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DNA of a Manager Search:

Equity Overlay

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Contents

03 Why read on?
04 Rising risk-consciousness
06 Defining a strategy
10 Manager selection
11 Key takeaways

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Contact details
Toby Goodworth, Managing Director and Head of Diversifying Strategies, tgoodworth@bfinance.com
Pravir Sharma, Senior Analyst, psharma@bfinance.com

Why read on?

Derivatives-based overlay strategies to protect against equity losses have become increasingly popular through the past twelve months among pension funds, endowments and other asset owners.

Investors are seeking more explicit forms of protection as the era of artificially-stimulated asset prices gives way to rising market volatility amid tighter monetary conditions, geopolitical tensions and trade war concerns. While many sophisticated investors have spent the past decade building up their "implicit" downside protection in the form of diversifying strategies, the prospect of severe downturns can strengthen the case for more "explicit" safeguards on investment portfolios.

Case by case, investors' motives for applying equity overlays are rather different. Some simply have low tolerance for losses at the stakeholder level, regardless of the investment horizon or funding ratio; some face high immediate liabilities relative to inflows, such that losses cannot be handled easily; some are acting based on purely technical considerations, such as the need to protect committed capital for future investments.

Yet, whatever the cause, the decision to apply a more explicit risk control approach involves a number of critical choices. Some of these are relatively complex, not just from a technical standpoint but also from the perspective of governance and stakeholder buy-in. These can include the decision to use single-period versus multi-period overlays, the degree of customisation, where to place caps in terms of both upside participation and downside losses, how to handle margining requirements and much more.

In order to illustrate some of these issues, this short paper – the latest in bfinance's DNA of a Manager Search series – explores the case of an equity risk overlay implementation recently undertaken by a UK pension fund. We hope that this analysis may prove useful to peers that are currently considering or embarking on such strategies.

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Rising risk-consciousness

What happens to my portfolio when equities head south?

To some extent, this question has led the portfolio construction conversation since 2008 – a year when supposedly diversified portfolios proved to be correlated in crisis conditions and popular risk models fell short. Many investors overhauled their approaches in the subsequent years to reduce equity factor risk and create more “all-weather” profiles.

Until relatively recently, the emphasis had primarily been on implicit rather than explicit protection, such as greater allocations to strategies that exhibited a lower correlation with equities but delivered appropriate returns in an anaemic interest rate environment. From an industry standpoint, alternative investments have been the most obvious beneficiary of this era. We have seen the rise of unlisted infrastructure, private debt, alternative risk premia and an increasingly colourful universe of multi-asset strategies (see *Seven Shades of Multi-Asset*).

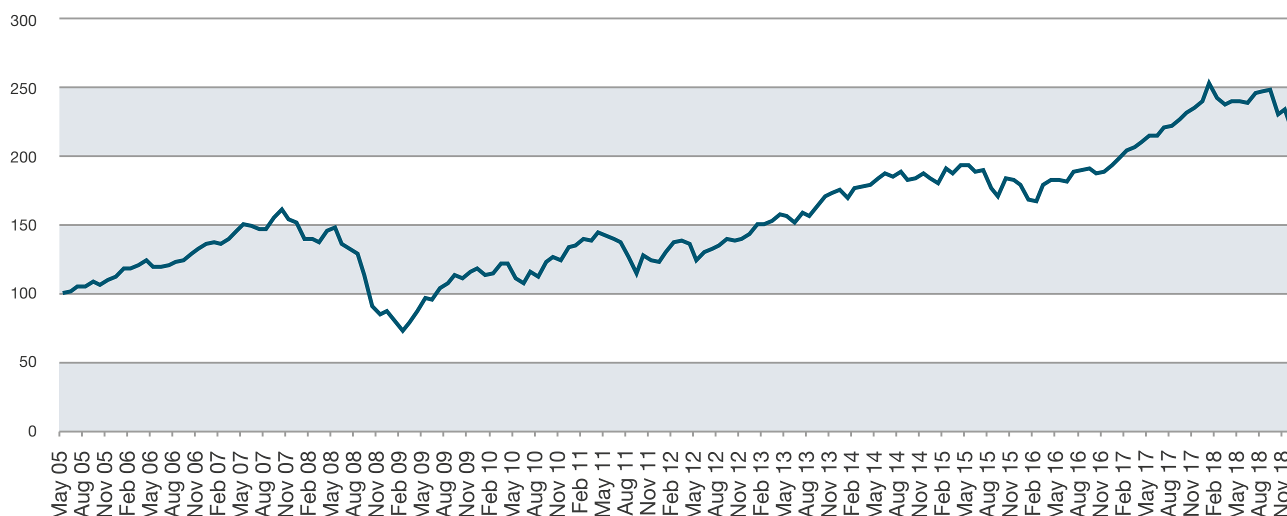
Those asset owners who took more aggressive measures to insulate against losses – such as running up large cash holdings or, at the most explicit end of the spectrum, applying hedges to protect against equity downturns – were largely unrewarded for such strategies in 2015-17. The cautious investor can sometimes find that stakeholders run out of patience before protective measures pay off.

2018 brought a turning point in this dynamic. We now see investors exhibiting considerably stronger appetite for the more explicit forms of downside protection. Diversification might have made the average investor’s tightrope more stable, but overlays provide the clearest safety net underneath that tightrope. This safety net becomes considerably more relevant in times of market stress, when correlations tend to converge. We have certainly observed this downwards convergence occurring in the fourth quarter of 2018.

The increasing use of overlays is not, of course, restricted to equities – the focus of this particular case study. Other types include (but are not limited to) LDI, volatility, rebalancing and currency overlays (see *Managing Currency Risk in a Two-Speed World*).

FIGURE 1: MSCI ACWI TRACK RECORD IN USD

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Annualised Performance	-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.4%	12.7%	34.6%	-42.2%	11.7%
Volatility	13.5%	2.8%	11.2%	13.9%	8.8%	9.3%	13.5%	18.1%	20.5%	23.8%	25.0%	9.9%



Source: MSCI

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Defining a strategy

The UK pension fund in this case study was seeking to appoint a panel of external managers to help mitigate equity risk over a medium-term period by implementing a put-spread collar.

This was the first time that the investor had sought to implement an equity overlay. The board and stakeholders were committed to supporting the new approach in order to ensure that appropriate funding levels would be maintained until the date of the scheme's next funding review.

This client strongly desired a simple, straightforward approach. Yet when it comes to applying overlays, simplicity is not always straightforward. Investors should make conscious, clear decisions regarding the degree of customisation that may be appropriate, the amount of tactical adjustment that is desirable and the types of instruments which may be employed, with an awareness of the trade-offs that are involved.

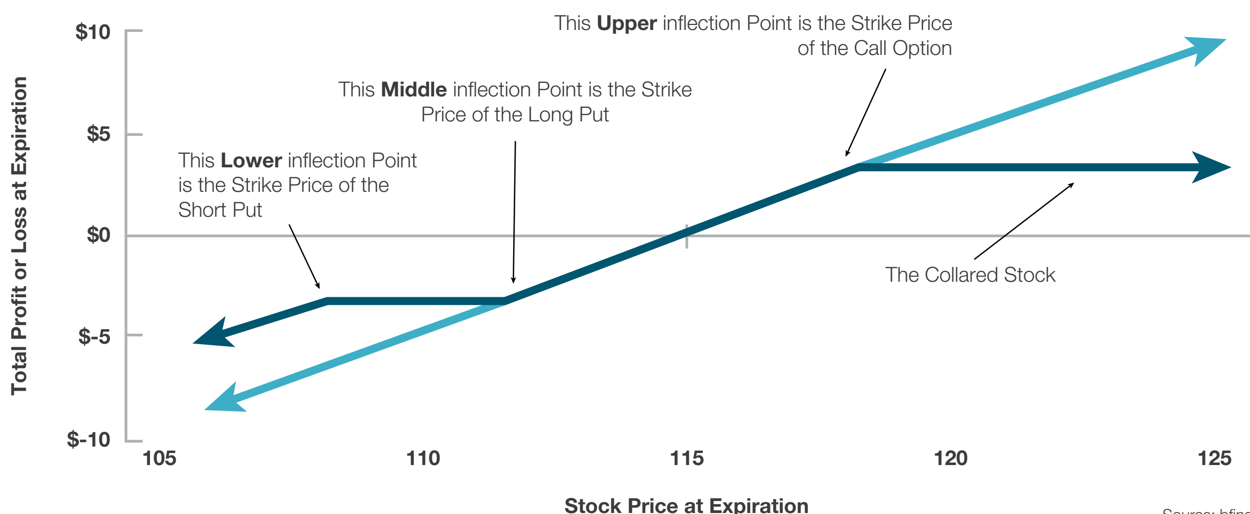
Jargon buster: put-spread collar

The simplest form of protection is a **protective put** option: the right to sell an asset at a specified strike price and at a specific expiration date, plus a long position in the asset.

When applying an equity **collar**, an investor surrenders some potential upside to pay for that protection. This can be done by going long a protective put and short a **covered call** option (the right to buy an asset at a specified strike price, covered by a long position in the asset). Both are **out of the money** (the strike price on the call is higher than the price of the asset; the strike price on the put is lower than the price of the asset). In cost terms, the sale of the short calls can offset the purchase of the long puts.

With a put-spread collar, we replace the long put with a long **put-spread** (the simultaneous purchase of a put at a higher strike and sale of a put at a lower strike). The put-spread costs less than an outright put; it allows the investor to achieve a put strike price that is closer to being "at the money" without paying a premium for the trade. It can also protect against falls of a certain percentage rather than all the way to zero.

FIGURE 2: ILLUSTRATION OF A PUT-SPREAD COLLAR



Source: bfinance

When seeking to implement an equity overlay, there are six key questions that investors should consider.

No two clients have exactly the same equity exposures, or exactly the same equity protection preferences. There are many points of potential differences, but these six areas of discussion provide an instructive starting point.

1: "How long do we want the protection to last?" Depending on the purpose of hedging and the cost of appropriate options at the time of implementation, it could make sense to apply a put-spread collar for any period of time between 1-3 months and 1-3 years. Yet investors should bear in mind that early exits from option structures may substantially reduce the pay-out received (e.g. less upside participation). Those wishing to apply long-term protection might want to consider more dynamic approaches rather than purely static approaches for the relevant period (see point 2).

Investor's answer: medium-term protection required for internal governance reasons.

2: "How much manager discretion would be tolerated?" Strategies in this field broadly fall into one of three categories: Static, Evolving Static and Dynamic (see Figure 3). The Static approach in this case would be a "set-and-forget" strategy; Evolving Static would be a sub-division into shorter periods (e.g. three six-month structures), and a Dynamic approach would involve active trading throughout the period. In our experience, most of the managers are capable of offering approaches across this spectrum, although their preference and aptitude for doing so varies. Pension funds and similar clients generally prefer more simple approaches, but most wish to retain some degree of flexibility in theory: it can be helpful to know that the manager has a range of tools in the toolkit and the ability to use them if appropriate.

Investor's answer: preference for a straightforward, transparent (more static) structure but willing to examine a variety of approaches.

FIGURE 3: THREE TYPES OF STRATEGY

STATIC	EVOLVING STATIC	DYNAMIC
Protection level is decided upon at the outset, cost is driven by the implied volatility in the market at that time and the intention is to hold the option structure until maturity. Transparent, simple and implemented fairly quickly. Sensitive to timing ("pin risk"): there is less flexibility if the market moves in the opposite direction. *Cost: 3 – 6bps p.a.*	Similar to static overlays but, should market dynamics change over time, the manager will adjust the hedge accordingly and establish a new option position. Example: three six-month collars rather than one eighteen-month collar. Less sensitive to inception date but more vulnerable to path-dependency.	A series of overlapping option positions to create a more complex solution. Less sensitive to inception date: protection levels evolve with the market. Less transparent in terms of where the protection level actually is. Greater complexity entails higher costs. *Cost: 8-30bps p.a.*

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Defining a strategy continued

3: "What costs are we willing to bear?"
Some investors strongly prefer a "zero-premium" or "premium neutral" structure, such that the sale of short calls fully offsets the purchase of long puts; others are more willing to pay an option premium up front (e.g. a simple protective put). Readers should note that industry participants often describe these zero-premium structures as "zero cost" but this is slightly misleading: the investor will still be paying a small amount to trade options.

The asset manager's own fees should also be considered, as discussed in the subsequent section on manager selection: these can range from approximately 3 to 30bps per annum depending on the strategy. Smaller investors and/or investors seeking to protect only a modest amount of equities (e.g. to meet capital calls) should be aware that several managers in this space apply a minimum fee, which can make otherwise attractive rates somewhat uncompetitive for smaller mandate sizes. Certain providers, it seems, are simply not interested in winning small pieces of business in this strategy and are happy to price themselves out of consideration.

Investor's answer: strong preference for a zero-premium approach.

4: "Where do we want to place the strikes?"
The question of how much upside participation to give up and how much downside participation to bear deserves close consideration. In particular, a pension fund or endowment investors may decide to obtain protection only on losses between certain points (e.g. between -15% and -40%) rather than all the way to zero. There are two reasons for this. Firstly, it is mandatory for certain asset owners to hedge out to the -100% mark, which drives up the cost of premiums in this segment of the market.

Secondly, if one is a long-term investor with a belief in some degree of mean reversion in markets, losses of this magnitude represent a good time to buy and hold equities, perhaps re-investing the capital protected between -15% and -40%. The investor should consider how the risk overlay policy may conflict with or complement the asset allocation policy.

Investor's answer: willing to give up equity market gains above 10% and participate in losses up to 10%, with protection required from -10% to -30%.

5: How should collateral be treated? (Margining requirements.) An investor must consider whether they would only like cash or gilts to be used as collateral or whether they are willing to use synthetic equity, which does introduce implicit leverage to the portfolio. All managers are happy to use cash or gilts, and a large proportion of managers are happy to provide synthetic equity solutions.

Investor's answer: preference for cash or government bonds (gilts) as collateral; investor less willing to use a synthetic equity approach though certain managers did advocate this.

6: "How closely should the protection match my portfolio?" This is an intriguing subject, and one where a manager's customisation and client servicing abilities can shine through. In terms of simplicity and transparency, the most straightforward approach is often to reference a popular passive index on which the overlay is managed. However, doing so will open up a degree of mapping risk between the investor's actual positions (e.g. an active management strategy, a less mainstream index e.g. smart beta, an emerging market equity investment) and the protection provided.

A closer fit can be achieved: tighter tailoring can enhance accuracy and minimise disruption to the physical portfolio. Yet this comes at a cost. The trade-off between simplicity of implementation and precision of protection should be understood not just by the investment team but by stakeholders. In certain cases, a manager may even recommend using an option in an entirely different market if compelling pricing skews exist and the investor is tolerant of basis risk.

The tools at hand may include listed options ("exchange-traded options"), flex options (flexible listed options), OTC equity index options, futures, total return swaps and, in some cases, ETFs.

Although most (if not all) managers theoretically have capability across the full range of instruments, analysis of provider activity indicates strong preferences towards different types of instrument depending on the manager. In our recent experience, the majority of managers tend to favour OTC options, citing cost efficiency and flexibility. OTC options allow for customisation of the maturity, strike and underlying index. Yet there are drawbacks. Operationally, these involve a considerably longer set-up time than listed options. Counterparty risk also creeps into the equation when considering OTC options. Meanwhile, others exhibit a clear leaning towards listed equity index options, supported by the liquidity of the underlying market. Where there is ample liquidity, such as in the major equity indices, listed options tend to be cost efficient as well as swift and easy to implement.

Investor's answer: open to various approaches. No strong internal view on whether OTC derivatives or liquid equity index options would be preferable, but keen to appoint partners with capability across all fields.

Jargon buster: synthetic equity

Synthetic equity is a futures-based replication of cash equity. In other words, if an investor has stocks in an index, a manager providing a derivatives overlay can effectively replicate that portfolio using futures by selling the cash equity portfolio, investing 20% in futures and keeping 80% as collateral. This introduces a modest level of leverage to the portfolio.

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Manager selection

While the previous section outlines a number of differences in manager capability, “softer” criteria often prove more critical to the investor’s choice of partner in this area.

From the perspective of quantitative analysis, the downside of the extensive customisation required for these strategies is that providers’ track records do not prove to be a useful barometer of how they might have performed for another institution. As such the focus is directed towards the qualitative factors such as investment process, team experience and client servicing, including willingness to support the investor throughout the life of the overlay.

In this case the investor saw 28 managers in this open tender. Most of these were global asset managers with multi-asset capability, although boutiques also had a small presence. Many were well-known household names, likely to be familiar to, or even engaged for another purpose by, the average client. All else being equal, investors in this type of strategy do often seek a partner that can offer broader synergies in terms of existing counterparties or known relationships.

Interestingly, the ten smaller managers had more overlay experience (average: 30 years) than the remainder of the group (average: 15 years). In addition, team sizes vary drastically depending on the range of overlay strategies being provided, with dynamic approaches and/or those featuring greater use of OTC derivatives tending to be more highly staffed. Implementation tends to be rules-based: these strategies are about solid processes, not star fund managers.

In most cases, the strategy offered sat as part of a firm’s “solution” division, although this was not always the case. In some cases, we do find that the solutions team can act as an effective “Rosetta Stone” between the demands of the investors and the more technical requirements of the investment team. When a group like this performs effectively, the customisation process can be much more straightforward. Although we do not necessarily advocate that clients look towards providers with portfolio solutions groups; the particular needs of the investor may make this degree of support helpful.

Outcome: the client appointed a panel of five managers who offered a broad range of strategies and experience with a similar client type. The managers distinguished themselves from the peer group with the ability to offer a deeper understanding of the client’s objectives beyond just the application of an overlay solution.

SEARCH AT A GLANCE

Source: bfinance

Key takeaways

Investor appetite for equity overlay strategies appears to have increased through 2018, based on demand from bfinance clients. There are many different ways of implementing more explicit forms of downside protection using derivatives, with substantial variability in terms of costs and outcomes.

Equity overlay strategies can be categorised into three types: Static, Evolving Static and Dynamic. While the more flexible approaches are less sensitive to inception date, they tend to be less transparent and more expensive.

Most relevant managers offer both static and dynamic strategies, and have capability across all instrument types (OTC derivatives, listed options, flex options). Yet closer examination reveals important differences in terms of preferred instruments, client servicing and the ability to support a particular investor's needs through the life of an overlay.

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Office locations

Amsterdam
Symphony building-26th Floor
Gustav Mahlerplein 109-115
1082 MS Amsterdam
The Netherlands

T +31(0)20 794 61 00
www.bfinance.nl

Chicago
220 N. Green Street
Chicago IL 60607
USA

T +1 (312) 829-4353
www.bfinance.com

London
36 Queen Street
London
EC4R 1BN
England

T +44 20 7747 8600
www.bfinance.co.uk

Montréal
1250 René Lévesque Blvd. W
Suite 2200, Montréal QC
Canada H3B 4W8

T +1 514 393 4899
www.bfinance.ca

Munich
Promenadeplatz, 8
D-80333 München
Germany

T +49 89 55 29 59 00
www.bfinance.de

Paris
49, avenue d'Iéna
75116 Paris
France

T +33 1 45 02 64 00
www.bfinance.fr

Sydney
Level 13
135 King Street
Sydney
Australia

T +61 2 8973 7503
www.bfinance.com

Toronto
88 Queens Quay West
Suite 2500, Toronto
Ontario M5J 0B8
Canada

T +1 (416) 560-7275
www.bfinance.ca

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