

Two questions posed by the AER

1. What is your view on the weight of evidence about whether the MRP varies through time?

- The preponderance of evidence suggests that the *prevailing* MRP changes over time.
- The *long-run average* MRP is likely to be much more stable.

2. If you think the evidence suggests that the MRP varies through time, how does it vary?

- I agree with CEPA that the Australian empirical evidence supports a “strong and convincing negative relationship between the implied MRP and the RfR” since at least the mid-1990s.

Does the MRP vary over time?

- There are two components to the MRP:
 - The market's assessment of the quantum of risk; and
 - The price of risk (i.e., the compensation required by a diversified investor for bearing each unit of risk).
- One would have to believe that neither of these things change over time in order to think the prevailing MRP is constant.
- The empirical literature on this topic is focussed on investigating the conditioning variables that might explain changes in the prevailing MRP – not on investigating whether the MRP changes.
- Harris & Marston (2013):¹ Does a constant MRP fit with the observed facts in the real world?

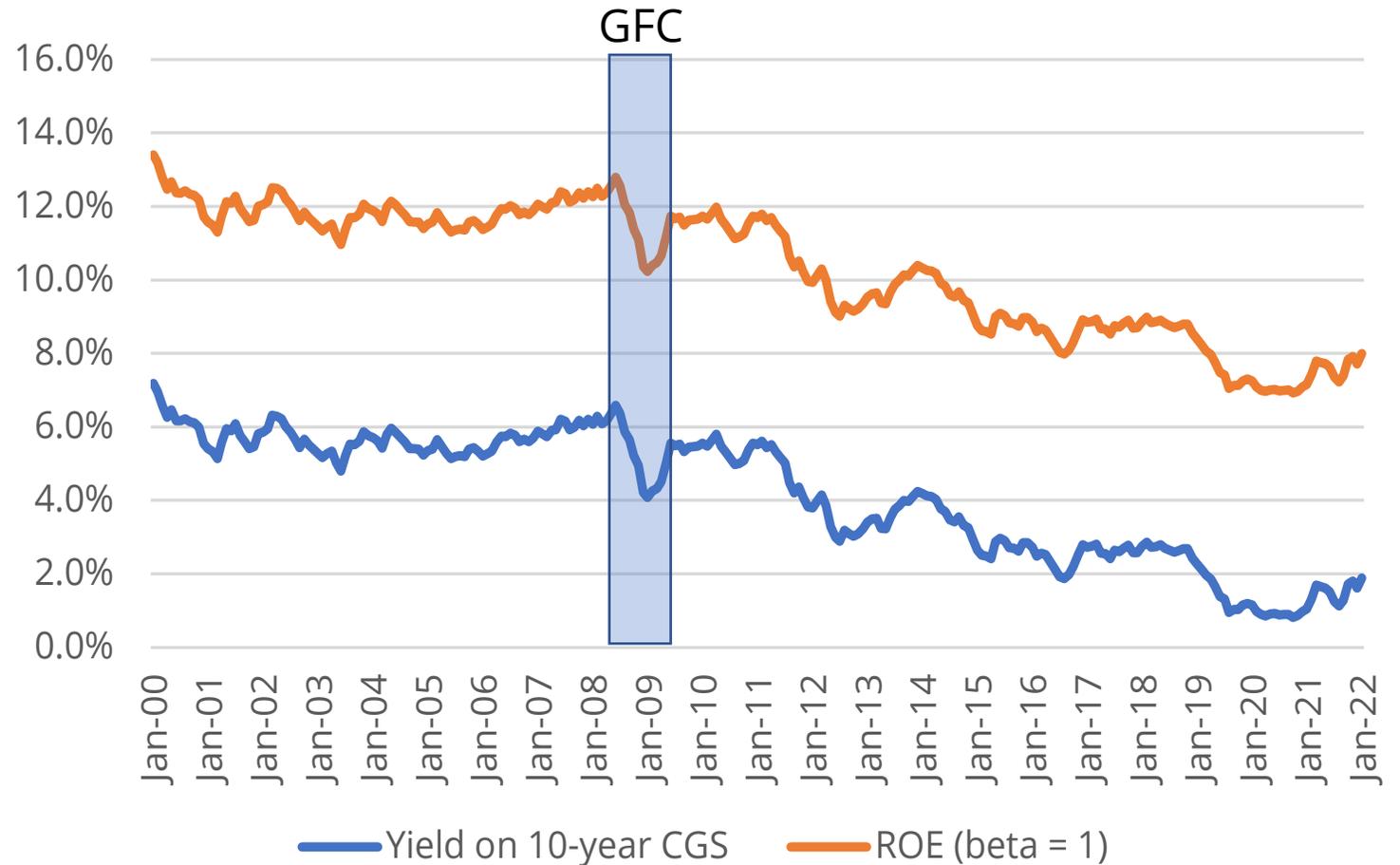
“...an implication of using a constant risk premium in Equation (1) [the SL CAPM] is that estimates of the market required return on equity will change one to one with interest rates: every 100 basis point change in the interest rate will change the market required return by 100 basis points.”

¹ Harris, R. S., Marston, F. C. (2013), Changes in the market risk premium and the cost of capital: Implications for practice, *Journal of Applied Finance* 23(1), pp. 1-14.

Is it plausible that the required return on equity *fell* by 15% during the peak of the GFC – in lockstep with government bond yields?

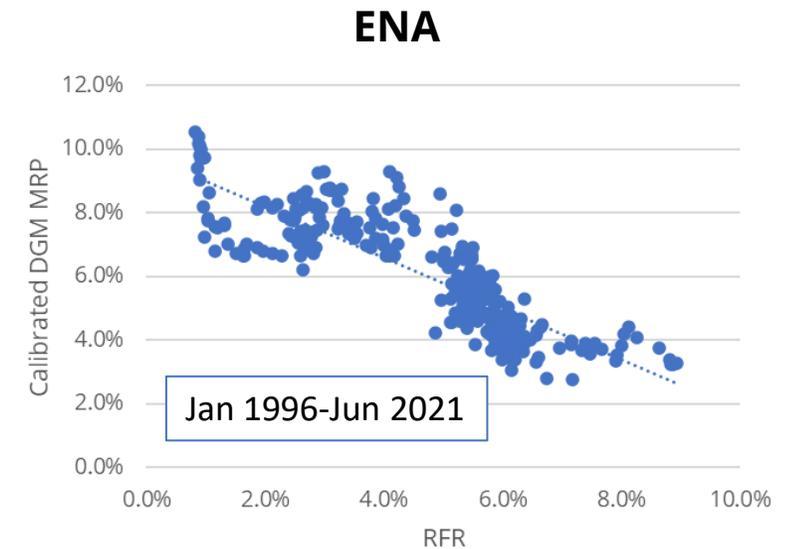
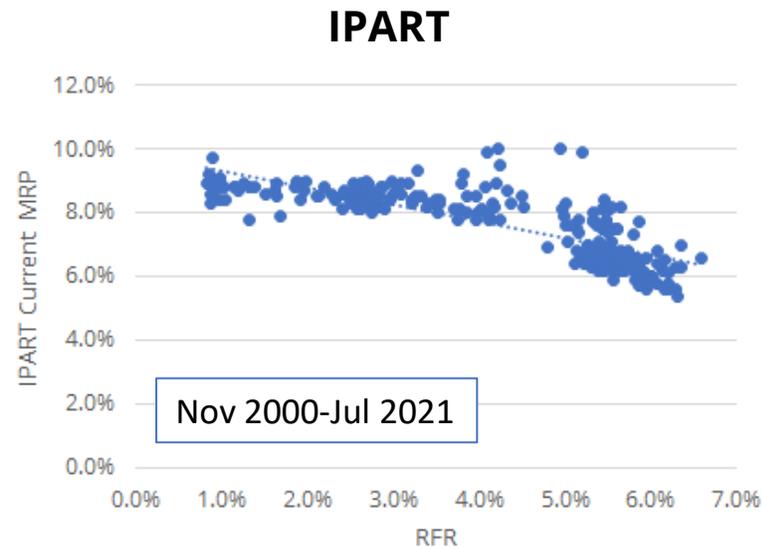
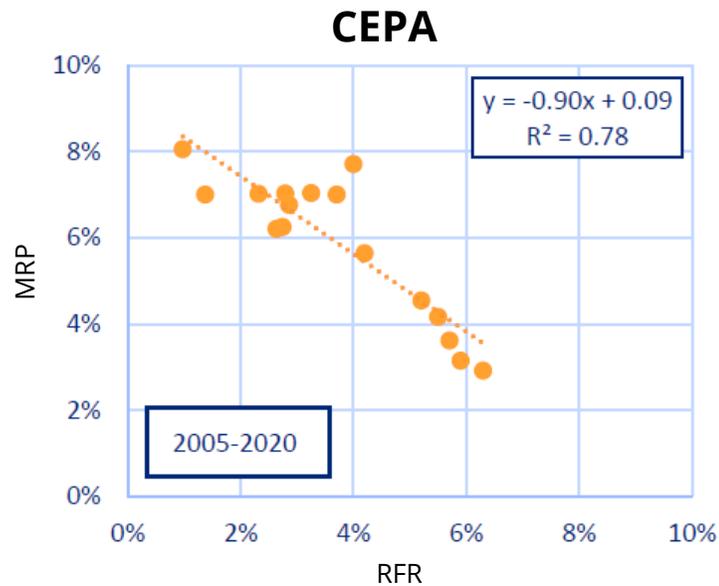
A few key conclusions reached by Harris & Marston (2013):

- *“Shareholder required returns change by less than do long-term government interest rates. Put another way, the equity market risk premium is higher (lower) in low (high) interest rate environments. As a consequence, cost of equity estimates using a constant risk premium assumption are highly likely to underestimate (overestimate) required returns in low (high) interest rate environments.”*
- *“Improved practice would incorporate an estimate of the market risk premium that reflects current market conditions and the relationships among the equity risk premium, interest rates and key metrics of market risk.”*



How does the prevailing MRP vary in Australia?

- There is convincing empirical evidence from multiple sources that since at least the mid-1990s there has been a negative relationship between the prevailing risk-free rate and the prevailing MRP.
- A few examples (there are many others) based on DGMs :



The observed negative relationship between the MRP and the RFR is an outcome of applying the model to the available data – not a hard-wired input or assumption.