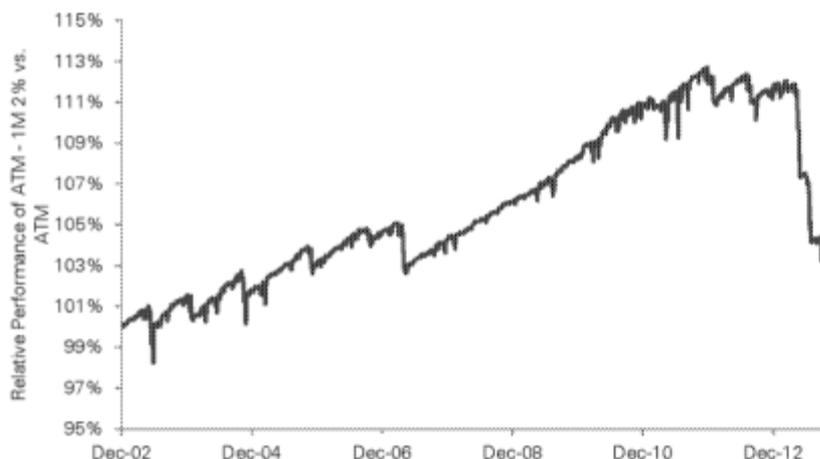




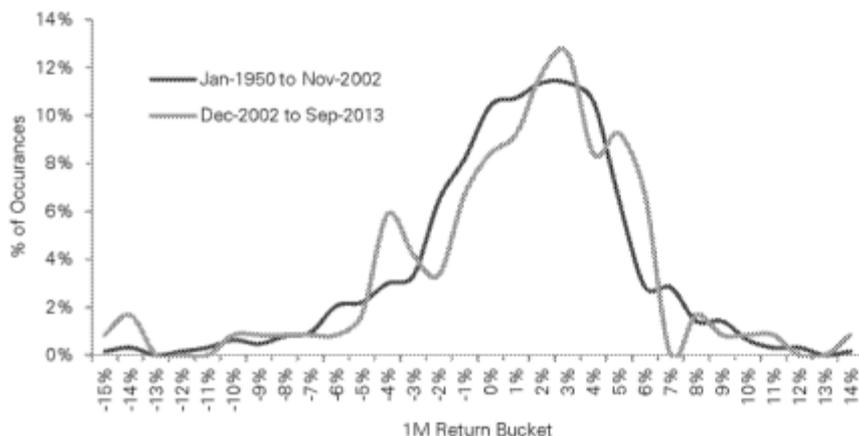
Figure 13: The Apr-13 to Sep-13 period has seen significant underperformance from financing long-dated calls with 1M calls



Source: Deutsche Bank, Bloomberg Finance LP

The backtest period is very representative for 1M risk. The main risk of the short 1M call occurs in violent rallies. Figure 14 shows that the frequency of sharp rallies in our backtest period is comparable to that from the prior ~50 years. If anything, we tended to see slightly higher occurrences of big 1M rallies in our backtest period.

Figure 14: Distribution of 1M SPX returns



Source: Deutsche Bank, Bloomberg Finance LP

Call spreads have had better risk-adjusted performance than all other strategies studied

Spreading a call option by selling a higher strike call reduces net delta exposure. So, call spreads tend to have lower returns in rallying markets but provide better downside protection (see Figure 9 above).

However, looking at the entire backtest period between Dec-02 and Sep-13 (both up and down markets), we find that call spreads tended to have annualized returns largely in line with outright call positions. Not surprisingly, call spread strategies experienced much lower volatility and higher risk-adjusted returns (see Figure 15 to Figure 18).