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FILE NOTE

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DATE:

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SUBJECT:

Hurdle Rate Literature

DISTRIBUTION:

James Mellsop

Hi James,

I have completed a high level review of the survey and econometric evidence cited by Graeme Guthrie in his paper of 21 April 2015 regarding the appropriate hurdle rate to assume in respect of a potential wool scouring entrant. My initial review of the survey and econometric-based articles cited suggests that:

- While Professor Guthrie is correct in his statement that a hurdle rate of 20 percent is plausible, it is higher than the average rates reported in the literature and would be at the top end of the range as suggested by those articles; and
- The articles use a mixture of nominal and real rates.

In particular, Professor Guthrie cites survey evidence reported by Jagannathan et al, (2014). The survey findings include a nominal average hurdle rate of 15 percent, which corresponds to a 12.7 percent real average hurdle rate. Note that the entry model is real, so this is the relevant number. Jagannathan et al. (2014) also cite two other studies, each reporting nominal discount rate below 15 percent, which in turn suggest real discount rates below 15 percent:

- o Graham and Harvey (2011a, 2012) report average nominal discount rates of 14.7 percent (in 2007), 14.8 percent (in 2011), and 13.5 percent (in 2012); and
- o Poterba and Summers (1995) report an average nominal hurdle rate of 17.8 percent (12.2 percent in real terms).

The second article referred to by Professor Guthrie is a survey reported by Brunzell et al. (2013). In this survey, respondents were asked to state their required rate of return for the whole company (WACC). The questionnaire also included questions on the capital budgeting methods used by each firm. Based on the phrasing, context and general cross-over in terminology, it may be that some of the respondents provided their hurdle rate rather than their strict WACC. The average WACC in this paper is 10.69 percent. The paper is silent on whether the WACC reported is nominal or real. Only three of 146 survey responses reported a WACC equal to or higher than 20 percent.

Finally, Professor Guthrie refers to econometric evidence by Chirinko and Schaller, (2008). This paper does not set a range of, or average estimate of a market hurdle rate, but rather estimates the "irreversibility premium" by which a hurdle rate exceeds the estimated cost of capital. These

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estimated premiums are real, post tax figures but do not directly provide guidance on the appropriate hurdle rate for a potential wool entrant.