THE DRIVE YOU DEMAND

Investing late in the economic cycle

A market context favourable to convertible bonds

For Qualified Investors in Switzerland or Professional Investors or Eligible Counterparties as defined by the relevant laws.

UBP Convertible Bond | March 2018

UNION BANCAIRE PRIVÉE

Key points

- *Historically, the convex nature of convertible bonds has provided investors with long-term benefits, such as equity-like returns, lower volatility and reduced drawdowns.*
- *In addition, their embedded conversion option grants them much lower sensitivity to interest rate moves than straight bonds of similar duration.*
- *In comparison with listed call options, convertible bonds' embedded conversion option offers highly attractive benefits, including access to longer maturities and to a set of protection clauses.*
- *The benefits of convexity make convertible bonds an "all-weather" asset class. However, certain market environments are additionally beneficial for the asset class. We believe that we are currently in one of them.*
- *The normalisation process of monetary policies, which has started in the US and which should gradually spread across developed countries, poses increased interest rate risks for fixed-income instruments.*
- *Although we remain positive on equities for 2018, the current late economic cycle offers potential for higher volatility and greater dispersion risk in equity markets.*
- *Under such conditions, convertible bonds' convexity and lower interest rate sensitivity are deemed to be beneficial. On top of this, their embedded long-term option constitutes, in our view, a key tool to face the current late-cycle challenges.*

The long-term benefits of convertible bonds

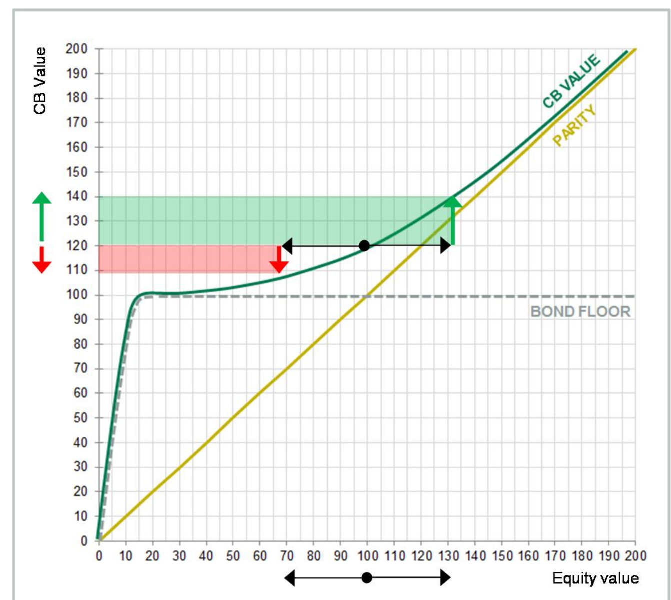
Introducing convertible bonds

Convertible bonds are debt instruments. However, unlike straight bonds, they can be either redeemed at par on maturity, or exchanged for a defined number of shares of the issuing company during the life of the instrument. That choice belongs to the bondholder.

The combination of bond-like and equity-like features is at the root of convertible bonds' asymmetric risk/return profile, also known as "convexity". Their bond component grants them the defensive qualities of straight bonds (such as a bond floor and a regular income), while their embedded "call" option allows exposure to changes in the underlying stock's price.

All other things being equal, the more the underlying equity rises, the more the convertible bond should participate in the upside, while the more the underlying equity falls, the less the convertible bond should suffer from its downside (Chart 1).

Chart 1: An asymmetric payoff

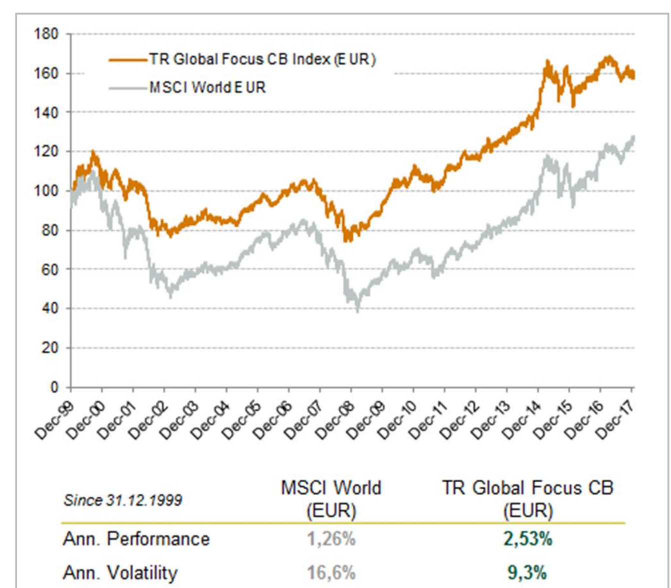


Source: UBP. For illustrative purposes only.

Convexity matters

Historically, the convex nature of convertible bonds has provided investors with long-term benefits compared with equities. Some of these are equity-like returns, significantly lower volatility (Chart 2) and reduced drawdowns (Chart 3).

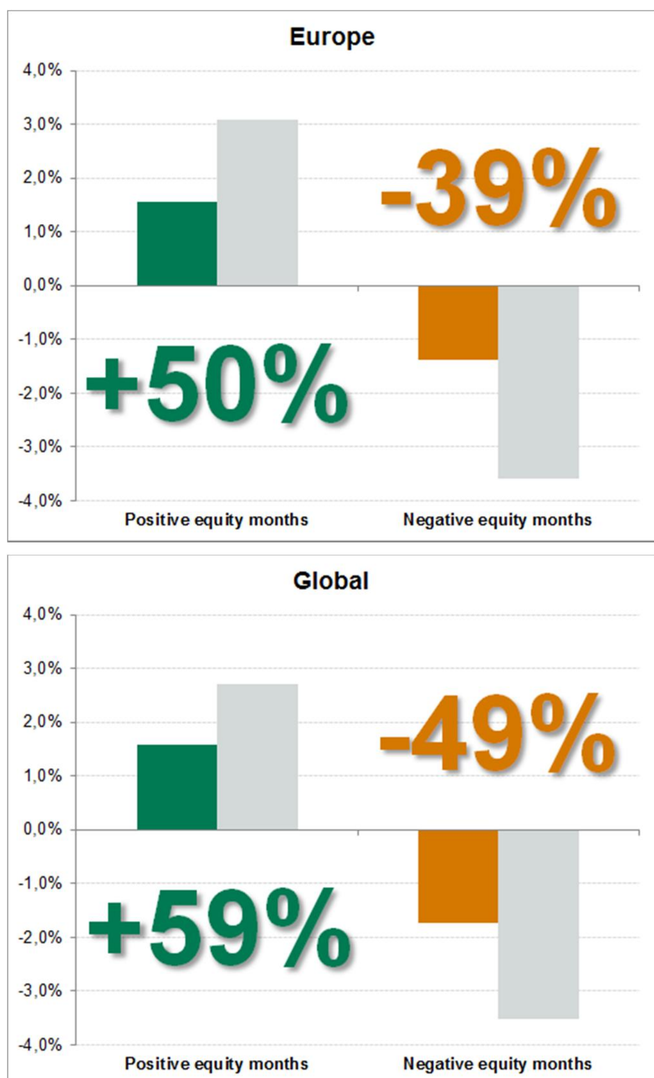
Chart 2: The long-term benefits of convexity (illustration in the global space)



Since 31.12.1999	MSCI World (EUR)	TR Global Focus CB (EUR)
Ann. Performance	1,26%	2,53%
Ann. Volatility	16,6%	9,3%

Sources: UBP, Bloomberg Finance LP, as at 31 January 2018. Convertible index: Thomson Reuters Convertible Global Focus Index (EUR). Equity index: MSCI World (EUR). Past performance is not a guide to current or future results.

Chart 3: Convertible bonds' average participation in positive & negative equity months (Europe, global)



Sources: UBP, Bloomberg Finance LP, 31 January 2018. Analysis based on monthly performance figures since 31 December 1999. Convertible indices: Thomson Reuters Convertibles Europe Focus (EUR) & Thomson Reuters Convertibles Global Focus (EUR). Equity indices: Stoxx Europe 50 NR EUR & MSCI World EUR. Past performance is not a guide to current or future results.

In the past twenty years, convertible bonds have suffered – on average – only 39% of equity markets' downside in the European space and 49% in the global space (based on monthly figures). This should be put in perspective with their participation in positive equity months: 50% in Europe, 59% at global level.

Caution on interest rates

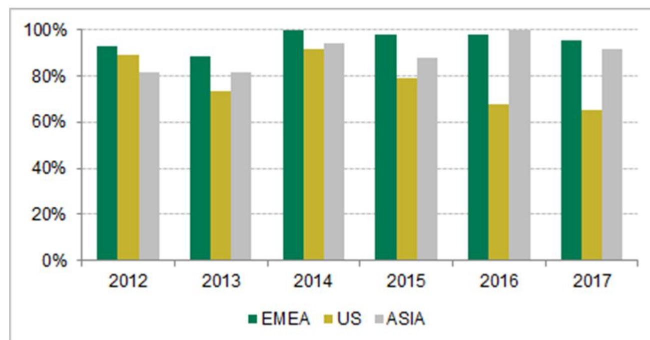
Relative to straight bonds, convertible bonds also offer key added value. To name but one: much lower sensitivity to interest rate moves, at similar duration.

This attractive feature comes from their embedded conversion option, which gains value with a rise in interest rates (all other things being equal) and hence partly offsets the negative impact on the bond component of the convertible instrument.

The hidden value in convertible bonds

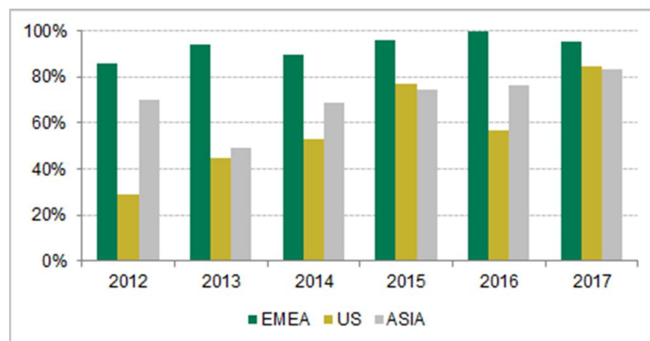
Following the 2008 global financial crisis, so-called "prospectus clauses" have become increasingly common in the convertible space. The best known of them – the dividend protection and ratchet clauses –, have today become the norm in the asset class (Charts 4 & 5).

Chart 4: Proportion of new convertible issues with dividend protection clauses*



Source: UBP. *Analysis based on the new convertible bonds included in our internal database for each year from 2012 to 2017. This analysis does not constitute an exhaustive representation of the convertible market.

Chart 5: Proportion of new convertible issues with ratchet clauses*



Source: UBP. *Analysis based on the new convertible bonds included in our internal database for each year from 2012 to 2017. This analysis does not constitute an exhaustive representation of the convertible market.

The mechanism of these clauses usually consists of an upward revision of the conversion ratio. They are designed to compensate the convertible bondholder for the potential detractive impact on the instrument value either of a dividend payment (dividend protection), or of a (potentially unwanted) takeover of the issuing company (ratchet). The formula applied is defined at issuance in the prospectus of the convertible issue. More rarely, they can take the form of cash compensation.

Often overlooked, prospectus clauses can still bring material, additional, long-term value to investors.

In any case, they are effective protection mechanisms against various events which can be part of an issuer's life cycle, and strengthen the case for "plain vanilla" convertible

bonds. While synthetic or structured products can try to reproduce the convex profile of a convertible bond, they do not offer investors similar protection.

The benefits of convexity make convertible bonds an “all-weather” asset class, where market timing is somehow less important. However, certain market environments are even more beneficial to the asset class. We believe that we are currently in one of them.

Investing late in the economic cycle

In 2017, the performance of equity markets was boosted by the combination of three main factors: accelerating global growth, surging corporate profits and central banks’ supportive monetary policies, in a context of moderate inflation.

With 2018 already well under way, we believe the first two pillars are still intact. Synchronised global growth is in place, economic growth is proving increasingly self-sustaining and corporate earnings remain on a strong path.

In contrast, inflation dynamics could be a headwind to this overall supportive macroeconomic backdrop – more specifically, inflation picking up faster than expected.

Increased interest rate risk

The sharp correction we saw in early February is, in our view, clear evidence of how unpredictable inflation dynamics can be, challenging the forecasts of a gradual and smooth normalisation process of monetary policies and, in turn, those of a gradual rise in government yields.

In this context, convertible bonds’ intrinsic lower sensitivity to interest rates is deemed to be beneficial.

Looking at periods when 10-year yields increased significantly (more than 120 bp) in the past twenty years, both in Europe and in the US, clear patterns emerge (Chart 6).

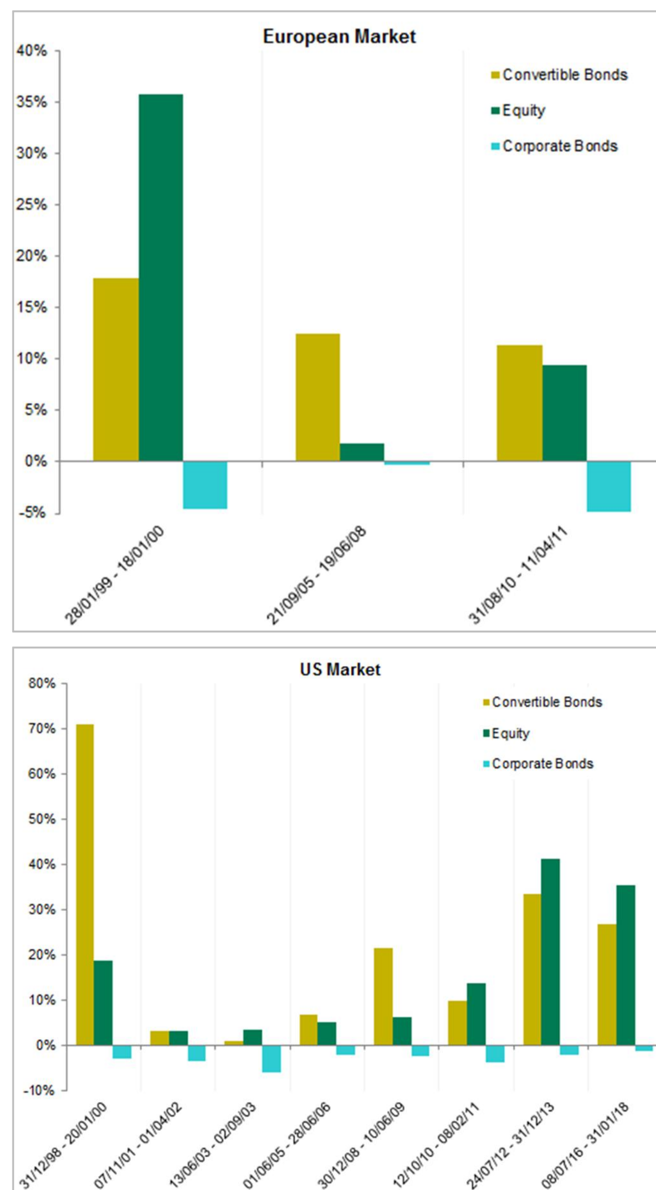
During each of these periods (three in Europe, eight in the US – including the current period), convertible bonds systematically ended up in positive territory – sometimes even outperforming equities – when straight bonds reported systematically negative returns.

This may sound counter-intuitive. Being fixed-income instruments above all, one might expect convertible bonds to suffer from a rise in interest rates – albeit to a lesser extent than straight bonds, thanks to the partial “hedging” of their embedded option.

The fact is central banks do not hike interest rates out of the blue. Interest rate rises traditionally occur in healthy economic contexts – as is currently the case.

Eventually, the outperformance of convertible bonds over straight bonds, and their capacity to deliver positive returns during each of these periods, was primarily driven by the combination of two effects. On the one hand, the supportive behaviour of their underlying equity; and on the other, the partial “hedging” offered by convertible bonds’ embedded option against rising interest rates.

Chart 6: Convertible bonds’ behaviour in rising interest rate environments (Europe & US)



Sources: UBP, Bloomberg Finance LP, 31 January 2018. *Analysis: periods where the yield of the Bund 10-year or of the US Treasury 10-year rose by more than 120 bp. 1) For the US Analysis - Corporate bond index: Barclays US Gov/Credit TR USD; Convertible bond index: Thomson Reuters Convertible US Vanilla Index (USD); Equity index: S&P 500 Net TR. 2) For the European analysis - Corporate bond index: Citi EuroBig Index; Convertible bond index: Thomson Reuters Convertibles Europe Index (EUR); Equity index: Stoxx Europe 50 NR. Past performance is not a guide to current or future results.

Convexity to face greater dispersion and volatility risk

With the economic cycle becoming more “late-cycle”, new challenges arise. These notably include normalising monetary policies by central banks – which should lead to higher interest rates –, higher equity valuations, especially in

the US, and policy uncertainties. Combined with lingering geopolitical concerns, they offer the potential for higher volatility and greater dispersion risk on equity markets.

Greater dispersion may also be supported and exacerbated by market participants. With potentially less "beta" expected in 2018 on equity markets, various actors should favour stock-picking strategies that focus on alpha – either at sector or stock levels –, thus increasing the dispersion effect.

Under such conditions, convexity appears as a key asset to embed in one's portfolio.

Thanks to their convex nature, convertible bonds allow investors to remain exposed to the additional upside potential of equity markets while keeping the defensive benefits of the bond floor.

Besides, were it to be confirmed after an initial spike in the volatility indices, a longer-term rise in volatility would trigger a positive revaluation of options. As such, investors can expect convertible bonds' embedded conversion option to benefit from such a rise, adding value on the optional front.

Consequently, for investors who expect a higher volatility regime, we believe building "long-term option" positions can be an appropriate choice.

However, not all options are equal

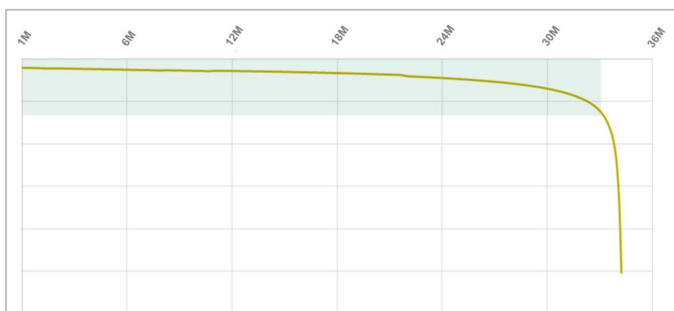
The benefits of "long-term" options to address late-market-cycle challenges

The "option pricing theory" shows that the actual value of an option can be split into two sub-components: its intrinsic value (the difference between the current stock price and the option's strike price) and its time value, which naturally declines over time in a non-linear fashion.

With short-term options, the "time value" decreases quickly. In other words, to earn money on short-term option positions, we must not only be right, but we must be right quickly. This can be a challenge in today's market.

In comparison, long-term options show very limited time decay in the first two-thirds of their life (see green insert, Chart 7).

Chart 7: Annualised "theta" of a 3-year-ATM option



Source: UBP, ITO33, December 2017.

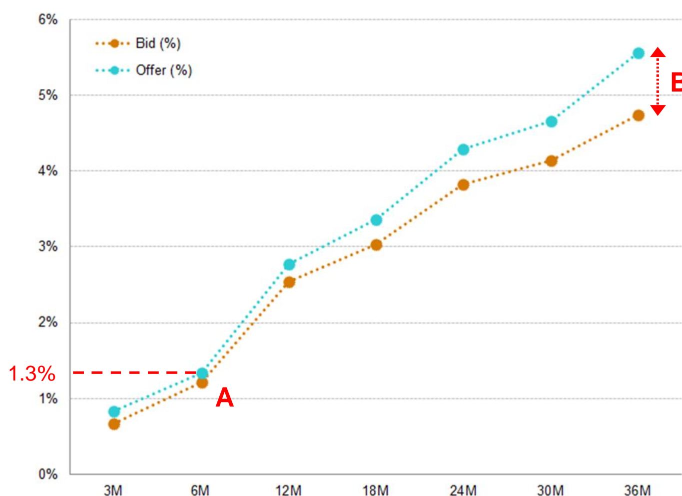
We believe this grants timing benefits back to the holder of these options.

By nature, convertible bonds give investors access to a long-term "call" option, with the maturity of their embedded conversion option mirroring that of the bond itself (about four years average duration today in the convertible space).

A first alternative to the long-term option embedded in convertible bonds could be holding long-term options on equity indices. However, a major hurdle appears.

Such long-term listed call options show very limited liquidity. The longer the maturity, the wider the bid/ask spread (Chart 8): a clear indication that there is no active trading on these positions. By way of illustration, the bid/ask spread for a 36-month-ATM call option on the Stoxx Europe 600 PI can be in the region of 15% (B, Chart 8).

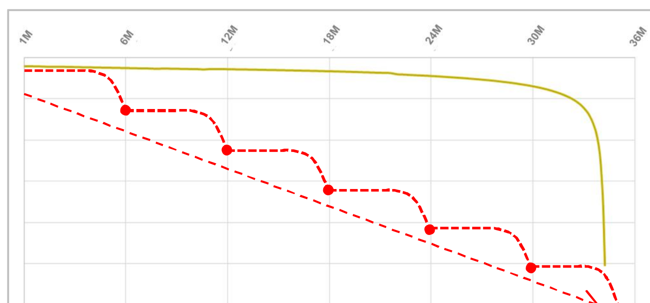
Chart 8: Bid/ask for an ATM call option on the Stoxx Europe 600 PI with different maturities



Sources: UBP, Bloomberg Finance LP, December 2017.

Another alternative would consist of buying short-term listed call options and rolling them over time. However, this also proves very costly, either:

- in terms of theta: immediate and linear decline in the time value (see below, in red);



Source: UBP, ITO33, December 2017. In red: theoretical illustration of a 6-month-ATM call option rolled over time to reach a 36-month-maturity.

- in terms of premium: taking the premium asked for a 6-month-ATM call option on the Stoxx Europe 600 (ca. 1.3%, see point A, Chart 8) and rolling it over time to reach a 36-month maturity leads to a total premium of 7.8%;
- plus, obviously, in terms of transaction costs.

One could reasonably argue that buying convertible bonds also comes with premium and transaction costs. However, unlike listed call options, if the convertible bondholder does not exercise the conversion option, they will get the premium

back through the repayment, on maturity, of the convertible instrument's par value (all other things being equal).

UBP has been active in the management of convertible bond strategies since 1999. Today, we offer a complete range of investment solutions, both in the European and global spaces, designed to leverage on the richness and singular diversity offered by the asset class.

Convertible bonds' timeless qualities are highly beneficial in the context of portfolio construction. We look forward to having the opportunity to discuss them with you further.

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