Consumer Reference Group

Market risk premium - Issues raised in the ERA 2022 gas rate of return Focussed Consultation Discussion Paper

Presentation – 27 April 2022

Market Risk Premium Issues – Calibrated DGM

- Standard DGM and implied MRP

(1) $P = \dfrac{D\ (1+g)}{r-g}$ (2) $r = \dfrac{D\ (1+g)}{P} + g$ (3) MRP = r – risk free rate

- Weaknesses

  - Constant r and constant g for very long periods

  - With a constant r, changes in MRP and risk free rate are perfectly offsetting

  - P may not reflect rational pricing

  - r moves more than 1-for-1 with D/P and g

  - Difficult to estimate g and cash flow to investors more relevant, need to take account of new share issues,

  - Dividend estimates slow to adjust

- **Calibrated DGM** estimates g to ensure calibrated MRP each period on average equals historic MRP – ameliorates problems in agreeing on g and dividends

- Both r and MRP vary with the calibration and have an inverse relationship

Market Risk Premium Issues – Calibrated DGM

Figure 13: Calibrated DGM estimates
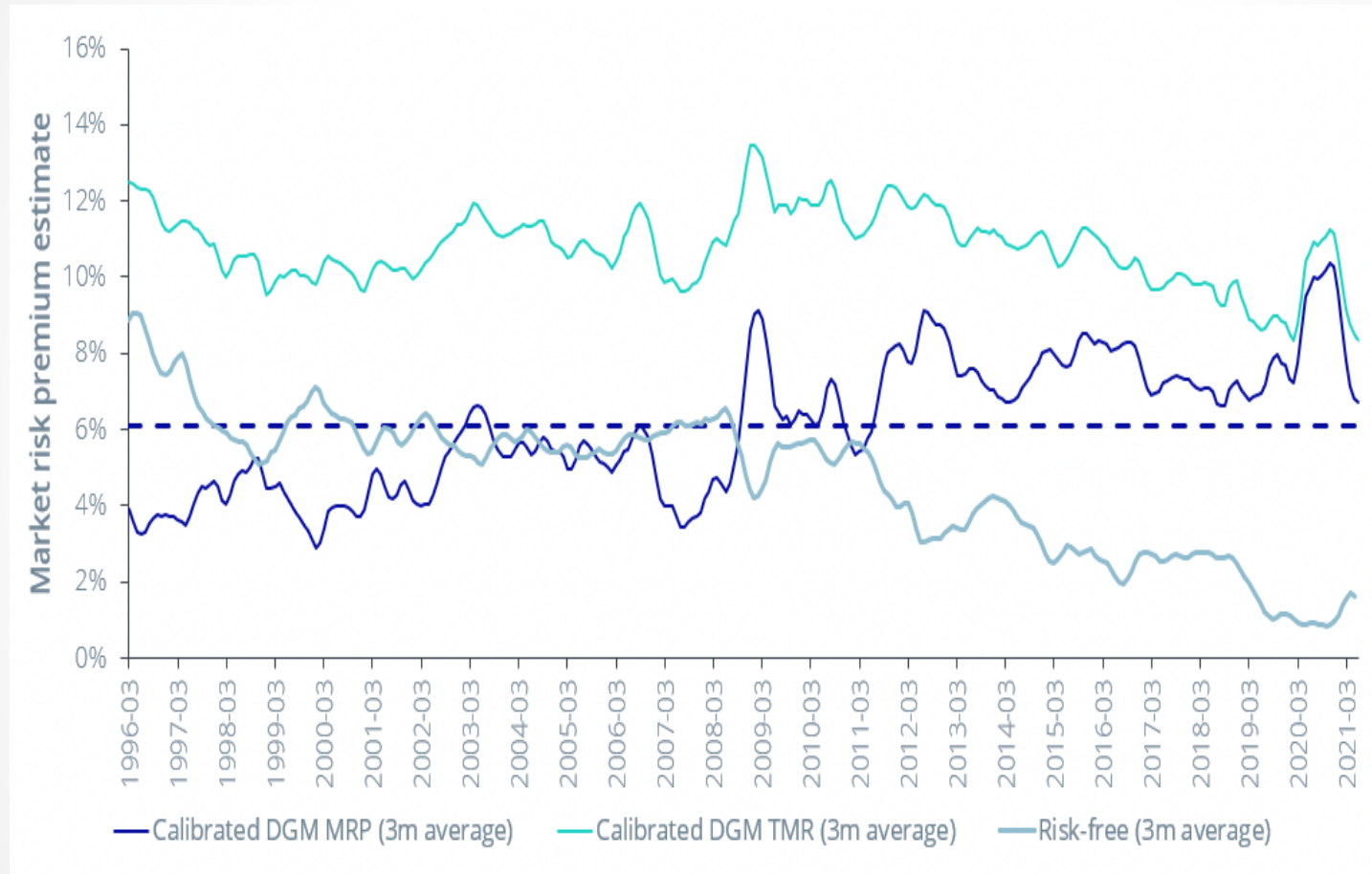
Source: Frontier Economics calculations in ENA 2021

Market Risk Premium Issues – Calibrated DGM

- Avoids problems with estimating g given MRP constraint

- But given MRP constraint, main potential use is different evidence supporting a recent inverse relationship between MRP and risk free rate

- AER 2021 Omnibus paper reviewed various evidence for such an inverse relationship –

  o No widely accepted theoretical basis

  o Any relationship likely to be time varying, with varying signs and cannot be reliably quantified

  o DGM subject to arbitrary filtering or adjustment of data and not sufficiently robust

- Need to consider all the evidence for any inverse relationship in order to establish best estimate of MRP for regulatory period

Market Risk Premium Issues – Combining inputs

- CRG considers
    - DGM estimates are still problematical and should not be given explicit weight in a formulaic approach

    - ERA should follow a similar approach as used to date giving most weight to historic MRP as a starting point and use DGM and conditioning variables to select a point estimate based on recent information

    - MRP needs to apply over the life of the instrument
        - most weight to historic MRP,
        - formula approach not convincing,
        - no clear evidence of insufficient incentive for efficient investment