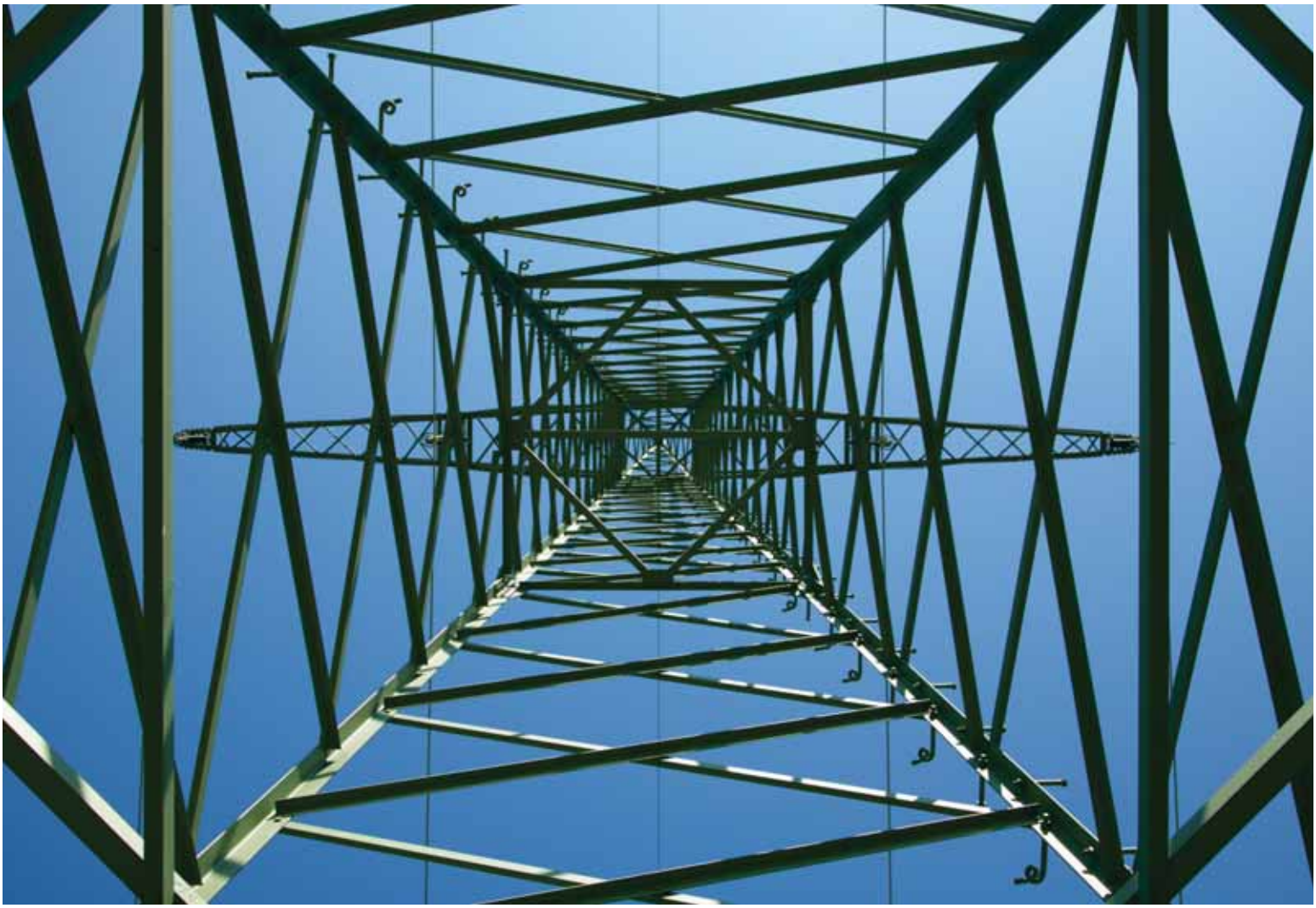
Derivatives focus

Our perspective on an increasingly important part of our overall investment management 'toolkit'

NEWTON
The Power of Ideas

➤ A BNY MELLON ASSET MANAGEMENT COMPANY℠



Performance

Newton exists primarily to increase the wealth of its clients by delivering strong and transparent investment performance

Perspective

Newton uses a distinctive global, thematic approach to maintain perspective and to generate strong and durable investment ideas

Teamwork

Newton is successful in varied market conditions by using a coherent, collaborative and enduring team-based investment approach

Consistency

Newton seeks to achieve consistent and stable growth in its business, by maintaining strong investment performance and managing portfolios that are appropriate to the fulfilment of clients' objectives

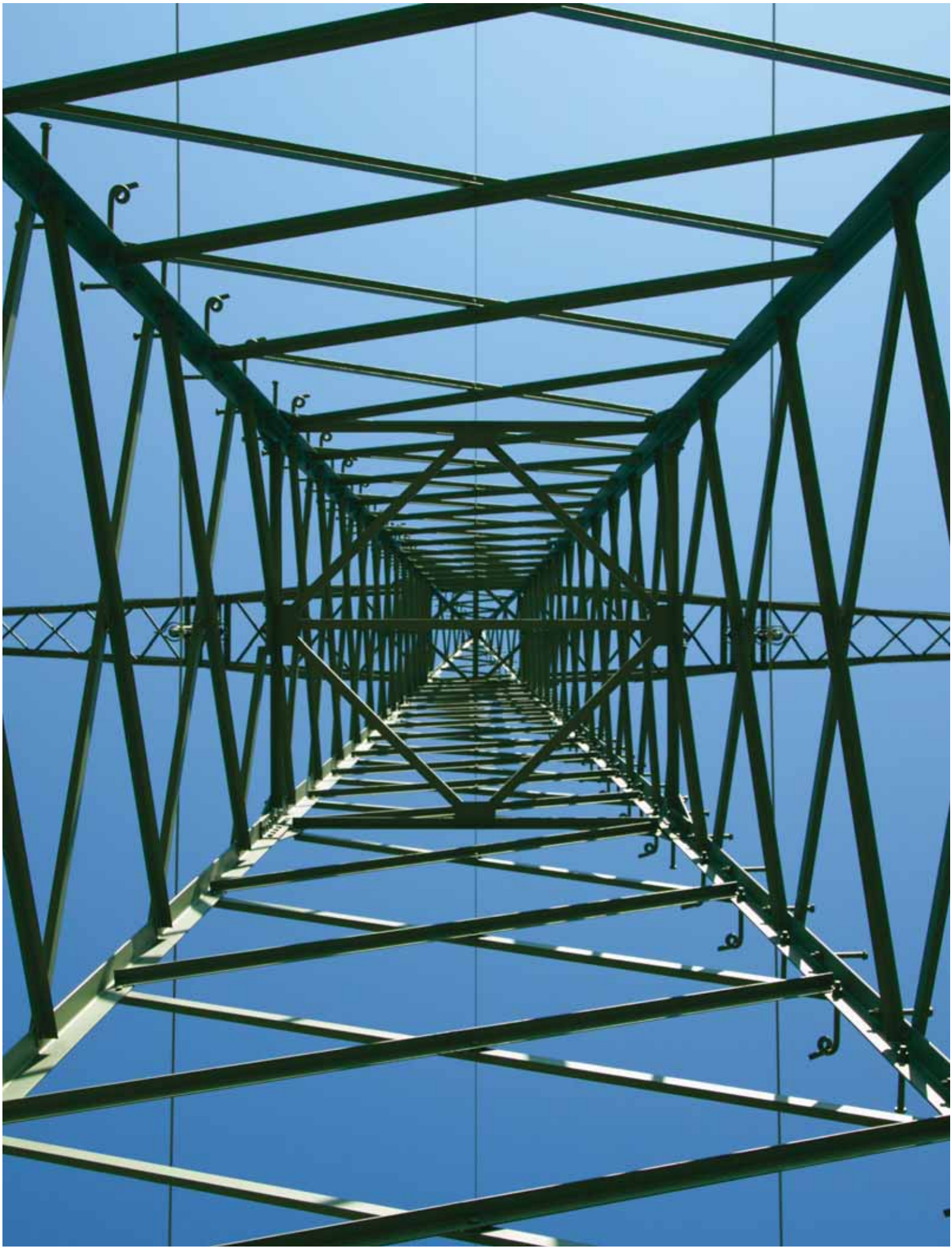
By the end of 2007, the size of the world's derivatives market had grown to over $500 trillion[1]. This compares to world GDP of around $50 trillion[2] and swamps the conventional equity and bond markets. However, derivatives continue to be little understood and considered relatively new (compared to equities and bonds), even though they have been a fixture of capital markets for over thirty years.

At Newton[3], while investment in equities and bonds is our primary focus, we consider derivatives to be an increasingly important part of our overall investment management 'toolkit'. Derivatives are often deemed 'complex' or 'risky', and while they can be both of these things, they need not be. They can actually be very simple and can be used to help reduce unwanted risks. Derivatives allow us to manage portfolios more efficiently for our clients by helping to potentially reduce risks, provide insurance and, in some cases, enhance returns. Therefore, while we are not using derivatives extensively within portfolios at Newton, we think it is important to have the ability to use them when we deem appropriate in seeking to fulfil our clients' interests.

We want to help our clients to gain a better understanding of derivatives as well as the ways in which Newton uses them. In this report, we give some recent examples of how Newton has used derivative strategies in portfolios and we explain the rationale for having done so. We also set out some 'frequently asked questions' on the subject of derivatives and Newton's approach to derivatives. Finally, in the appendix to this report, you will find a glossary of derivatives terminology which we hope you will find useful[4].

At Newton, whilst investment in equities and bonds is our primary focus, we consider derivatives to be an increasingly important part of our overall investment management 'toolkit'

[1]BIS Quarterly Review, March 2008 [2]International Monetary Fund, 2007 [3]'Newton' refers to the following group of affiliated companies: Newton Investment Management Limited, Newton Capital Management Limited, Newton International Investment Management Limited, Newton Capital Management LLC and Newton Fund Managers (CI) Limited. Assets under management include assets managed by all of these companies except Newton Capital Management LLC, which provides marketing services in the U.S. for Newton Capital Management Limited. Except for Newton Capital Management LLC and Newton Capital Management Limited, none of the other Newton companies offer services in the U.S.
[4]Terms highlighted in green in the document are explained in the glossary



The following two derivative strategies have been used across a range of pension fund portfolios, including multi-asset and absolute-return portfolios

Example 1 Calls on U.S. treasuries

We have bought call options several times over the last year on 10-year U.S. treasury note futures, as an alternative to buying the underlying notes. This allowed us to gain exposure to medium-dated 10-year U.S. treasury notes with limited capital outlay and limited capital risk. As with the buying of all such options at Newton, purchases have been covered by cash and have entailed no gearing of portfolios. At the outset, therefore, we have known the maximum potential loss to portfolios should the view that prompted the option purchase prove to be incorrect. On most occasions, we have sold the call options profitably before their expiration. With the economic outlook being unusually uncertain (both in relation to growth and inflation), we have been able to participate in the upside of 10-year U.S. treasury notes while limiting the downside to the cost of the premium (equivalent to 0.1% to capture exposure to 20% of the value of a portfolio). Exposure to the underlying U.S. treasury notes, by contrast, would have entailed much greater possible losses and would have required much greater capital outlays.

Example 2 XYZ combination[5]

We bought call options and sold put options simultaneously in an oil company last year (and again recently) to create a 'synthetic long' position in the stock. While we have been positive about the prospects for the company amid a higher oil price environment, we recognized the risk that the oil price could fall following a period of marked strength. The combination has effectively given us exposure to the upside of an oil company's share price through call options which have been funded from the sale proceeds of put options. Had the oil price weakened significantly, it is likely that an oil company's share price would have weakened significantly too. By using the derivative combination (buying a call option and selling a put option), we were required to deploy much less capital than if we had bought the underlying oil company's shares and the potential loss to portfolios from any given fall in the oil company's share price was reduced. One 'risk' to portfolios has been that the oil company's share price would fall through the respective strike price of the put option, thereby obliging us to buy the underlying stock at the strike price. We assessed this risk and concluded that each strike price represented a highly attractive price at which to obtain exposure to the oil company. There was also a risk that the oil company share price would remain relatively static and that we would forsake the premium costs of the call options (equivalent to about 0.02% of the value of a portfolio). When used last year, the positions were closed profitably before expiry of the options.

[5] For illustrative purposes only

Frequently asked questions: the basics

1 What is the difference between a future and an option?

A future (or forward) contract obliges the holder to buy or sell the underlying asset at a certain price. An option gives the purchaser the right to buy or sell at a certain price; he may or may not exercise that right.

2 What determines the value of an option?

The value of an option is determined by a number of factors, including time, volatility, the strike price and the price of the underlying asset, current interest rates and (for equity-related options) the dividend rate on the underlying asset. A long-dated option trading in a volatile market whose strike price is close to the price of the underlying asset will be more expensive than a short-dated equivalent trading in a comparatively tranquil market whose strike price is far away from the price of the underlying asset.

The prevailing price of an option is also dependent to a large extent on supply of, and demand for, that option.

3 What is the difference between exchange-traded derivatives (ETD) and over-the-counter derivatives (OTC)?

ETDs have features that are standardized by an exchange, whereas OTC derivatives have more tailored features that are privately negotiated between counterparties. OTCs may be beneficial in allowing the fund manager to put in place a contract that meets more effectively the portfolio strategy in terms of contract size and expiry than would be the case with an ETD.

4 Are OTC derivatives more risky?

From an investment perspective, OTC instruments can be classified as being no more risky to a client than ETD instruments. With an ETD, margins are required between the exchange and the user, whereas with OTC derivatives collateral is posted between parties to militate against market risks. There are some additional operational risks associated with OTC derivatives (see 5 below).

5 Is there counterparty risk with OTCs?

Counterparty risk exists with OTC derivatives as there is no exchange to facilitate the transaction. Newton has an approved counterparties procedure whereby appropriate credit checks are performed before we accept a broker with whom to trade. As well as a list of instruments allowable per broker, an appropriate exposure limit may also be in place and monitored by the fixed-income credit analyst.

6 Is there a risk that an investor may lose more than the value of their assets when using calls or puts?

There is such a risk when using uncovered call options, writing uncovered put options or using leverage. This occurs, for example, when writing a call option while not owning the equivalent number of shares in the underlying stock, or when writing a put option while not owning an equivalent amount of cash to cover the position. However, at Newton, we do not hold uncovered positions or 'leverage' portfolios.

7 What are the costs of using derivatives?

The costs of using derivatives vary and depend upon many variables such as the duration of the contract, levels of volatility, and the nature of the asset class involved. However, it is well worth noting that derivative transaction costs, in general, are lower than the cost of trading the physical, underlying asset.

8 What is option time value?

The time value component of an option is a function of two variables: (1) time remaining until expiration and (2) the closeness of the option strike price to the money. All other things remaining the same (i.e. no changes in the underlying and volatility levels), the longer the time to expiration, the more value the option will have in the form of time value. But this level is also affected by how close to the money the option is. For example, two call options with the same calendar month expiration, but different strike prices, will have different levels of time value. This is because one will be closer to the money than the other.

Time value is at its highest level when an option is 'at the money' because the potential for intrinsic value (the difference between the exercise price of the option and the current value of the underlying) to begin to rise is the greatest at that point.

One important dynamic of time-value decay is that the rate is not constant. As expiration draws near, the rate of time-value decay increases. This means that the amount of time premium disappearing from the option's price per day gets greater with each passing day.

9 What are the main risks of using derivatives?

The main risks are as follows:

- Insufficient management oversight
- Risks from 'marking to model' (i.e. valuing the position)
- Improper hedging
- Unexpected market movements
- Losses owing to concentration, for example if too many positions are concentrated in a particular underlying asset class
- Losses owing to fraud

There is also the risk of unlimited losses when using uncovered call options, although Newton has taken a house view that all calls will be covered, (i.e. portfolios will not be geared).

Other risks include:

- The failure to meet margin calls or settlement
- The risk of inadequate counterparty documentation or authority
- Incorrect valuation
- Investment outside a mandate/ breaching of restrictions

10 Have derivatives been affected by the credit crunch?

Yes, they have been. What is most evident from the credit crunch is that volatility levels have risen to levels last seen back in 2001. Given the rise in equity market volatility levels, derivatives have generally become a little more expensive. However, given the various building blocks available to us, these costs can be reduced through a combination of ideas and strategies.

Frequently asked questions: additional information on the use of derivatives at Newton

1 To what extent do you use derivatives?

We use derivatives primarily for downside protection purposes (e.g. put options are used to help protect the portfolio.) While investment in equities and bonds is Newton's primary focus, we also use derivatives as part of the overall investment strategy to achieve investment objectives where mandates allow.

2 What sort of derivatives do you use?

We use options, futures and forwards in equity, fixed-income, interest-rate, credit, commodity and currency markets. We also use convertible bonds.

3 Give an example of when you would prefer synthetic rather than physical exposure.

When a stock investment has rallied but we are not sure about the future price direction. Stock replacement using call options locks in profit but still allows an investor to profit further from the rising price of a security.

4 Is this preference based on cost, liquidity or other factors?

It is based on the capital efficiency afforded by derivatives.

5 How do you monitor the use of derivatives?

All derivative positions are monitored (for consistency and appropriateness) independently by the Portfolio Analytics Team (PAT).

Within our summary of derivatives use or SDU process, investment management, dealing, settlements, portfolio analytics, risk and compliance are all segregated functions[6]. There is a derivatives steering group (DSG) that meets monthly to review investment and operational issues associated with the use of derivatives. The DSG has ten representatives from key areas of the business and is co-chaired by our chief investment officer and chief operating officer. The PAT reports to the Portfolio Analytics Group (PAG), Investment Committee and DSG. We also have a peer review process, whereby a gatekeeper signs off each derivatives transaction.

6 How do derivatives fit with Newton's investment philosophy/process?

Our global, thematic approach allows us to gain long-term perspective on global financial markets and economies. Perspective is a defining feature of our investment process; it helps us to anticipate how the world will change and directs analysts and fund managers towards profitable investment opportunities across the world.

Derivatives are used in conjunction with our process to allow Newton's fund managers to enhance the risk and return characteristics of portfolios and to exploit investment opportunities fully as they arise.

7 How competent is Newton to use derivatives?

We have a dedicated derivatives specialist and have a number of other individuals who are well versed in the use of derivative instruments. We strive to understand the nuances of particular markets, as well as how particular instruments operate, how they are priced, how they are booked and how they are managed from a risk (operational, market and credit) perspective. We believe we have a thorough understanding of equity, fixed-income, currency, commodity and interest-rate derivatives.

8 Are equity analysts involved in the derivatives process?

Yes, analysts are involved in the derivatives process at Newton. In-house analysts recommend underlying assets, and derivatives may be used to accentuate the recommendations. Discussions with analysts look to identify key fundamentals and how various derivative instruments can be used in conjunction with recommendations.

9 Is your use of derivatives consistent across client portfolios?

Yes, our approach to derivative use is consistent across portfolios, subject to an individual client's investment restrictions within their investment management agreement. For groups of strategies with similar mandates, trades are executed across all strategies. Newton's PAT undertakes commonality reviews that are reported at the PAG and DSG.

10 What proportion of your clients uses derivatives?

Close to 50% of our segregated institutional clients globally can trade derivatives. All Newton sub-advised pooled funds can use some form of derivatives.

11 Are derivatives suitable for some clients, but not for others?

Particular client objectives, strategies or mandates will determine whether specific derivatives are suitable for some clients. However, as with all types of investment, clients should have an understanding of the basics of derivatives and the risks entailed in their use.

[6] Please refer to the important information at the end of this presentation

12 Would any of the wide variety of derivatives available cause a client's portfolio to be leveraged?

While derivative instruments themselves do provide leverage by their very nature, Newton ensures that all derivative positions within a client's portfolio are fully covered such that the client's overall exposure would never be more than 100% of the value of the total portfolio. Therefore, Newton would not gear or leverage a client's overall portfolio.

13 Who makes the decision to sell a derivative if it goes wrong?

In a situation where a derivative does not achieve its desired objective (i.e. where a position or view may prove to be unsuccessful similar to buying a stock that does not appreciate), a discussion between the investment manager and the derivatives analyst would be the driver to closing out positions; this is further helped by daily monitoring of outstanding derivative positions.

14 Do you short equities?

No. We do not feel that shorting equities fits with Newton's overall investment philosophy or process.

15 How tradable/liquid are the derivatives you use?

Most derivatives used at Newton are exchange-traded and ETDs are very liquid. OTC derivatives in the currency markets are also very liquid. At Newton, we would tend to use derivatives from either of these markets. However, when we require a tailored solution only achievable from the OTC market, we use only short-dated securities (i.e. securities with a short time to expiry) to optimize liquidity.

16 Who are your counterparties?

Clearing agreements are currently in place with UBS Warburg in the U.S. and UK, and Morgan Stanley in the UK. ISDAs (International Swaps and Derivatives Association agreements for over-the-counter trades) are in place on behalf of our clients with UBS Warburg and Citigroup. Newton currently has six executing broker agreements in place with UBS Warburg, Morgan Stanley, Citigroup, Merrill Lynch, Deutsche Bank and JP Morgan.

17 How do you monitor counterparties?

Newton has an approved procedure in relation to counterparties whereby appropriate credit checks are performed before a broker is accepted to trade. As well as a list of instruments allowable per broker, an appropriate exposure limit may also be in place and monitored by the fixed-income credit analyst.

18 How are execution and clearing commission rates with counterparties negotiated?

The execution and clearing rates are agreed on an annual basis. The execution rate is taken as an average of the market rate and then negotiated to the 'lower end' to ensure we remain competitive. On individual low-priced shares or in large numbers of option contracts/shares, we negotiate a lower execution cost.

The clearing rates are agreed as an industry average from our top five broker cost schedules.

19 What limitations do you place on the use of derivatives?

Limits on the use of derivatives are put in place on a trade-by-trade basis; for example, in our call overwrites process, we only write call options against stock we currently hold. Our compliance system rules have been coded to identify that a derivative position is in place against the underlying stock.

A fund must be approved via the internal summary of derivatives use (SDU) process before it can trade in derivatives. This involves a review of the investment management agreement (IMA)/prospectus against the proposed use of derivative instruments to ensure that it is permitted. Limitations must also reflect the investment guidelines of the client's IMA/prospectus.

20 What internal controls do you have?

Internal controls exist from idea generation to execution, to unwinding and closing out of derivatives positions. For example, before a trade is executed, we ensure that a particular fund has the necessary approvals in place to trade a particular instrument.

Within our summary of derivatives use (SDU) process, investment management, dealing, settlements, portfolio analytics, risk and compliance are all segregated functions. There is a Derivatives Steering Group (DSG) that meets monthly to review investment and operational issues associated with the use of derivatives. Derivatives are also reviewed regularly by the Portfolio Analytics Team (PAT) and reported at the Portfolio Analytics Group (PAG), Investment Committee and DSG. There is a peer review, whereby a gatekeeper signs off each derivatives transaction.

In our trading system, we have hard-coded compliance rules which are the controls for call overwriting. The control in essence means that calls can not be written against more than what is held; otherwise exposure would be 'naked'. At Newton, we do not leverage or gear portfolios.

22 How might clients restrict the use of derivatives in their portfolios?

Clients can do this via the investment guidelines within their investment management agreement (IMA).
For example, a client may only wish derivatives to be used for hedging purposes; or a client might restrict derivative use to exchange-traded derivatives.

22 How do you report upon the performance of derivatives in a portfolio?

Performance measurement on derivatives can broadly be split into two areas:

(a) options, and (b) futures.

a) Options are treated much like any other security insofar as we calculate the price-to-price movement of the instrument using the option premium. Some institutions show the economic exposure performance of options but this can only be done on certain types of option strategy.

b) We calculate the performance of futures contracts on a slightly different basis. There is no premium to be paid or received when buying or selling futures; the only transaction costs relate to broker commission and therefore we have to calculate the performance of the future's exposure. This is done by taking the theoretical price of the future and multiplying it by the contract size. However, this has the effect of gearing up the portfolio and so cash deposits equal to the value of the exposure of the future have to be offset. Combined performance is then calculated on the future exposure and the cash-backing together.

23 Can you attribute performance from derivatives? In 2007, on a fund that used derivatives, how much value did derivatives add?

Each derivative strategy needs to be analyzed on an individual basis as it is important to understand the actual purpose of the instrument held; e.g. a call can provide downside defensive protection to a portfolio or give leveraged exposure to a rising index. Like holding an ordinary share, the timing of trades and the number of contracts held can also vary from strategy to strategy, thus impacting the performance on the same derivative held in different portfolios.

We are able to attribute the contribution of derivatives to a strategy's performance and we can break down the holdings into broader strategies to enable an overview of performance. For example:

Covered calls – these are commonly used within our absolute-return strategies and in generating an income stream for higher-income funds.

Index put options – these are held largely by absolute-return strategies. Most successful over 2007 was an index put, sold at the lowest point of the year. It contributed approximately 140 bps to the strategy's total performance. A further put was bought the next day, locking-in these profits and providing downside protection to the funds. This option moved out of the money, losing the premium, as markets recovered, but the net position was still positive. The purpose of using the option was portfolio protection, and this was provided.

24 How are positions priced?

All exchange-traded derivative positions are priced on a daily basis using the closing exchange-traded prices obtained from Bloomberg.

25 How is margin cash held at the clearer?

Accounts are opened with the clearer in the name of the underlying client. For clients that use Newton-appointed clearers, the clearing agreement states that Newton is acting as agent only.

26 Does the fund manager monitor margin balances?

Yes, fund managers monitor margin positions. They appear daily on valuations and are directly attributable to a particular derivative security.

27 Are payments or receipts to/from clearers ever netted?

On any given day, when there is both a physical payment due out and a receipt of funds due in for the same account, these items may be netted off as one payment or receipt. Cash entries, however, will always be posted individually in order to provide a full audit trail and to ensure that client valuations are as clear as possible. There is no netting of payments between different client accounts.

Glossary

American option
An option which can be exercised at any time before and up to maturity. An American option is normally worth more than an identical European option owing to its flexibility.

At-the-money (ATM)
An option is at-the-money if the underlying asset price is equal to the exercise (or 'strike') price.

Beta (β)
Measures the sensitivity of a security's return to the movement of the market. It is a measure of a security's systematic risk.

Call option
The buyer of a call option has the right (but not the obligation) to buy the underlying asset on a specified date at a specified price (the strike).

Cash settlement
The settlement of a derivatives contract by an exchange of cash from the party who is out-of-the-money to the party who is in-the-money.

Collar
In relation to interest-rate derivatives, a collar is the combined purchase of a 'cap' (call option) and sale of a 'floor' (put option). This protects a buyer from significant interest-rate rises, but limits the benefit of a fall in rates.

Combination
A position involving both call options and put options on the same underlying asset.

Convertible bond
A bond whereby the owner has the option to convert it into common shares under specific terms.

Covered call
The covered call is a strategy in which an investor writes a call option contract while owning an equivalent number of shares in the underlying stock. If the stock is purchased simultaneously with writing the call contract, the strategy is referred to commonly as a 'buy-write'. If the shares are already held from a previous purchase, the strategy is referred to commonly as an 'overwrite'. This strategy is the most basic and most widely-used strategy, combining the flexibility of listed options with stock ownership.

Currency option
An option written on a currency. It is the right to buy or sell a specific amount of foreign currency at a fixed exchange rate.

Delta (Δ)
The sensitivity of the option price to a change in the underlying asset price, expressed as a decimal point from zero to one.

Derivative securities
Instruments whose value is derived from the value of another more basic underlying asset (e.g. a bond or stock). Examples include futures, forward contracts, options and swaps.

European option
Can only be exercised on the specified option maturity date, i.e. on a specific future date.

Exchange-traded derivative (ETD)
Derivatives that are traded on an exchange are referred to as exchange-traded and generally have standardised parameters. Examples of exchanges include London Stock Exchange (LSE), Chicago Board of Trade (CBOT) and London International Financial Futures and Options Exchange LIFFE.

Exchange-traded fund (ETF)
A pooled fund, traded on an exchange and invested with a stated investment objective such as tracking UK bank stocks.

Exercise price
The price at which the owner of an option can buy or sell a security.

Exotic options
An option that is not ordinary and hence not 'plain vanilla'.

Expiry
The maturity date of an option.

Forward contract
An agreement to buy or sell an underlying asset at a pre-specified price at a future date. Forward contracts are similar to futures, except that they trade in the over-the-counter (or OTC) market, rather than being formally traded on exchanges.

Futures contract
An agreement to buy or sell an underlying asset at a pre-specified price at a future date. Futures contracts are like forward contracts except that futures contracts are standardised and are formally traded on major exchanges. Futures are settled daily through the payment of margin.

Gamma (γ)
The sensitivity (or the rate of change) of the delta to a change in the price of the underlying asset.

Gearing
Using borrowed money to buy derivatives. Also refers to entering into derivatives agreements for underlying assets in excess of those for which the investor has money available to purchase.

Greeks
The 'Greeks' is the collective noun for Delta, Gamma, Vega*, Theta and Rho, the relationships which are integral to understanding how option prices change quantitatively with respect to variables. Each Greek letter measures a different dimension of option risk.

Hedging
A strategy which aims to reduce or eliminate negative impacts on profits owing to unexpected price changes. Typical instruments for hedging purposes are forward contracts.

Historical volatility
The observed volatility of the asset price over a specified period.

Hockey sticks
The graphical representation of the 'pay-off' profile of an option position at expiry.

Implied volatility
The volatility implied by the option price traded in the market. This may be higher or lower than the historical volatility. Implied volatility is, in a sense, forward-looking; historical volatility is backward-looking.

In-the-money (ITM)
An option is in-the-money if the intrinsic value is positive. A call option is in-the-money when the current underlying asset price is higher than the exercise price (or strike); a put option is in-the-money when the current underlying asset price is lower than the strike.

Interest-rate swap
A derivative by which one party exchanges a stream of interest payments for another party's stream of cash flows. Interest-rate swaps can be used by hedgers to manage their fixed or floating assets and liabilities. As such, interest rate swaps are very popular and highly liquid instruments.

Intrinsic value
The immediate exercise value of an option. The value (if positive) of immediate exercise of a call option is the greater of (i) zero and (ii) the asset value less the strike. For a put, the value is the greater of (i) zero and (ii) the strike less the asset value.

Leverage
A way of magnifying returns by borrowing money to invest. (See gearing).

Liquidity risk
The risk that there is a lack of marketability of an instrument such that it cannot be bought or sold quickly enough to prevent or minimise a loss.

Long
To buy or hold.

Margin account
A type of brokerage account that allows holders to borrow money from their brokers to leverage their investments. To protect their loans, brokers will set a particular minimum value or margin to be maintained at all times in margin accounts. If the account balance falls below the minimum level owing to adverse price movements, a margin call will be made for additional funds.

Margin call
A demand from a broker for additional funds on a margin account owing to adverse price movements.

Naked option writing
A short position in a call option that is not combined with a long position in the underlying asset, i.e. a strategy in which an investor writes a call option contract but does not own the equivalent underlying asset.

Netting
The settlement of mutual obligations at the net value of a contract.

Open interest
The number of outstanding long and short positions in an exchange's listed contracts.

Option
A contract which conveys to its holder the right, but not the obligation, to buy (in the case of a call) or sell (in the case of a put) an underlying asset at a specified price (the strike) on or before a given date (expiry). After this given date, the option ceases to exist. The seller of an option is, in turn, obligated to sell (in the case of a call) or buy (in the case of a put) the underlying asset to (or from) the buyer of the option at the specified price upon the buyer's request.

Option value
The value for which an option can be bought or sold in the market; this is the premium paid to buy the option or the 'market price'.

Over the counter (OTC) market
A market in which securities are traded among dealers and brokers connected via telephone and computer networks rather than via a formal exchange.

Out-of-the-money (OTM)
An option is out-of-the-money (OTM) if immediate exercise would result in a loss. A call option is OTM when the current underlying asset price is lower than the exercise/strike price. A put option is OTM when the current underlying asset price is higher than the exercise/strike price.

Premium
The price of the option contract; the buyer of the option pays the seller of the option this price at inception.

Put option
The buyer of a put option has the right (but not the obligation) to sell the underlying asset on a specified date at a specified price.

Rho (ρ)
The sensitivity of the option price to changes in interest rates.

Short
The selling of a security that is not owned by the seller (and that must therefore be borrowed first). If a party anticipates that the price of a security will fall, it may short it, but it must buy it back later to return it to the party from whom it was borrowed.

Strike
The price at which an asset is bought or sold if the option is exercised.

Structured note
A debt obligation which contains an embedded derivative component with characteristics that change the security's risk/return profile.

Swap
In its simplest form, an agreement to exchange cashflows at specified future times according to specified rules. For example, a company may swap out of a floating-rate loan and into a fixed-rate loan (an interest rate swap). Typically, swaps can be used to hedge risk or take advantage of certain market conditions.

Swaption
An option used to enter an interest-rate swap.

Theta (θ)
The sensitivity of the value of an option to a change in time. If everything is held constant, an option will lose value over the passage of time to maturity/expiry.

Time value
The residual value of an option after accounting for the intrinsic value. It captures the potential additional pay-off from the underlying asset moving (deeper) into-the-money before expiry. By definition, time value is equal to the option value less the intrinsic value.

Underlying asset
The underlying instrument from which a derivative derives its value. For example, the underlying asset on a BP call option is the value of the ordinary stock of BP.

VaR (Value at Risk)
This is a loss which will not be exceeded at some specified confidence level.

Vanilla option
An option where the only parameters are: call or put, European or American, specified strike and expiry. An 'exotic' option has more parameters.

Vega (ν)
The sensitivity of the price to a change in the volatility of the underlying asset.

Volatility
A measure of the variability of the price of the underlying asset. Technically, it is the standard deviation of the log of the asset price. It usually refers to the riskiness of an asset. Prices of options are usually higher for more volatile assets.

This glossary has been prepared by Newton to assist investors in their understanding and interpretation of derivative jargon. While every effort has been made to ensure its completeness and accuracy, we take no responsibility in this regard. It is intended to supplement rather than replace professional investment advice.

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