

*Equity Risk Premiums (ERP): Determinants,  
Estimation and Implications – The 2020 Edition*

*Updated: March 2020*

*Aswath Damodaran*

*Stern School of Business*

[adamodar@stern.nyu.edu](mailto:adamodar@stern.nyu.edu)

---

---

## *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2020 Edition*

---

The equity risk premium is the price of risk in equity markets, and it is a key input in estimating costs of equity and capital in both corporate finance and valuation. Given its importance, it is surprising how haphazard the estimation of equity risk premiums remains in practice. We begin this paper by looking at the economic determinants of equity risk premiums, including investor risk aversion, information uncertainty and perceptions of macroeconomic risk. In the standard approach to estimating the equity risk premium, historical returns are used, with the difference in annual returns on stocks versus bonds, over a long period, comprising the expected risk premium. We note the limitations of this approach, even in markets like the United States, which have long periods of historical data available, and its complete failure in emerging markets, where the historical data tends to be limited and volatile. We look at two other approaches to estimating equity risk premiums – the survey approach, where investors and managers are asked to assess the risk premium and the implied approach, where a forward-looking estimate of the premium is estimated using either current equity prices or risk premiums in non-equity markets. In the next section, we look at the relationship between the equity risk premium and risk premiums in the bond market (default spreads) and in real estate (cap rates) and how that relationship can be mined to generate expected equity risk premiums. We close the paper by examining why different approaches yield different values for the equity risk premium, and how to choose the “right” number to use in analysis.

*(This is the eleventh update of this paper. The first update was in the midst of the financial crisis in 2008 and there have been annual updates at the start of each year from 2009 through 2019)*

designed more to capture shifts in sentiments rather than to estimate equity risk premiums.<sup>45</sup>

b. Institutional Investors/ Investment Professionals: Investors Intelligence, an investment service, tracks more than a hundred newsletters and categorizes them as bullish, bearish or neutral, resulting in a consolidated advisor sentiment index about the future direction of equities. Like the Shiller and UBS surveys, it is a directional survey that does not yield an equity risk premium. Merrill Lynch, in its monthly survey of institutional investors globally, explicitly poses the question about equity risk premiums to these investors. In its February 2007 report, for instance, Merrill reported an average equity risk premium of 3.5% from the survey, but that number jumped to 4.1% by March, after a market downturn.<sup>46</sup> As markets settled down in 2009, the survey premium has also settled back to 3.76% in January 2010. Through much of 2010, the survey premium stayed in a tight range (3.85% - 3.90%) but the premium climbed to 4.08% in the January 2012 update. In February 2014, the survey yielded a risk premium of 4.6%, though it may not be directly comparable to the earlier numbers because of changes in the survey.<sup>47</sup>

While survey premiums have become more accessible, very few practitioners seem to be inclined to use the numbers from these surveys in computations and there are several reasons for this reluctance:

1. Survey risk premiums are responsive to recent stock prices movements, with survey numbers generally increasing after bullish periods and decreasing after market decline. Thus, the peaks in the SIA survey premium of individual investors occurred in the bull market of 1999, and the more moderate premiums of 2003 and 2004 occurred after the market collapse in 2000 and 2001.
2. Survey premiums are sensitive not only to whom the question is directed at but how the question is asked. For instance, individual investors seem to have higher

---

<sup>45</sup> The American Association of Individual Investors (AAII) surveys investors every week and reports sentiments shifts, <http://www.aaii.com/files/surveys/sentiment.xls>.

<sup>46</sup> See [http://www.ml.com/index.asp?id=7695\\_8137\\_47928](http://www.ml.com/index.asp?id=7695_8137_47928).

<sup>47</sup> Global Fund Manager Survey, Bank of America Merrill Lynch, February 2014. In more recent surveys, we were unable to find this premium.

- (and more volatile) expected returns on equity than institutional investors and the survey numbers vary depending upon the framing of the question.<sup>48</sup>
3. In keeping with other surveys that show differences across sub-groups, the premium seems to vary depending on who gets surveyed. Kaustia, Lehtoranta and Puttonen (2011) surveyed 1,465 Finnish investment advisors and note that not only are male advisors more likely to provide an estimate but that their estimated premiums are roughly 2% lower than those obtained from female advisors, after controlling for experience, education and other factors.<sup>49</sup>
  4. Studies that have looked at the efficacy of survey premiums indicate that if they have any predictive power, it is in the wrong direction. Fisher and Statman (2000) document the negative relationship between investor sentiment (individual and institutional) and stock returns.<sup>50</sup> In other words, investors becoming more optimistic (and demanding a larger premium) is more likely to be a precursor to poor (rather than good) market returns.

As technology aids the process, the number and sophistication of surveys of both individual and institutional investors will also increase. However, it is also likely that these survey premiums will be more reflections of the recent past rather than good forecasts of the future.

## Managers

---

As noted in the first section, equity risk premiums are a key input not only in investing but also in corporate finance. The hurdle rates used by companies – costs of equity and capital – are affected by the equity risk premiums that they use and have significant consequences for investment, financing and dividend decisions. Graham and Harvey have been conducting annual surveys of Chief Financial Officers (CFOs) or companies for roughly the last decade with the intent of estimating what these CFOs think is a reasonable equity risk premium (for the next 10 years over the ten-year bond

---

<sup>48</sup> Asking the question “What do you think stocks will do next year?” generates different numbers than asking “What should the risk premium be for investing in stocks?”

<sup>49</sup> Kaustia, M., A. Lehtoranta and V. Puttonen, 2011, *Sophistication and Gender Effects in Financial Advisers Expectations*, Working Paper, Aalto University.

<sup>50</sup> Fisher, K.L., and M. Statman, 2000, *Investor Sentiment and Stock Returns*, *Financial Analysts Journal*, v56, 16-23.