignity is the only listed company with funeral and crematoria services in the UK. However, we required a larger sample size to estimate an appropriate benchmark for funeral directors and crematories for the purposes of our analysis.

## Risk free rate

26. In order to estimate the risk-free rate applicable over the period of our investigation, we have had reference to two sources. The first is index-linked gilt yields, which have negligible default and inflation risk. The second source is nominal gilt yields, which also have negligible default risk, but which do have inflation risk (and, therefore, should contain an inflation risk premium).
27. We use 10-year yield curves to estimate the WACC as we consider long-maturity gilts to be most relevant to the RFR in the cost of equity since equities also have long (indefinite) maturity. Figure 1 shows real gilt yields at the start and end on the relevant period, as well as the five-year average (i.e. covering the whole period) for maturities longer than 10 years. We can see there is a large wedge between the yield curves at the start and end of the period. At the start, the yield curve is between -0.1% and 0.1%, but at the end, the yield curve is between -1.6% and -2.0%. For maturities equal to 10 years, the yield curve is between -0.1% and -2.0% with an average of -1.3%.

**Figure 1: Yield curves on UK index-linked gilts, 2014 to 2018**



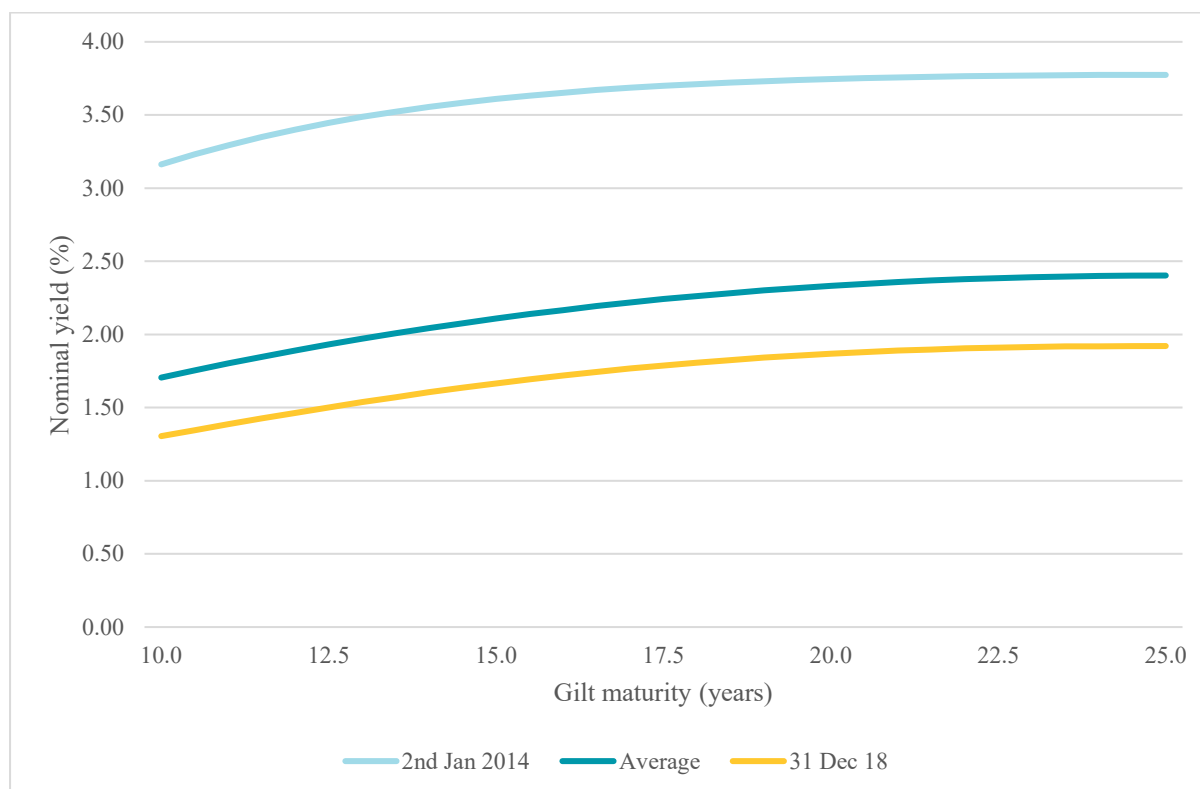
Source: Bank of England, real spot yield curve data.

Note: The three lines show yields on 2 January 2014, 31 December 2018 and the average yields covering the 5 years between January 2014 and December 2018.

28. Figure 2 shows nominal gilt yields at the start and end of the relevant period, as well as the five-year average (ie covering the whole period). Overall, a

similar pattern of declining yields on shorter maturities can be seen on these nominal gilts. At the start, the yield curve is between 3.2% and 3.8% and this declined to 1.3% and 1.9% by the end of 2018. For maturities equal to 10 years, the yield curve is between 1.3% and 3.2% with an average of 1.7%.

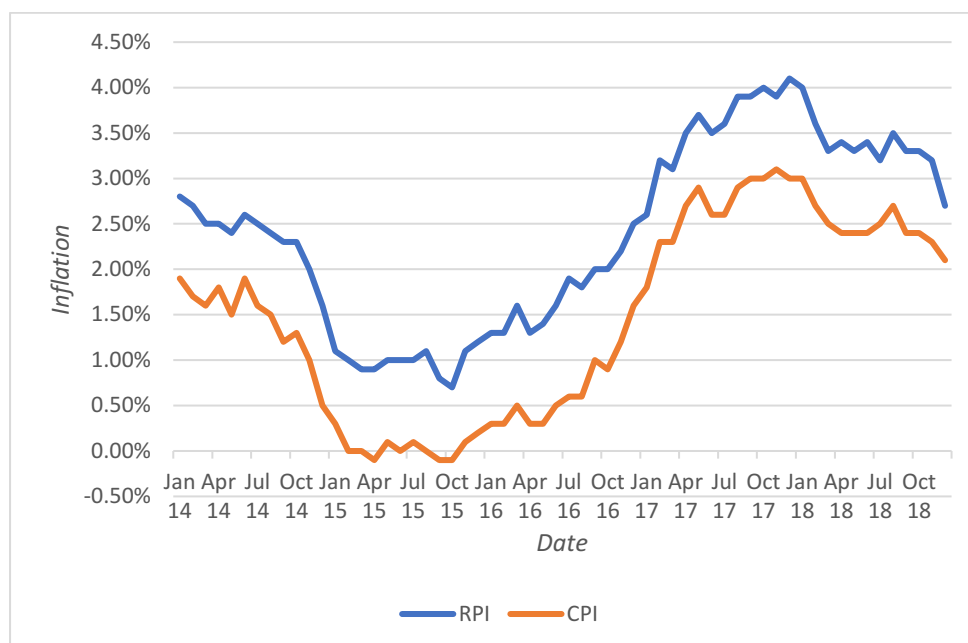
**Figure 2: Nominal yield curves on UK gilts, 2014 to 2018**



Source: Bank of England, nominal spot yield curve data.  
 Note: The three lines show yields on 31 January 2014, 31 December 2018 and the average yields covering the 5 years between January 2014 and December 2018.

29. In coming to a view on the appropriate real and nominal RFRs for our analysis, we have had reference to both real and nominal gilt yields, noting that the former are likely to be affected by the imperfections associated with the RPI as a measure of underlying inflation, while the latter can be expected to include an inflation risk premium. As set out in Figure 3, we note the historical gap between Retail Price Index (RPI) and Consumer Price Index (CPI) measures of inflation of around 0.9% between 2014 and 2018. To the extent that the CPI better reflects underlying inflation, measures of the apparent riskless rate of return taken from index-linked gilt yields may be distorted as a result of that gap.

**Figure 3: RPI and CPI annual rates, 2014 to 2018**



Source: ONS, CPI and RPI annual rates.

30. Therefore, we have considered two approaches: first, to adjust the historic yield on 10-year ILGs (-1.3%) upwards to take account of the gap between RPI and CPI (0.9%) in the period 2014 to 2018; this produces an estimate of the real RFR of -0.4%. Second, we consider the nominal yield on 10-year gilts (1.7%) and deduct the CPI over the period. Between January 2014 and December 2018, the CPI averaged 1.5%. This produces a real RFR estimate of 0.2%. On this basis, we have used a range for the real RFR of between -0.5% and 0.5%.

### ***Equity risk premium***

31. The ERP is the additional return that investors require to compensate them for assuming the risk associated with investing in equities rather than in risk-free assets. When seeking to understand what the ERP was over a historical period of time, it is necessary to identify the returns which investors expected to make on the market and deduct the relevant RFR (as estimated above).
32. There are two types of approach that can be used to estimate the ERP. Historical methods seek to derive the ERP from a long run of data on realised returns on equities. Forward-looking approaches seek to estimate the expected ERP based on either the reported expectations of market participants or the ERP implied in asset prices at the start of the period.
33. There is no universally accepted method for deriving the equity market return or the ERP. Both concepts are concerned with investors' ex-ante expectations

of returns, which are largely unobservable. The academic literature on the subject is large and can be categorised into three types:

- (a) Studies that assume that historical realised returns are equal to investors' expectations ('historical ex-post approaches').
  - (b) Studies that fit models of stock returns to historical data to separate out ex ante expectations from ex-post good or bad fortune ('historical ex ante approaches').
  - (c) Studies that use current market prices and surveys of market participants to derive current forward-looking expectations ('forward-looking approaches').
34. All of the above methods have a large degree of uncertainty associated with them, and any answers from these analyses require a large number of assumptions and significant amounts of judgement. In the NIE and Bristol Water regulatory decisions, the CMA drew on both historical approaches (ex-ante and ex-post) as our primary sources for estimating the equity market return, with forward-looking approaches being used only as a cross-check on our resulting ERP estimates.<sup>11</sup>
35. NIE estimated an equity market return of 5% to 6.5%, placing more weight on the upper end of the range, and ultimately using 6.5%. For the purposes of our initial WACC analysis, we have decided to use this same range for the equity market return, giving an ERP of between 5.5% and 6%. However, we note that the CMA is currently considering the evidence on expected market returns as part of its NATS En-route Limited Price Determination and we propose to revisit this element of our WACC estimate in light of that work.

### **Tax Rate**

36. The corporation tax rates applicable over the period are set out in Table 4. For the purpose of estimating the initial WACC, we use an average of the tax rates for the period of 19.6%.

**Table 4: UK corporations tax rates**

<b>Corporate Tax Rate</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
UK	21%	20%	19%	19%	19%

Source: Main rates for all profits except ring fence profits from HMRC.

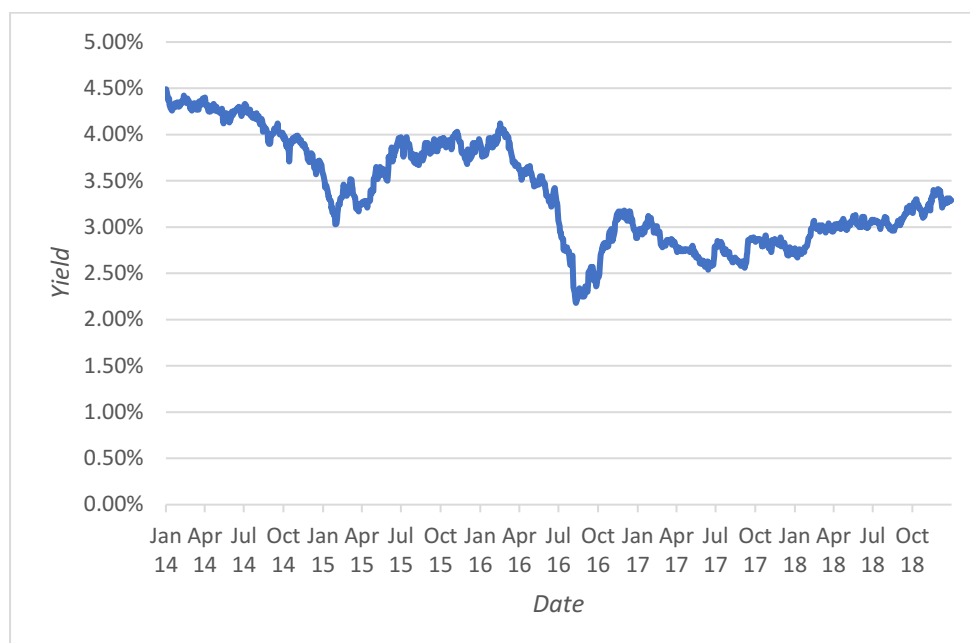
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<sup>11</sup> NIE Final Determination

## Cost of debt

37. In order to come to a view on the likely cost of debt of a UK funeral director and/or crematoria firm, we examine spreads on UK corporate bonds of various credit ratings and sectors over the relevant period as shown in Figure 4.<sup>12</sup>

**Figure 4: Corporate bond annual yields, 2014-2018**



Source: Markit, CMA analysis

38. These spreads are consistent with the cost of debt submitted by some providers:
- Memoria told us that its cost of debt was between [X] and [X]%;
  - Westerleigh submitted an estimate of its cost of debt in investment appraisals of [X]%; and
  - LCC told us their cost of debt was [X]%
39. We also collected information on the interest rates paid by smaller, independent funeral directors to understand whether their cost of debt was significantly different. We noted that there was a broad range of debt costs, with some firms reporting a cost of debt below 3.5%, some reporting a cost of debt between 3.5% and 4.5%, and others reporting higher costs of debt.

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<sup>12</sup> Yield is calculated from iBoxx GBP Liquid Corporates Large Cap Index available on Markit.

40. On this basis, we consider that a cost of debt between 3.5% and 4.5% is reasonable.

### ***Equity betas***

41. The beta of an asset measures the correlation between the volatility of the returns on the asset and the returns on the market as a whole, or the exposure of the firm to systematic or 'non-diversifiable' risk. It is in return for assuming this (market) risk that investors require an (equity risk) premium over the risk-free return.
42. The beta value of a listed firm can be directly estimated as the covariance between the stock's returns and the market's returns, divided by the variance of market returns. However, when estimated in this way, the beta value reflects the full range of activities undertaken by a listed business and, as a result, may differ from the beta of the relevant activities for the purposes of our investigation.
43. Within a CAPM framework, changes in gearing affect equity betas. Hence, it is necessary to adjust for gearing differences in order to make comparisons between equity betas. We do this by calculating the asset beta, ie the beta at zero gearing. In this section, we first set out the range of beta estimates that we have collected on our sample of funeral and crematoria firms.

### ***Beta estimates***

44. The betas of the listed companies are calculated by Bloomberg and shown in Table 5. Bloomberg betas are available on daily, weekly and monthly basis. Our sample of firms has an average asset (or unlevered) beta of between 0.49 and 0.78 (daily to monthly figures).
45. We note that, for some firms in our sample, there is significant variability between daily, weekly and monthly betas across the sample ie Stonemor Partners' daily beta is 0.15 compared to a monthly beta of 0.75.
46. Co-op used a similar sample of listed companies to estimate its WACC and obtained an average unlevered beta of 0.70, which sits towards the upper end of the range of our beta estimates.
47. Therefore, in our analysis, we have considered a range of asset betas of 0.5 to 0.8, which gives a range of equity betas of 0.77 to 1.08, based on gearing of 30% to 40% (see Gearing section below).



**Table 5: Equity and asset betas of the sample**

<b>Company</b>	<b>Levered beta</b>			<b>Unlevered beta</b>		
	<i>Daily</i>	<i>Weekly</i>	<i>Monthly</i>	<i>Daily</i>	<i>Weekly</i>	<i>Monthly</i>
Service	0.88	1.03	1.07	0.60	0.70	0.73
Invocare	0.88	0.81	1.06	0.76	0.69	0.91
Carriage Services	0.67	0.76	0.89	0.39	0.44	0.52
Dignity	0.67	0.76	1.53	0.41	0.47	0.94
Propel Funeral	0.65	0.48	0.83	0.65	0.48	0.83
Stonemor	0.32	0.51	1.60	0.15	0.24	0.75
<b>Average</b>				<b>0.49</b>	<b>0.50</b>	<b>0.78</b>

Source: Bloomberg

\*Betas have been unlevered using the following formula: Unlevered Beta = Levered Beta / (1 + ((1 – Tax Rate) x (Debt/Equity))), where the tax rate used is the average statutory corporate tax rate in UK.<sup>13</sup> The tax rates used are set out in Table 4. The levered beta is also called the equity beta; the unlevered beta is also called the asset beta.

## Gearing

48. We examine the levels of gearing of the sample and calculated the average for the Relevant Period. The results, as set out in Table 6, show that there is significant variation within firms across time and also, across some firms ie Stonemor and Dignity. This latter effect is the result of significant decreases in the market value of equity of these firms rather than increases in debt over time.<sup>14</sup>

**Table 6: Gearing levels of the sample**

<b>Company</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Average</b>
Service	40%	38%	38%	33%	33%	36%
Invocare	15%	15%	13%	12%	26%	16%
Carriage Services	42%	45%	42%	47%	57%	46%
Dignity	40%	33%	32%	38%	62%	<b>41%</b>
Propel	n/a	n/a	n/a	n/a	0%	0%
Stonemor	27%	27%	47%	56%	80%	48%
<b>Average</b>						<b>31%</b>

Source: Bloomberg and CMA analysis.

49. We observe that Stonemor experienced a continued increase in their gearing between 2014 and 2018 due to falling share price, starting in 2016.<sup>15</sup> Similarly, Dignity’s gearing increased significantly from 2017 and 2018 as their

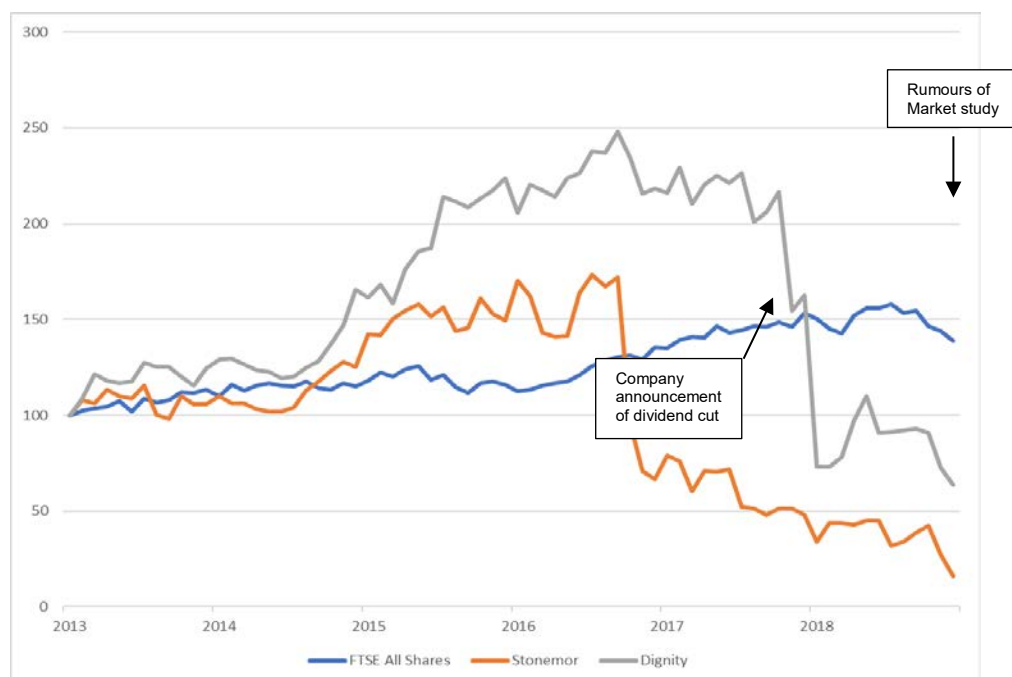
<sup>13</sup> Professor Alan Gregory affirms that under ADMP approach and “instant re-balancing” [tax rates are irrelevant](#). We therefore use the average UK rate from the 5-year period between 2014 and 2018 to un-lever equity betas and then re-lever the outturn assets beta range.

<sup>14</sup> Market value of equity is also known as market capitalisation.

<sup>15</sup> Stonemor Partners announced that its upcoming third-quarter distribution would only be \$0.33 per unit, which is 50% less than the prior period. Driving this decision: the company’s third-quarter results, which while not yet finalized, led the company to the conclusion that it needed to cut the payout.

market capitalisation fell significantly. Figure 5 shows the evolution of their share prices against FTSE all-share index for the Relevant Period.

**Figure 5: Stonemor and Dignity share price against FTSE all-share index**



Source: Bloomberg and CMA analysis.  
Note: GDP shares prices and rebased to 100.

50. With reference to parties' submissions, Co-op and Funeral Partners used a gearing level of 30% and [X]%, respectively, to estimate their WACC, which is similar to the average of our sample ie 31%. On the other hand, Memoria told us a gearing level of [X]% was used.
51. Given the variability of gearing levels submitted by the providers, we consider that it would be reasonable in principle to use a different gearing level for each activity. The evidence from Memoria suggests that crematoria operators may be able to support a higher level of gearing than funeral directors.
52. However, we observed that adopting different gearing assumptions for the activities would, in the absence of activity-specific beta information, result in broadly offsetting changes in the equity betas calculated. Ie assuming a higher level of gearing results in a higher equity beta (for the same asset beta) and this offsets the impact on the overall WACC of having a greater proportion of lower-cost debt. Therefore, making such an assumption does not have a material impact on our WACC estimates, which will remain broadly the same for both activities.
53. Furthermore, we consider that using the (asset) beta data that we have collected on comparator firms, all of which undertake both activities, to derive different equity betas based on different rates of gearing does not provide

meaningful insights into the relative risks of funeral directors and crematoria. This is because the observed asset betas can be viewed as weighted averages of the (unobserved) asset betas of the two relevant activities (funeral directors and crematoria services). Without information on these specific asset betas, estimating different equity betas based on different gearing levels only provides information on the relative riskiness of higher or lower geared business undertaking both activities. It does not provide information on the likely equity betas of a stand-alone funeral director business or a stand-alone crematoria business.

54. Therefore, we have used a range of gearing of 30% to 40% for both activities, with the lower end of this range consistent with the submissions made by Co-op and Funeral Partners, as well as the average gearing observed in our sample of comparator firms and the upper end of the range reflecting Dignity's average gearing over the Relevant Period.

## CMA WACC analysis

55. In this section, we provide a summary of the analysis and we also set out future considerations for our WACC estimates.
56. Based on our own analysis and parties' submissions, our initial WACC estimates are between 5.3% and 8.8%, as set out in Table 7.

**Table 7: CMA estimates of WACC**

	<b>Low</b>	<b>High</b>
Real RFR	-0.5%	0.5%
Real TMR	5.0%	6.5%
ERP	5.5%	6.0%
Asset beta	0.5	0.8
Equity beta	0.8	1.1
Real CoE	3.7%	7.0%
CPI	1.5%	1.5%
Nominal CoE	5.3%	8.6%
Nominal CoD	3.50%	4.50%
Gearing	40%	30%
<b>Nominal pre-tax WACC</b>	<b>5.3%</b>	<b>8.8%</b>

Source: CMA analysis

57. We note our initial WACC estimates are in line with those of Memoria (between [X]%) and [X]%) and somewhat lower than the submissions from Dignity, Co-op and Funeral Partners. The difference with Funeral Partners is driven largely by differences in the cost of debt (Funeral Partners used a

[X] % figure), while that with Co-op is driven by their inclusion of a small company premium. We do not consider that there is good theoretical or empirical evidence to support the inclusion of a small company premium (on equity). We recognise that smaller firms may incur higher costs of debt but our estimates of the cost of debt are consistent with the actual costs of debt reported by Memoria, Westerleigh and LCC, as well as those submitted by independent funeral directors.

58. As discussed above, we consider in principle that funeral directors and crematoria may have different costs of capital but the data that we have been able to collect does not provide us with a good basis for estimating specific figures. We encourage submissions of reasoning and evidence in respect of how the average asset betas we have observed (see Table 5) may be decomposed between funeral director and crematoria services, as well as submissions of reasoning and/or evidence in respect of the sustainable gearing levels of the two activities.