

Convexity complexities

– *Lorenzo La Posta*

Slow economic growth, subdued inflation, mature business cycle, political risks, unfavourable demographics: the backdrop to today's equity markets is challenging and adding convexity to portfolios can prove to be a highly valuable defensive solution. Be it via options, convertible bonds, tactical tilts or any other method and tool available, this must be managed carefully though. Increasing convexity imprudently can prove ineffective and expensive, but making wise use of it can reduce risks, smoothen the journey towards the investor's objective and enhance returns over time.

We have often employed one or more of the above techniques in our multi-asset portfolios when we felt the opportunity was compelling, always supporting our investment decisions with appropriate risk management, sophisticated portfolio construction and full understanding. In practice, increasing convexity means moving away from the typical linear exposure of portfolio returns to underlying assets in favour of an asymmetric profile where the upside capture is greater than the downside, i.e. reshape the portfolio such that, for a given increase in equity markets, it can gain more than the potential loss for an equivalent fall.

One way we have added asymmetry to our portfolios with is via options. For instance, overlaying put options on an equity holding or substituting some of that equity with call options are common methods to decrease the portfolio's delta (sensitivity to changes in the underlying asset's price) and increase convexity. In a falling market, convex portfolios automatically decrease their delta (i.e. equity exposure) thus reducing downside capture as well as increasing it in rising markets. This determines the much-desired, characteristic option return profile which investors pay for in form of upfront premium paid at purchase.

A second method we have used to achieve this is with convertible bonds. These are debt obligations that can be converted by the holder into a fixed number of shares of the issuing company according to a pre-determined conversion price. As such, these hybrid securities have positive convexity: bondholders collect regular interest payments and sit higher up in the firm's capital structure, hence having inherently higher downside protection than the equity, but thanks to the conversion feature they can participate to the upside should the stock perform well. Or in other words, convertible bonds have equity-like upside with bond-like downside. Clearly, this valuable feature comes with a price, as yields on convertible bonds are lower than their plain vanilla counterparts.

Thirdly, we use tactical asset allocation to skew the portfolio's return characteristics towards more of an asymmetric profile. In fact, whereby most of the long-run risks and returns are driven by the strategic asset allocation, shorter term tactical positioning can be helpful in managing the path towards the long-term objective. This could involve reducing exposure to upcoming risks or taking advantage of overlooked opportunities with the aim of capturing more upside than downside, i.e. increasing convexity. In addition to the monetary cost of this (higher turnover and trading costs), being tactical can be expensive in risk terms: wide deviations from the strategic portfolio could backfire and detract from returns, having the opposite effect than originally aimed for, hence why we apply a very cautious approach to TAA and have a tried and tested investment process.

At Momentum, we spend a lot of time and resources researching any technique that could improve our investment solutions and our clients' experience with us. Convexity is one of them.

The Marketplace

- Germany's jobless claims unexpectedly dropped for the month of November
- The US introduced legislation supporting the Hong Kong protests, causing Chinese equities to fall
- Brent crude fell 1.5% ending the week at \$62.4 a barrel
- Gold gained 0.1% ending the week at \$1464.0 an ounce

Market Focus

US

- Equity markets moved higher over the shortened holiday week with growing optimism about a “phase one” trade deal between the US and China.
- Improved trade sentiment between the US and China was supported by China's announcement of new intellectual property protection measures, a primary demand of US trade negotiators.
- The Q3 annualised GDP growth figure was revised upwards to 2.1% (from 1.9%) due to an overestimated decline in business investment.
- US Treasuries rose by 0.1% last week, with their investment grade counterparts returning 0.4%.

Europe

- European equity markets followed US equities higher during the week, although their performance was suppressed after the US showed support for Hong Kong.

- German consumer sentiment rose unexpectedly in December (reported by the GfK institute). This improved mood is expected to boost household spending.
- European government bonds fell 0.1% over the past week, with their investment grade counterparts gaining 0.1% and high yield bonds rising 0.7%.

UK

- The Conservative party maintained their polling lead, which sits around 12-points ahead of the Labour party.
- The pound sterling rose by 0.8% against the US dollar over the week as the probability of a Conservative party leadership increased.
- Equity markets gained 0.3% over the week but lagged broader developed equity markets.
- UK gilts returned 0.7% over the past week, with corporate bonds gaining 0.5%.

Asia/Rest of The World

- For the third time this year the IMF reduced Japan's 2019 GDP forecast, this time by 10 basis points to 0.8%. The reduction was attributed to the global economic slowdown.
- Japanese factory outputs contracted more than expected in October, with a 4.2% fall. This was close to its fastest decline in 2 years.
- Pro-democracy candidates swept Hong Kong's district elections, taking 347 out of 452 seats to gain 17 out of 18 districts.

Asset Class/Region	Currency	Currency returns			
		Week ending 29 Nov. 2019	Month to date	YTD 2019	12 months
Developed Market Equities					
United States	USD	1.0%	3.6%	26.9%	16.4%
United Kingdom	GBP	0.3%	1.7%	13.3%	8.4%
Continental Europe	EUR	0.6%	2.6%	25.1%	17.7%
Japan	JPY	0.5%	1.9%	16.4%	5.0%
Asia Pacific (ex Japan)	USD	0.1%	0.4%	12.6%	9.2%
Australia	AUD	2.1%	3.3%	26.1%	24.0%
Global	USD	0.8%	2.8%	24.0%	14.9%
Emerging markets equities					
Emerging Europe	USD	-1.3%	-0.4%	24.3%	19.4%
Emerging Asia	USD	-0.2%	0.5%	11.3%	8.0%
Emerging Latin America	USD	-2.0%	-4.1%	6.5%	4.4%
BRICs	USD	0.0%	0.3%	14.0%	9.7%
MENA countries	USD	-1.2%	1.1%	2.5%	3.1%
South Africa	USD	-4.4%	0.0%	0.3%	-4.4%
India	USD	1.2%	0.5%	9.2%	9.4%
Global emerging markets	USD	-0.8%	-0.1%	10.2%	6.9%
Bonds					
US Treasuries	USD	0.1%	-0.3%	7.8%	10.4%
US Treasuries (inflation protected)	USD	-0.1%	0.2%	8.4%	9.2%
US Corporate (investment grade)	USD	0.4%	0.3%	14.2%	15.8%
US High Yield	USD	0.4%	0.3%	12.1%	9.7%
UK Gilts	GBP	0.7%	-0.8%	8.9%	11.1%
UK Corporate (investment grade)	GBP	0.5%	-0.1%	10.9%	11.9%
Euro Government Bonds	EUR	-0.1%	-0.9%	7.8%	8.9%
Euro Corporate (investment grade)	EUR	0.1%	-0.3%	6.3%	6.5%
Euro High Yield	EUR	0.7%	0.9%	10.1%	9.6%
Japanese Government	JPY	0.1%	-0.4%	2.5%	3.4%
Australian Government	AUD	0.4%	0.7%	10.6%	12.9%
Global Government Bonds	USD	0.0%	-1.1%	5.8%	8.2%
Global Bonds	USD	0.0%	-0.8%	6.4%	8.3%
Global Convertible Bonds	USD	0.3%	1.1%	9.0%	7.2%
Emerging Market Bonds	USD	-0.1%	0.4%	9.8%	11.7%

Asset Class/Region	Currency	Currency returns			
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Property					
US Property Securities	USD	1.7%	-1.6%	25.4%	16.0%
Australian Property Securities	AUD	2.6%	2.3%	21.2%	17.7%
Asia Property Securities	USD	-0.1%	-2.8%	9.2%	9.1%
Global Property Securities	USD	1.2%	-1.1%	20.9%	15.4%
Currencies					
Euro	USD	-0.1%	-1.2%	-3.8%	-3.1%
UK Pound Sterling	USD	0.8%	0.0%	1.5%	1.2%
Japanese Yen	USD	-0.7%	-1.3%	0.2%	3.7%
Australian Dollar	USD	-0.3%	-1.8%	-4.0%	-7.4%
South African Rand	USD	0.5%	2.9%	-1.8%	-6.7%
Swiss Franc	USD	-0.2%	-1.3%	-1.7%	-0.3%
Chinese Yuan	USD	0.1%	0.1%	-2.2%	-1.3%
Commodities & Alternatives					
Commodities	USD	-2.1%	-1.2%	5.6%	-0.4%
Agricultural Commodities	USD	0.6%	0.0%	-4.0%	-5.3%
Oil	USD	-1.5%	3.7%	16.0%	4.9%
Gold	USD	0.1%	-3.2%	14.2%	19.4%
Hedge funds	USD	0.6%	1.1%	7.4%	5.5%

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The Rex Building, 62 Queen Street, EC4R 1EB*

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