A Comprehensive Strategy to Reduce Black Swan Risk
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by Adam Butler

Larry Swedroe and Kevin Grogan will be presenting a webinar on this book on April 12. Our newsletter subscribers will be sent an invitation to attend this webinar, once registration is open. In the meantime, check this page for a list of our upcoming webinars.

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The first edition of Larry Swedroe’s and Kevin Grogan’s book, Reducing the Risk of Black Swans, was an instant classic. For the first time, the authors introduced to retail investors the idea that they don’t need to rely so heavily on equity beta to generate the long-term returns they require to meet their investment goals. Instead, they proposed that investors should seek to harvest returns from other risk factors – specifically the small-cap and value premia – to seek equity-like returns with less exposure to equity bear markets.

In this second edition, Larry and Kevin take the concept much further. Taking advantage of the democratization of more esoteric alternative return premia over the past five years, they build a compelling case for a genuine multi-factor strategy that is accessible to retail investors. They make a rigorously defended case for allocations to a variety of academically validated strategies with successful live track records and associated funds, which are uncorrelated with one another, and traditional portfolio constituents. The resulting portfolio has the potential to deliver equity-like returns over the long term, with surprisingly little dependence on the equity risk premium (ERP).

The book begins with a review of the long-term evidence on the ERP. This is an intuitive place to start, as equities dominate most investors’ portfolios. Larry and Kevin document a strong relationship between valuations and long-term returns to stocks. While there is a wide distribution of potential outcomes, average returns are much lower when stocks are expensive in the context of their historical range of valuations. The authors’ models show future returns for stocks are likely to be well below their long-term average. This sets the stage for an exploration of alternative sources of return to help fill the gap.

The first edition spent a great deal of time exploring the history of factor investing. This edition preserves the original’s in-depth background on the arc of factor investing in academia. There is an exploration of the most common factor models, with a focus on CAPM as well as Fama-French and AQR factors. The authors take time to show that these factors represent alternative sources of return, and that they are uncorrelated to the ERP. As a result, investors can create more efficient portfolios – that is, portfolios with higher expected returns at the same level of risk, or similar returns with less risk – by incorporating exposures to these factors.

A case study

The authors provide a case study that is especially salient for risk-averse investors. Consider a world with just two investments – the U.S. total-market equity index with an expected return of 7% and five-year Treasury bonds at 5%. An investor with a required nominal return of 6.5% would to allocate 75% to equities (0.75 * 7%) + (0.25 * 5%) = 6.5%. Now let’s expand our investment universe to include exposures to two well-known factors: small cap and value. Per the authors, small-value stocks have historically produced a premium return of 3.8% per year over the U.S. total market. By allocating half of the equity sleeve of the portfolio to the U.S. total market and the other half to U.S. small-value stocks, an investor would have achieved his target 6.5% return with just a 40% allocation to stocks, and 60% allocation to bonds: (0.2 * 10.8%) + (0.2 * 7%) + (.6 * 5%) = 6.56%.

It is this revelation that invokes the title of the book. Recall that Nassim Taleb coined the term “black swan” to describe unusual events that have a large impact. Many investors consider the global financial crisis in 2008-2009, which saw equities decline by over 50% peak-to-trough, to have been a financial black swan. Larry and Kevin note that the 75/25 U.S. total-market equity/five-year Treasury portfolio above would have lost 24.5% in 2008. However, the portfolio consisting of 20% U.S. total market, 20% U.S. small-value stocks and 60% five-year Treasury bonds would have declined just 5.3%. Hence, by adding alternative sources of risk (in this case small-cap and value premia), an investor has the potential to
achieve long-term returns that rival those of traditional stock/bond portfolios, and with significantly less exposure to black swan-type losses.

Chapter 4 investigates the results of a recent study by Louis Scott and Stefano Caglia. Using robust simulation techniques, the paper's authors examined how well factor diversification (including small, value, momentum, and quality) improved expected terminal wealth and the odds of sustaining a retirement portfolio. Larry and Kevin parse the paper's results and observe that factor exposures helped to mitigate downside risk and improve returns, even when the analysis is conducted on historical factor returns that have been reduced by 50%, to account for overgrazing (i.e., the possibility that returns from exposures to those factors have eroded over time as more assets have been invested in them). The paper also demonstrates that a portfolio of diversified factor exposures would have dominated even a skilled market timer in terms of terminal wealth.

**Alternative investments**

Part II of the book deals with alternative investments, with chapters devoted to the authors' five favorite strategies: alternative lending, reinsurance, volatility, style premia and time-series momentum (also called trend-following). Each chapter in this section has a similar structure, beginning with an exploration of the theoretical basis for the premium. The authors address why they believe the premium exists, and who is on the “other side of the trade.”

The theoretical assessment is followed by an extensive analysis of the seminal literature. Larry and Kevin bring to bear evidence from several articles supporting the persistence, pervasiveness, and economic and statistical significance of each premium. They also describe why they expect the premiums to be sustained and discuss barriers to arbitrage. The authors bring a practitioner's pragmatism to these discussions, warning investors to expect smaller, but still very attractive premiums in the future as markets become more efficient. For each premium, they also weigh the pros and cons of several products that investors might use to access them.

A key takeaway from Part II is that investors should seek returns from sources that are uncorrelated with the stocks and bonds that form the core of their portfolios. Alternative lending has exhibited credit risk, but the typical short duration of alternative loans has minimized exposure to term and inflation risk. Reinsurance and style premia have the potential to deliver equity-like returns with virtually no correlation to stocks and bonds. While harvesting volatility from equities alone may exhibit unpleasant pro-cyclical risk, correlations declined substantially when the premium was harvested from a variety of asset classes. On the other hand, time-series momentum has historically behaved like an intermediate-term long straddle-options strategy. Returns to time-series momentum have been generally uncorrelated with stocks and bonds in normal markets; however, when volatility rises around recessions, time-series momentum has a history of producing strong positive returns. As a result, trend-following mutual funds may be especially useful in a portfolio. (Note: Larry examined how an allocation to alternatives would have fared during the February market volatility in a recent blog post here).

Chapter 10 is capital allocators can develop an action plan. Larry and Kevin provide a case study to illustrate how to optimize portfolios that include allocations to alternatives. They start with the premise that, in mostly efficient markets, all premia should deliver similar risk-adjusted returns. If this assumption holds (or is even close), then the optimal portfolio would allocate the same amount of risk to each premium. Portfolios would allocate more capital to premia with lower risk (like bonds), and less capital to premia with higher risk (like stocks). A portfolio constructed in this way is said to have “risk parity.”

Using data from the Ken French and AQR data libraries, the authors examine the performance of portfolios that include exposures to common market factors. Incredibly, portfolios that diversify into a roughly equal allocation to market beta, size, value, momentum, and quality factors have achieved almost three-times the risk-adjusted performance of a standard equity portfolio from 1958-2016. Moreover, this diversified portfolio of factor exposures has underperformed a U.S. total stock market portfolio in just 3% of three-year periods over the same time frame.

Not to be missed, the book also includes several appendices that answer many of the questions that are prompted by the concepts in other chapters. I found the appendix on Monte Carlo simulations fascinating. The authors examined the impact to retirement outcomes from including either a 15% or a 25% allocation to the five major strategies explored in Part II, taken from the equity sleeve of a more traditional portfolio. The improvements are non-trivial. For a retiree withdrawing 4% real over a 30-year horizon, by adding a small-cap value tilt to the equity sleeve and replacing 25% of the equity sleeve with equal weights in alternative lending, reinsurance, volatility, style premia and time-series momentum, the probability of success would have risen from 70% to 92%.

To summarize, Larry and Kevin have created a near-perfect guide for practitioners and investors who are concerned about prospective returns from stocks and bonds in the current environment. The book explains how to think about the value of diversification and presents at least five novel strategies with exhaustive attention to detail. Even better, readers will come
away with specific options they can use to gain access to these strategies, using exactly the same products the authors recommend for their own clients.

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