

# Equity Risk Premium Survey 2013

## – Results and Comments



This is the third year that the Equity Premium Research group has polled the profession on the size and use of the Equity Risk Premium (ERP).

We believe the survey and reported results helps actuaries to obtain a view on the range of ERP in use – allowing them to either confirm that they are within consensus range or to have the opportunity to justify any outliers. Surveys of this type can help identify errors of omission and help create more informed opinions.

We define the ERP as ‘the expected excess of the return of the market portfolio of equities over the long-term sovereign bond rate’. As such, the Australian ERP is defined as the expected return on the Australian share market (the S&P ASX 200 Accumulation index is a reasonable proxy) less the 10-year Australian government bond yield. The expected return on the Australian share market includes any benefits assigned to the value of franking credits.

This year’s survey took place from the fifth to the 14 September 2013. A total of 71 people participated in the survey. We had 46 people provide a response to the question of what ERP over the next 10 years would they use for Australian equities, including franking credits. This compared to 49 responses in 2012 and 45 in 2011.

The respondents were spread widely across the actuarial profession in the four practice areas of Life insurance; Investments; General insurance and Super. However, only one respondent identified themselves as working in financial planning. ‘Other’ category respondents included banking; government; strategy; and health.

The range of responses for Australian ERP was from 0.0% to 7.0%. The mean was 4.8% and the median was 5.0%. This compared to a mean of 4.6% in the 2012 survey and 4.7% in the 2011 survey.

Excluding franking credits (assuming nil value where no response was made) the mean Australian ERP was 4.3% and the median was 4.2%.

A respondent who responded with an ERP of 0.0% commented that “ERP is a regularity, not a law of nature. In layman’s terms this means it does not exist.” See Richard Fitzherbert’s paper *A Review of the Methodology of Forecasting Long-term Equity Returns*, for the

2007 Actuarial Biennial Convention for a discussion on that topic.

It should be noted that as the definition of the ERP for this survey was the expected excess return of the equity market over the sovereign bond rate, it did not require the respondent to assume the ERP was a ‘risk premium’. That said, it is commonly considered that share prices are more volatile than bonds and as investors are in general risk averse they will expect a higher return from equities.

The next lowest forecast ERP was 2.0%. Four people forecast an ERP of 3.0%. On the high side, two people forecast an ERP of 7.0% and the next highest was one person using 6.5%.

There were 43 respondents who answered the question as to the level of franking credits used in their Australian ERP. No adjustments were made by 11 of the respondents. Two respondents said they allowed for franking credits by making direct adjustments to the valuation using actual tax paid rather than adjusting the ERP. Of the remaining 30 respondents, the mean allowance for franking credits was 90bp and the median allowance was 100bp.

A total of 39 people responded to question regarding the adjustment to ERP for international equities. 18 respondents make no adjustment. Two respondents said they just exclude franking credits. Of the remaining 19 respondents, the median adjustment is a reduction of 75bp. The mean adjustment is a reduction of 50bp (or 76bp if all data is assumed to be reductions in ERP).

A total of 34 people responded to the adjustment to ERP for emerging equities. 12 respondents make no adjustment. For the remaining 22 respondents, the median adjustment is an increase of 75bp. The mean adjustment is an increase of 87bp.

One respondent commented that he was “disappointed by the focus on the level of equity risk premium. More interesting is the uses – to set profitability targets for incentives, to value risky cashflows (assets or liabilities), value pension liabilities and illustrate benefits to investors. These are areas of controversy where we need to improve the methodology.”

The survey asked for what purpose respondents need an estimate of the equity risk premium. Respondents could tick multiple uses. The responses were quite well spread with 22% using it for the valuation of unlisted assets; 37% using it for the valuation of risky liabilities;



39% using it for portfolio construction / asset allocation and 26% using it for own research. No one said that they were using it for scholarly articles. Other responses included using it for determining the WACC for regulated utilities; regulatory returns; valuation of listed equities; fair profit margin construction; pricing and illustration of benefits, setting profitability targets; financial projections; and internal capital modelling.

Most respondents (69%) said that they had left the ERP unchanged in the past 12 months. Two (4%) said that they had increased the ERP and 12 (27%) have reduced the ERP. The most common reduction in ERP was 50bp, with a mean reduction of 82bp. The most common reason (67%) cited for a reduction in the ERP was changes to prospective economic growth. Changes in market level (33%) and changes in expected earnings (25%) were also chosen as reasons for a lower ERP. A respondent commented that the reduction in ERP followed a review of the Dimson / Marsh / Staunton paper in Credit Suisse Global Returns Year Book 2013.

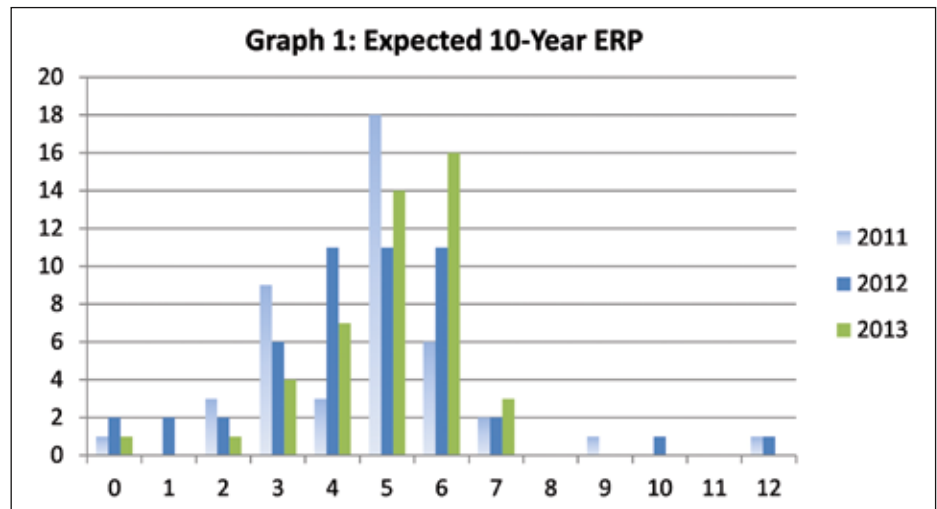
In the 2011 and 2012 ERP surveys, two respondents reported using an ERP of 9% or more. These upper outliers were not evident in this survey.

It should be noted that despite the lack of upper outliers and more respondents saying that they have reduced than increased the Australian ERP in the past year, the mean of 4.8% is 20bp higher than the mean of 4.6% from the 2012 survey.

Of the 28 respondents who indicated whether or not they make any allowance for Australian sovereign bond default risk, 26 respondents make no allowance. Only one person makes an explicit allowance for Australian sovereign default risk (a 20bp allowance). The other respondent commented that "this is for a stochastic asset model and so the default risk of sovereign bonds are implicit – there are no explicit adjustments to the ERP".

For International bonds, four of the respondents make allowances for sovereign default risk, typically 20-50bp. One person commented that "Sovereign bond default risk will depend on the individual country, and should be adjusted based on the Lang / Teoh paper to the securities institute in 1999."

For emerging market bonds, nine respondents said they make allowances for



**TABLE 1: EXPECTED 10-YEAR ERP BY USE**

	2012	2013	Count
Valuation of unlisted assets	5.5	5.3	10
Valuation of risky liabilities	5.2	4.7	16
Portfolio construction / asset allocation	4.5	4.8	17
Own research	5.2	4.7	12
Scholarly articles	4.2	n/a	0
Other uses	4.4	5.1	9
<b>TOTAL</b>	<b>4.6</b>	<b>4.8</b>	<b>46</b>

sovereign default risk. The most common allowance was 100-200bp, with one person suggesting up to 1000bp may be appropriate depending on the individual market.

One respondent said the "Arithmetic mean is a silly metric for ERP". We note there is much industry debate about the use of arithmetic or geometric mean for future returns. The arithmetic mean is seen to be a better estimate for getting the expected result and for returns that are independent. Some people argue that as we move to longer time horizons and where the returns are serially correlated a geometric mean may be a more appropriate statistic to use. Other people argue that it lies somewhere between the geometric mean and the arithmetic mean.

Other general comments included:

- "ERP is a risk premium to the suitable rate e.g. 10-year bond. That rate would already include an inherent risk loading implied by term structure of interest rates."

- "Equity Risk Premium is that used for long term asset class assumptions for determining Strategic Asset Allocations. A different (higher) ERP applies to the valuation of liabilities".

Another comment referred to the Australian Energy Regulator's current review of Rate of Return Guidelines for energy providers, and noted that the Essential Services Commission of Victoria will be reviewing its WACC guidelines next year.

We encourage ongoing industry debate around the determination of the ERP. From the wide range of respondent comments it is clear there is much opportunity for further investigation and actuarial research. **A**

*The ERP research group consists of Martin Hickling (Convenor), Anthony Asher and Mark Hancock. We would welcome further volunteers.*