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# Investment viewpoint

# Convertible bonds: a low governance equity hedge

For professional investor use only • Convertible Bonds

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**Executive summary**

- Pension schemes and insurers holding equities are exposed to the current uncertain environment, equity market volatility and a potential correction in stocks
- Convertible bonds, similar to equity options, could provide a flexible solution to address some of the issues related to the impact of a large drawdown
- Convertible bonds are corporate bonds with an embedded equity call option that enables investors to participate in equity rises, but with less exposure to downside risk
- Strategically, convertible bonds have provided attractive risk-adjusted return characteristics compared to traditional equity allocations
- Convertibles could be a powerful alternative to equity options, in our view, because they require a simpler governance framework and can provide more effective coverage to protect from volatility
- Reducing the equity allocation by 30% and replacing this with convertibles has historically protected a portfolio during drawdowns by approximately 20%
- It is important to target the 'right' convertibles if protection is the key motivation

## Current market volatility

Global equity markets have performed well in the first few months of 2019, rebounding from the sharp sell-off in December 2018. This performance, however, has notably accompanied an increase in uncertainty as the market is buffeted by geopolitical risk, including the US-China trade war. Such uncertainty has led to volatility in stock indices globally, and some pullback from the very highs hit earlier this year, at the time of writing this note.

Many pension schemes hold roughly 30-40% of their assets in equities and are therefore exposed to this uncertain environment, its accompanying volatility and a potential correction in stocks. Crucially, volatility could compromise a scheme's funding ratio and prolong the length of any recovery plan.

Some insurers also hold equities, and are subject to a potential lowering of solvency ratios if equity markets suffer losses.

Even without a large correction in equities, the current increase in volatility brings uncertainty to the planning that pension schemes and insurers must carry out.

This uncertainty and the need for protection have meant that many institutional investors have implemented equity option strategies to help protect their return seeking portfolio.

Convertible bonds could provide an alternative way for such investors to shield their equity exposure.

### Convertibles: the basics of higher Sharpe ratios

A convertible bond is a corporate bond with a fixed coupon and a set maturity date. In this regard, it is like any typical bond instrument. Convertibles, however, also contain an equity call option.[1] This option allows the holder to convert the bond into the common stock of the issuing company at some point in the future, if certain conditions are met. The details of the option – namely the number of shares into which each bond can be converted, and the conversion price – are set at the time of issuance.

Should equity markets rise, the convertible bondholder may choose to convert the bond into shares and participate in the equity market returns. But should equities fall, the option does not kick in and the holder still has the protection[2] elements of a bond. This means that convertible bondholders tend to be much less exposed to falls in share prices than a traditional equity holder – the bond element enables them to effectively dampen the equity downturn.

From 2004 to 2018, for instance, a convertible bond strategy would have enabled upside participation in global equity rallies, while also insulating investors from the downside in equities. As such, in an equity upturn, a convertible strategy would have captured roughly 70% of the MSCI World Index's returns. In an equity downturn, however, the convertible strategy only participated in about 40% of the returns.[3]

This diminished exposure to equity downside highlights one of the principal advantages of convertibles: they can offer better risk-adjusted returns than simply investing in straight equities. Because of their structure, convertible strategies typically feature higher Sharpe ratios than pure equity strategies over the long-term.

For instance, over the past 14 years, a convertible bond strategy could have achieved a Sharpe ratio of 0.88, on average, compared to an average Sharpe ratio of 0.38 for the MSCI World index.[4] Such risk-adjusted returns could prove particularly attractive for pension schemes and insurers looking to mitigate the impact of volatility on their equity allocations, in our view.

In addition to compelling risk-adjusted returns, other characteristics of convertibles could similarly suit the needs of institutional investors. Comprised of roughly USD 400 billion in issuance, the convertible bond universe is deep and offers ample choice. The convertible market is also well-diversified in terms of the profile of borrowers, the maturities of bonds, and the specifics of the embedded equity call options. Convertibles are senior to equities and on par with the corporate bonds that many investors hold.

1 An equity call option gives the holder the right (but not the obligation) to buy a stock at a set price until or on expiry date. The holder can therefore participate in a rising equity market above the strike price and has no exposure to a falling equity market beyond the cost of the option.
2 Capital protection represents a portfolio construction goal and cannot be guaranteed.
3 Sources: Equities: MSCI World TR (EUR-hedged); LOIM Convertible Bond Fund. Based on historical analysis of a convertible bond portfolio from December 2004 to December 2018. All figures EUR-hedged. For illustrative purposes only. Past performance is not a guarantee of future results.
4 Based on historical analysis of a convertible bond portfolio from December 2004 to March 2019. Sources: Equities: MSCI World TR (EUR-hedged); LOIM Convertible Bond Fund; TR Global Convertible Composite index. Past performance is not a guarantee of future results. For illustrative purposes only.

## An illustration: Cellnex

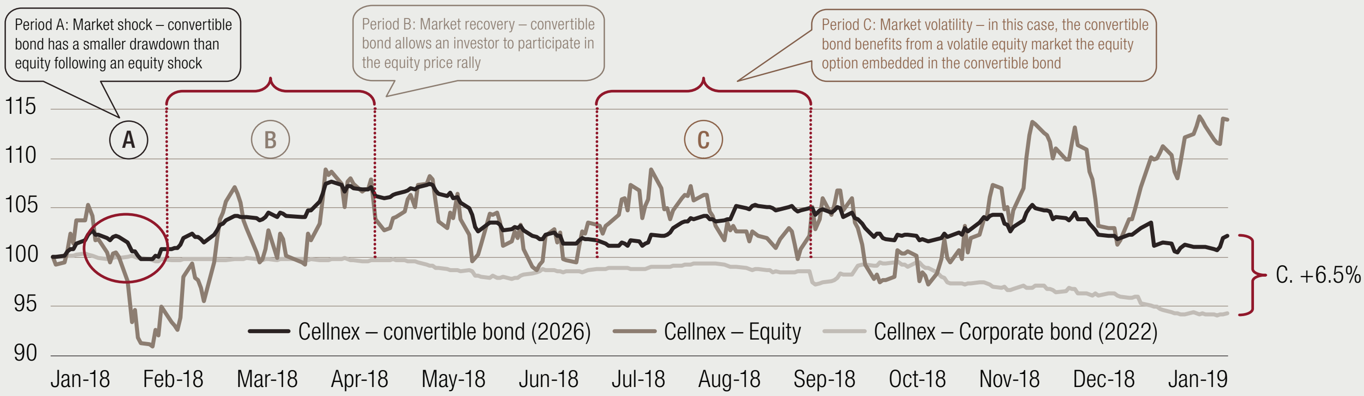
We compare how a convertible bond performed last year relative to the same issuer's stock and corporate bond to illustrate the various performance engines of convertibles relative to other instruments. Cellnex Telecom, an infrastructure operator for wireless telecommunications in Europe, is used as an example.[5]

Figure 1 shows how a Cellnex convertible bond performed from January 2018 to January 2019 relative to the Cellnex share and a Cellnex corporate bond.

In period A, the convertible bond shows lower drawdown than the share following an equity shock. In period B of a market recovery, the convertible bond allows an investor to participate in the equity rally. In period C of market volatility, the convertible bond benefits from a volatile equity market due to the increased value of the embedded equity option outperforming both the share and the bond.

Such a varied profile is well-suited to investors looking to reduce the impact of equity shocks, but nonetheless retaining the potential for equity upside when markets rally.

**FIG. 1 PERFORMANCE COMPARISON OF CELLNEX CONVERTIBLE BOND VERSUS CELLNEX EQUITY AND CELLNEX CORPORATE BOND.**




Source: LOIM, Bloomberg, January 2018 to January 2019. Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or securities. It should not be assumed that the recommendations made in the future will be profitable or will equal the performance of the securities discussed in this document. Past performance is not a guarantee of future results. The case studies provided in this document are for illustrative purposes only and do not purport to be recommendation of an investment in, or a comprehensive statement of all of the factors or considerations which may be relevant to an investment in, the referenced securities. The case studies have been selected to illustrate the investment process undertaken by the Manager in respect of a certain type of investment, but may not be representative of the Fund's past or future portfolio of investments as a whole and it should be understood that the case studies of themselves will not be sufficient to give a clear and balanced view of the investment process undertaken by the Manager or of the composition of the investment portfolio of the Fund now or in the future.

## Comparison with equity options

Equity options are a very useful tool for many investors looking to shape their return profile. Given their exposure, many pension schemes have recently implemented equity options to protect against volatility. For instance, a scheme may buy an equity put, funded by selling an equity call in a collar structure. This could partly insulate the scheme from the downside in equities. That said, although equity options might be useful to tailor return streams, such options also come with onerous governance requirements.

For instance, using equity options means investors typically must:

- Cover and manage collateral requirements
- Capture optimal timing for exit or entry from positions
- Assess whether to stop or roll the position at expiry

Convertibles, in contrast, provide a lower-governance way to gain optionality because they require no additional framework other than the capacity to invest in bonds. The embedded optionality in convertibles can also provide protection features that are longer-term, and more varied. In many cases, convertibles have outperformed equity options in the past.

The deep universe of convertible bonds has a longer average duration than equity options. Whereas equity options tend to be liquid only out to 1-year or so, the average maturity of convertible bonds (and therefore their embedded options) currently outstanding is 3 to 5 years.[6] At the same time, the longer average term of convertibles lends itself to investors that do not have adequate governance structures to accurately time the more frequent entry or exit required by equity options.

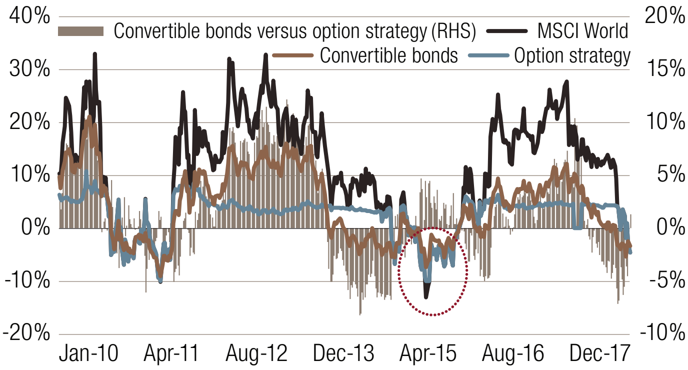
Convertible bonds have outperformed equity option strategies in a high proportion of instances over the past 8 years, providing relatively better and more effective protection from equity downturns.

5 Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or securities. Past performance is not a guarantee of future results. The case study provided is for illustrative purposes only and does not purport to be a recommendation of an investment in or a comprehensive statement of all of the factors or considerations which may be relevant to an investment in the referenced securities.

6 Source: LOIM, Bloomberg. Past performance is not a guarantee of future returns.

Figure 2 analyses how a convertible bond strategy performed against a zero-cost 1 year equity put spread collar.

**FIG. 2 CONVERTIBLE BONDS VERSUS 1 YEAR EQUITY OPTION STRATEGY (2010-2018)**




Source: LOIM, Bloomberg. Right hand side refers to the difference between the performance of convertible bonds and the structured equity options position. Left hand side refers to performance of convertible bonds, global equities and the structured equity options position. Refers to weekly rolling 1 year periods. For illustrative purposes. Past performance is not a guarantee of future returns.

The analysis assumes an equity options structure implemented as a 1 year zero-cost put spread collar on any given date between January 2010 – December 2017. One leg of the trade assumes that the investor is protected for share losses between 10% and 30% (i.e. a 90-70 put spread). This is funded by selling a call that involves giving up equity upside beyond a level such that the premium received is sufficient to pay for the put spread position. We then compare the outcome of the structured option position (zero-cost 1 year put spread collar and equity performance combined) implemented on any given date over our calculation period against holding convertible bond over the same period.

For a large part of the overall period, convertible bonds would have been a more effective way to address drawdown over a 1 year period. We estimate that convertibles outperformed the equity option hedge about 63% of times over the period being analysed, and that the average outperformance was about 1.7% during this period.

The probability of the convertible bond position being more effective over that period was higher, as shown by our analysis.

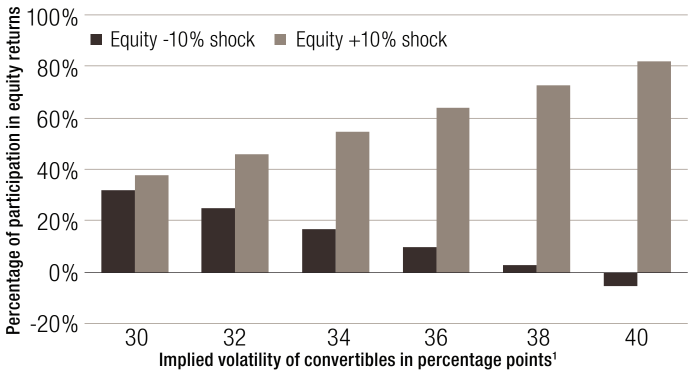
### Performance in different environments

Convertibles are uniquely adaptable and their performance changes in different volatility environments. Generally speaking, as volatility increases, the value of the option embedded in convertibles increases.

Figure 3 considers how the equity participation of convertible bonds might play out in various times of volatility. For instance, equity participation is expected to decrease when equity markets fall and volatility rises, as shown by the dark brown bars. This is because the convertible becomes more like a bond and the option gains in value. Conversely, equity participation is expected to increase when equity markets rise, as shown by the light brown bars. This is because as the option in the convertible nears the equity price, it gains in value.

This asymmetric nature of convertible bonds would be beneficial for pension schemes and insurers invested in equities.

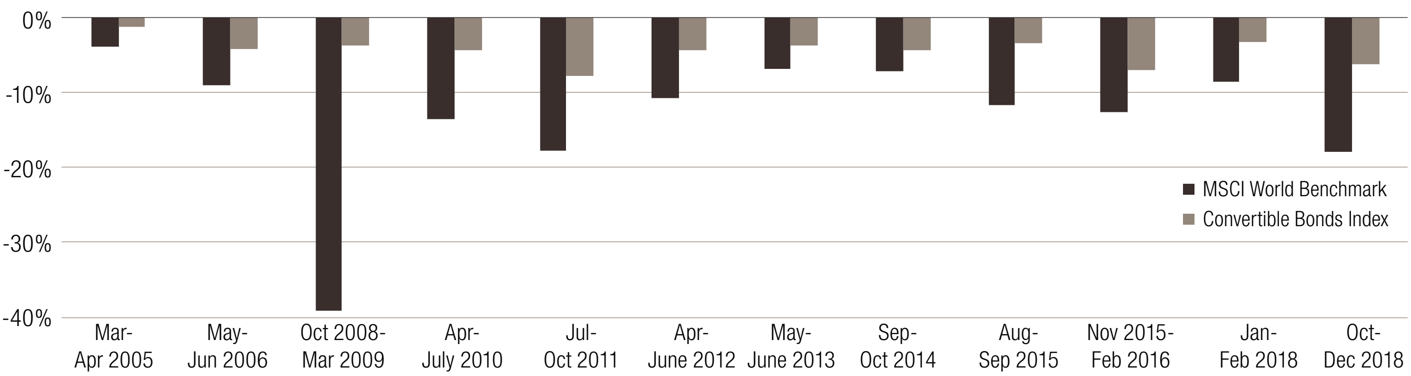
**FIG. 3 SCENARIO ANALYSIS: EQUITY PARTICIPATION OF CONVERTIBLES IN RISING VOLATILITY ENVIRONMENTS**




Source: LOIM, Bloomberg, May 2019. For illustrative purposes only.
[1] Based on Thomson Reuter Global Focus Convertibles Index hedged in EUR.
Simulated performance results do not reflect actual trading and have inherent limitations.

Convertible strategies have typically performed well historically during periods of equity corrections, with more muted drawdown than the MSCI World Index. In fact, in 7 of the past 12 correction periods over the last 13 years, equity drawdown has exceeded 10%. In contrast, convertible strategies have seen drawdown of less than 5% in 9 of the past 12 corrections, as shown in Figure 4.

**FIG. 4 CONVERTIBLE STRATEGY DRAWDOWN VERSUS MSCI WORLD DRAWDOWN DURING EQUITY CORRECTIONS (2005-2018)**




Source: LOIM, Bloomberg, May 2019. For illustrative purposes only. Based on Thomson Reuter Global Focus Convertibles Index hedged in EUR. Simulated performance results do not reflect actual trading and have inherent limitations. Past performance is not a guarantee of future results. For illustrative purposes only.

### Potential combination of equities and convertibles in a portfolio

Investors could use convertibles to temper the exposure of their equity allocation to volatility by rebalancing part of the equity allocation away from equities and towards convertibles. For instance, if a 100% allocation to equities were rebalanced to a 70% equities and 30% convertibles weighting, it could protect a portfolio by roughly 20% more from volatility, according to our calculations in the table below, based on historic drawdowns.

Table 1 shows the impact on drawdowns of different allocations to convertible bonds in an equity portfolio since 2005. The table shows how potential protection varies relative to the mix chosen, typically increasing when a higher proportion of convertibles is added to the portfolio.

As an example, in October 2008-March 2009, a 70% equities and 30% convertible split would have reduced drawdowns by 27% relative to a 100% equity allocation. An 80%-20% allocation would have lowered drawdowns by 18%, and a 90%-10% would have cut drawdowns by 9%.

Incorporating convertibles would have improved the resilience of the portfolio.

### Choice of convertible tailored to investor objectives

Similar to corporate bonds, convertible bonds also come in different risk profiles. It is important to tailor the convertible bond mandate to suit specific investor needs, and to optimise the distinctive features of the asset class. For instance, if pension schemes were to integrate convertibles into an equity portfolio to insulate against downside risk (instead of an option), we would highlight a few important aspects that should be incorporated in the mandate design.

Firstly, an investment grade rating for the convertible borrower is key to the bond's ability to withstand potentially increased credit risk to the bond floor when equities are falling. Convertibles necessarily entail credit risk, which must be carefully assessed.

Secondly, convertibles offer investors peak potential when they display the most balanced profiles. Convertibles are described as balanced when they combine a relatively large bond component (or bond floor) and meaningful equity sensitivity (or delta). A balanced profile optimises the asymmetric potential of a convertible to deliver upside participation in equities while retaining downside protection due to the bond characteristics. Balanced convertibles give investors the greatest bond-equity resilience to different market environments.

Lastly, sustainability is increasingly upending the traditional investment landscape in terms of both risks and rewards, and we believe it must be taken into account. As such, we screen all our convertible portfolios through the prism of sustainability to assess how it steers companies and their businesses. Our proprietary approach looks at how sustainability will drive both the potential for equity growth, and the risks to creditworthiness in the asset class. We believe that equipping our convertible specialists with a toolkit to incorporate sustainability helps them improve investment outcomes.

**TAB. 1 HOW DIFFERENT ALLOCATIONS TO CONVERTIBLE BONDS IN AN EQUITY PORTFOLIO REDUCE DRAWDOWN**

| | | | PROTECTION FACTOR | | |
|---|---|---|---|---|---|
| DRAWDOWN PERIODS | MSCI WORLD TR -HEDGED | CONVERTIBLE BOND STRATEGY | 90% EQUITIES, 10% CONVERTIBLE BONDS | 80% EQUITIES 20% CONVERTIBLE BONDS | 70% EQUITIES 30% CONVERTIBLE BONDS |
| March-April 2005 | -3.9% | -1.3% | 7% | 13% | 20% |
| May-June 2006 | -9.0% | -4.2% | 5% | 11% | 16% |
| Oct 2008-March 2009 | -39.2% | -3.8% | 9% | 18% | 27% |
| April 2010-July 2010 | -13.6% | -4.4% | 7% | 14% | 20% |
| July-October 2011 | -17.8% | -7.8% | 6% | 11% | 17% |
| April-June 2012 | -10.8% | -4.4% | 6% | 12% | 18% |
| May-June 2013 | -6.8% | -3.7% | 5% | 9% | 14% |
| Sept-Oct 2014 | -7.3% | -4.3% | 4% | 8% | 12% |
| Aug-Sept 2015 | -11.8% | -3.5% | 7% | 14% | 21% |
| Nov 2015-Feb 2016 | -12.6% | -7.0% | 4% | 9% | 13% |
| Jan-Feb 2018 | -8.6% | -3.3% | 6% | 12% | 18% |
| Oct-Dec 2018 | -17.9% | -6.3% | 6% | 13% | 19% |

Source: LOIM, Bloomberg. Convertible strategy refers to LO Funds–Convertible Bond Fund NA Hedged. Past performance is not a guarantee of future results. For illustrative purposes only. Capital protection represents a portfolio construction goal and cannot be guaranteed.

## Conclusion

Uncertain times call for resilient portfolios, particularly for pension funds and insurers. We believe that convertible bonds offer compelling arguments to mitigate exposure to volatility, both in terms of the asset class's higher Sharpe ratios and its lower governance features compared to equity options. Re-allocating part of an equity portfolio towards convertibles could provide more shelter, but must be tailored to optimise protection features.

## IMPORTANT INFORMATION

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