# Chapter Three The complicated world of derivatives

Derivatives are financial instruments that depend on or derive from an underlying security that also determines the price of the derived investment. In other words, these are financial products derived from other financial products. Strictly speaking the term could cover unit and investment trusts and exchange trade funds, as well as a range of sophisticated and complex creations. At their simplest, and not normally allocated to this heading, they are pooled investments.

## **Pooled investments**

The main benefit of devices such as unit or investment trusts is the reduction of risk; you get a spread of investments over a number of companies, which cuts the danger of any one of the companies performing badly or going under. Another advantage is administration by a market professional who may have a better feel for what is a good investment than the average layperson.

# **Advantages**

Everything has a cost. Pooled investments are safer for small investors because they spread risks but, conversely, they cannot soar as a result of finding a spectacular performer. So you pay for the lack of risk by lack of sparkle. They are managed by professionals who must be paid, so the funds charge a fee.

Opting for safety does not mean investors can avoid thought, care or research. Some investment managers are not awfully clever and fail to buy shares that perform better than average. They can be found in the league tables of performance some newspapers and magazines reproduce, as can the funds with startlingly better performance than both the market and other trusts.

Those tables have to be used with caution. The performance statistics look only backwards and one cannot just draw a straight line and expect that level of performance to continue steadily into the future. One trust may have done awfully well, but it may just be the fluke of having been in a sector or area that suddenly became fashionable – retail, Japan, biotechnology, financials, emerging markets, etc. There is also the factor that somebody good at dealing with the financial circumstances of 10 years ago may not be as good at analysing the market of today, much less of tomorrow. On top of that, the chances are that whoever was in charge 10 years ago to take the fund to the top of the league tables will have been poached by a rival company.

The converse holds equally true. A fund may have been handicapped by being committed to investment in Japan at a time when Japan fell out of fashion or hit a rough patch, or in internet stocks when the net lost its glister. Such factors, whether prompted by economic circumstance or fashion, may reverse just as quickly and have the fund at the top of the table. It may also have had a clumsy investment manager who has since been replaced by a star recruited from the competition.

As a vehicle for recurrent investments, or as an additional safeguard against fluctuating markets, many of these organizations have regular savings arrangements. The investor puts in a set amount and the size of the holding bought depends on the prevailing price at the time. This is another version of what professionals call 'pound cost averaging'. It also tends to level the risk of buying all the shares or units when the price is at the top.

One way of mitigating management charges is to get into a US mutual fund, which is much the same thing as a unit trust but has lower charges. The offsetting factor is the exposure to exchange rate risk.

Finally, there is the option of setting up your own pooled investment vehicle. Investment clubs, hugely popular in the United States, are growing up around the United Kingdom. A group of people get together to pool cash for putting into the market. The usual method is to put in a set amount, say £10 a month each, and jointly decide what the best home is for it. This has the advantage of being able to spread investments, to avoid management charges, to have the excitement of direct investment, to provide an excuse for a social occasion, and for the work of research to be spread among the members.

#### Investment trusts

Investment trusts are merely companies like any other quoted on the stock exchange, but their only function is to invest in other companies. They are called 'closed-end funds' because the number of shares on issue is fixed and does not fluctuate no matter how popular or otherwise the fund may be.

A small investor without enough spare cash to buy dozens of shares as a way of spreading risk can buy investment trusts to subcontract that work. A trust puts its money across dozens, possibly hundreds, of companies, so a problem with one can be compensated by boom at another. That does not make them foolproof or certain winners; investment managers after all are only human and can be wrong.

There are also pressures on them to which the private investor is immune. For instance, there is a continual monitoring of their performance so there is no chance to allow an investment prospect the time to mature for a number of years before reaching its full potential if that means in the meantime their figures are substantially below those of their rivals. A private investor on the other hand can afford to be patient and take a long-term view. Similarly, it is only brave managers who decide to stick their necks out and take their own maverick course different from the other funds. They will get praise if they are right and the sack if not. Stick with the same sort of policies as all the others however, and the bonuses will probably keep rolling in for not being notably worse than the industry average.

Some have given up the challenging and unrelenting task of outperforming the market and called themselves 'trackers' – they buy a large collection of the biggest companies' shares and so move with the market as a whole.

Another disadvantage of going for collective investments is the cost. Since investment trusts are quoted on the stock exchange just like any other company, the set of costs is the same as with all share dealings: the cost of the broker (though that can be reduced through a regular savings scheme with the trust management company), the government tax in stamp duty, and the spread between the buying and the selling price, which in smaller trusts can be over 10 per cent. Some can be bought directly from the management company. There are obviously advantages or they would not still be around, much less in such large numbers.

Buying into investment trusts does not entail abandoning all choice. The investor has an enormously wide range of specialists to pick from: there are trusts specializing in the hairier stock markets like Istanbul,

Budapest, Manila, Moscow and Caracas (some of them drift in and out of various 'emerging markets' labels such as the BRIC countries (Brazil, Russia, India and China)); there are some investing in the countries of the Pacific Rim with some of those concentrating on just Japan; some go for small companies; some gamble on 'recovery' companies (which tend to have a fluctuating success record); some specialize in Europe or the United States; some in an area of technology, and so on. Managers of investment trusts tend on the whole to be more adventurous in their investment policies than unit trusts.

Some are split capital trusts. These have a finite life during which one class of shares gets all the income, and when it is wound up the other class of shares gets the proceeds from selling off the holdings.

As the trusts' shares are quoted, one can tell not only how the share price is doing, but check precisely how they are viewed. It is possible to calculate the value of the quoted company shares a trust owns, except of course for the ones specializing in private companies. Then one can compare asset value with the trust's own share price, and this is published – see Chapter 7. Quite a few will then be seen to stand at a discount to assets (the value of a trust's holdings per share is greater than the market is offering for its own shares), and some at a premium.

One reason many of them are priced lower than their real value is that the major investing institutions tend to avoid them. A huge pension fund or insurance company does not have to subcontract this way of spreading investments, nor does it have to buy the managerial expertise – it can get them in-house. This leaves investment trusts mainly to private investors who are steered more towards unit trusts by their accountants and bank managers. Fashion changes, however, and from time to time the investment trust sector becomes more popular. Buying into one at a hefty discount can provide a decent return – so long as the discount was not prompted by some more fundamental problem with the trust or its management.

#### **Unit trusts**

Unit trusts have the same advantage of spreading the individual's risk over a large number of companies to reduce the dangers of picking a loser, and of having the portfolio managed by a full-time professional. As with investment trusts there are specialist unit trusts investing in a variety of sectors or types of company, so one can pick high-income, high-capital growth, Pacific Rim, high-technology or other specialized areas.

Instead of the units being quoted on the stock market, as investment trusts are, investors deal directly with the management company. The paper issued has therefore only a very limited secondary market – the investor cannot sell it to anyone other than back to the unit trust. The market is viewed from the managers' viewpoint: it sells units at the 'offer' price and buys them back at the lower 'bid' price, to give it a profit from the spread as well as from the management charge. Many of the prices are also published in the better newspapers.

As opposed to investment trusts, these are called 'open-ended funds' because they are merely the pooled resources of all the investors. If more people want to get into a unit trust, it simply issues more paper and invests the money, and so grows to accommodate them. Unlike the price of investment trusts shares, which is set by market demand and can get grossly out of line with the underlying value, the price of units is set strictly by the value of the shares the trust owns.

The EU and legislation have invented a new vocabulary. Unit trusts are now 'collective investment schemes' (CIS) as part of what the law calls pooled schemes managed by an independent fund manager. These are allowed to invest in quoted shares, bonds and gilts, but generally not in unquoted shares or property. Most of these 'open ended investment companies', unit trusts, and recognized offshore schemes are authorized and regulated by the Financial Conduct Authority.

The others are sometimes called non-mainstream pooled investments (NMPIs) because they have unusual, risky or complex assets, product structures, or investment strategies. These are unregulated collective investment schemes (UCIS); securities issued by special purpose vehicles (SPVs); units in qualified investor schemes (QIS); and traded life policy investments (TLPIs). These unregulated schemes are not bad or crooked but are reckoned generally to have more risky investment portfolios and so cannot be marketed to retail investors or members of the general public. They can sell only to people who have shown they know what they are doing, such as wealthy individuals (income over £100,000 and £250,000 to invest), sophisticated investors, existing investors in such schemes and financial institutions. Unregulated schemes are not subject to the FCA rules on investment powers, how they are run, what type of assets they can invest in, or the information they must disclose to investors. And investors do not have the safety net of the Financial Ombudsman Service or the Financial Services Compensation Scheme (FSCS) if things go wrong. They may however complain about a regulated firm if it advised an investor to put money into an unregulated scheme.

#### **Tracker funds**

Legend has it that blindfolded staff at one US business magazine threw darts at the prices pages of the *Wall Street Journal* and found their selection beat every one of the major fund managers. And indeed the task of having consistently to do better than the market average over long periods of time is so daunting that very few can manage it.

Some managers have given up the unequal struggle of trying to outguess the vagaries of the stock market and call themselves 'tracker funds' (or 'index funds' in the United States). That means they invest in all the big shares (in practice a large enough selection to be representative) and so move with the main stock market index - in the United Kingdom that is usually taken to be the FTSE100. This gives even greater comfort to nervous investors worried about falling behind the economy, and the policy provides correspondingly little excitement, so it is highly suitable for people looking for a home for their savings that in the medium term at least is fairly risk-free – it is still subject to the vagaries of the market as a whole in the short term but on any reasonable time frame should do pretty well. All the same, managers of passive funds like these are sometimes criticized for not earning their keep, because instead of picking potential winners they merely follow a statistical measure of a market. Their defence is that by picking the market segment to follow – such as 'emerging markets' – they are in effect allowing small investors to spread their risk in a sector they fancy. The growth of passive fund investment shows that either their defence is justified or that people are looking for lower risk in their investment strategy.

In fact there are various ways of structuring such a fund. Full replication involves buying every share in the index or sector in appropriate proportions. Stratified sampling buys the biggest companies in the sector plus a sample of the rest, and optimization involves statistical analysis of the share prices in the sector. Just to complicate matters, there is a very large number of things to track.

#### **FTSE Russell**

The Stock Exchange's set of indexes produced by this subsidiary company now covers about 98 per cent of the world's stock market investments. This allows the choice of, say, global property market companies, or one of 13 'stability indexes', or, indeed, a 'low beta equal weight' index. That gives a huge variety for such passive investors. For instance, just following the American stock market can include the S&P500 or indexes of 3,000 or 5,000 companies for a wide exposure to most US quoted companies.

#### **MSCI**

The MSCI company (formerly Morgan Stanley Capital International but now a separate company) has a range of indexes that covers pretty well anything, anywhere, segmented in a wide variety of ways. It has a set under world index, just as its emerging market section is divided into Americas (5 countries); Europe, Middle East and Africa (11 countries) and Asia (8 countries). Then there is the more alarming sounding 'Frontier Markets' section, and there are also 'standalone' countries ranging from Saudi Arabia to Jamaica, Bosnia to Zimbabwe.

#### Curve Global

The London Stock Exchange with the Chicago Board Options Exchange and major bank investing customers set up a market for interest rate derivatives, with no market charges. But this is sophisticated stuff that few small investors can cope with, especially as it tends to be in large amounts of money.

#### Open-ended investment companies

These are a sort of half-way house between unit and investment trusts. Like investment trusts they are incorporated companies that issue shares. Like unit trusts the number of shares on issue depends on how much money investors want to put into the fund. When they take their money out and sell the shares back, those shares are cancelled. The acronym OEIC is pronounced 'oik' by investment professionals.

The companies usually contain a number of funds segmented by specialism. This enables investors to pick the sort of area they prefer and to switch from one fund to another with a minimum of administration and cost.

# Exchange traded funds

Very like tracker funds, ETFs are baskets of securities generally tracking an index, a market or an asset class. They are dealt on the stock exchange and have no entry or exit fees, but, as they trade like other shares, they incur commissions on transactions and do have annual fees of usually under 0.5 per cent. Also like tracker funds they may not buy every share in the index tracked (called 'total replication') but may use some sampling technique that can lead to 'tracking error', ie the performance of the fund does not follow its target completely and this can range from about 0.25 per cent to about 4 per cent, which can outweigh fees and price changes.

The low cost of ETFs has recently attracted a big rise in investment interest, which has in turn brought in a greater variety of products. So much so that the Financial Conduct Authority has been moved to publish a warning about growing complexity in the products producing higher risk. Another source of problem is the sloppy use of the ETF label – sometimes it is now applied to Exchange Traded Commodities and Exchange Traded Notes which are unsecured assets and hence of substantially greater risk.

#### Other derivatives

When people talk of derivatives they are usually not referring to the range of collective investments but mean highly geared gambles requiring extensive knowledge, continuous attention and deep pockets. Even the professionals got it so spectacularly wrong that the derivatives mire rocked the foundations of the global economy in the 1990s and swallowed some of the world's largest finance houses, banks and insurance companies between 2007 and 2009. If the 'expert' financiers who are paid millions a year can get it so hugely wrong that they bankrupted multibillion pound companies, a small amateur is unlikely to survive long. These shark-infested waters are too dangerous for small or inexperienced investors.

This section therefore is intended as background rather than temptation. Some readers of this book may be gamblers, rich enough to bet on long odds, or grow experienced enough to venture into such treacherous areas. That is the speculative end of derivatives. For others it may also act as a safety net by hedging a perceived risk, or by fixing the price at which to trade within a specific time. But even then one needs a feel for the market.

There is a huge selection of ever more complicated derivatives. They include futures, options and swaps with a growing collection of increasingly exotic and complex instruments. These derivatives are contracts derived from or relying on some other thing of value, an underlying asset or indicator, such as commodities, equities, residential mortgages,

commercial property, loans, bonds or other forms of credit, interest rates, energy prices, exchange rates, stock market indices, rates of inflation, weather conditions, or yet more derivatives.

They are nothing new. Thales of Miletus in the 6th century BC was mocked for being a philosopher, an occupation that would keep him poor. To prove them wrong he used his little cash to reserve early all the oil presses for his exclusive use at harvest time. He got them cheap because nobody knew how much demand there would be when the harvest came around. According to Aristotle, 'When the harvest-time came, and many were suddenly wanted all at once, he let them out at any rate which he pleased, and made a quantity of money', showing thinkers could be rich if they tried but their interest lay elsewhere (*Politics*, Book I, Chapter 11). There is some dispute as to whether this was an options or forward contract but either way it shows derivatives have a long history.

Derivatives are generally analogous to an insurance contract since the principal function is offsetting some impending risk ('hedging', as the financial world calls it) by one side of the contract, and taking on the risk for a fee on the other. In addition there is the straight gamble of taking a punt on the value of something moving in one direction.

Hedging can entail using a futures contract to sell an asset at a specified price on a stated date (such as a commodity, a parcel of bonds or shares, and so on). The individual or institution has access to the asset for a specified amount of time, and then can sell it in the future at a specified price according to the futures contract. This allows the individual or institution the benefit of holding the asset while reducing the risk that the future selling price will deviate unexpectedly from the market's current assessment of the future value of the asset.

Derivatives allow investors to earn large returns from small movements in the underlying asset's price, but, as is usual, by the same token they could lose large amounts if the price moves against them significantly, as was shown by the 2009 need to recapitalize the giant American International Group with \$85 billion of debt provided by the US federal government. It had lost more than \$18 billion over the preceding three quarters on credit default swaps (CDSs) with more losses in prospect. Orange County in California was bankrupted in 1994 through losing about \$1.6 billion in derivatives trading. But the sky really fell in from 2007 onwards when it became clear that most of the major banks had traded in complex derivatives without the slightest understanding of the origin, risk and implications of what they were doing.

There are three main types of derivatives: swaps, futures/forwards, and options; though they can also be combined. For example, the holder of a 'swaption' has the right, but not the obligation, to enter into a swap on or before a specified future date.

## Futures/forwards

Futures/forwards are contracts to buy or sell an asset on or before a date at a price specified today. A futures agreement is a standardized contract written by a clearing house and exchange where the contract can be bought and sold; a forward is negotiated for a specific arrangement by the two sides to the deal.

The facility, as with so many derivatives, was originally created as a way of 'hedging' or offloading risk. For instance, a business exporting to the United States can shield itself against currency fluctuations by buying 'forward' currency. That provides the right to have dollars at a specific date at a known exchange rate so it can predict the revenue from its overseas contract. If some shares had to be sold at some known date (say to satisfy a debt) and the investor was nervous that the market might fall in the meantime, it is possible to agree a selling price now.

A gambler decides to buy a futures contract of £1,000 (it almost does not matter what lies behind the derivative – it could be grain, shares, currencies, gilts or chromium). It costs only 10 per cent (called the 'margin' in the trade), so in this case £100. That shows the business is geared up enormously. Three months later the price is up to £1,500 so the lucky person can sell at a £500 profit, which is five times the original stake. It could also happen though that the price drops to £500 and he or she decides to get out before it gets worse. On the same reckoning the loss of £500 is also five times the original money. This shows that, unlike investment in shares or warrants, where the maximum loss is the amount of the purchase money, the possible downside of a futures deal is many times the original investment.

Futures contracts can be sold before the maturity date and the price will depend on the price of the underlying security. If you fail to act in time and sell a contract, the contract can now be rolled over into the next period or the intermediary arranging the contract will close and remit profits or deduct losses.

There is also an 'index future', which is an outright bet similar to backing a horse, with the money being won or lost depending on the level of the index at the time the bet matures. A FTSE100 Index future values a one-point difference between the bet and the Index at £25.

An extension of that is 'spread trading', which is just out and out gambling on some event or trend vaguely connected to the stock market or some financially related event. It could be anything from the level of the FTSE100 Index to the survival of a major company's chief executive in his or her troubled job. If the spread betting company is quoting 4,460 to 4,800 or if the market-makers are quoting 40 to 42 days for the chief executive and somebody thought it would be less than a month, it is possible to 'sell' at 40; while somebody reckoning the chances are better than that and the executive could be there for months to come would 'buy' at 42. Then if the person lasted 47 days before getting the elbow, the buyers would have won by five days and their winnings would depend on how much they staked - at £1,000 a day they would have cleared £5,000. The sellers, however, would have lost by seven days and once again their debt would depend on how much they staked. The marketmaker makes a profit on the spread between the two (if running an even book), just as do market-makers in ordinary shares.

The spread betting company, say, offers Brigantine & Fossbender at 361 to 371p. If you think the shares will rise substantially you buy at 371 in units of £10. If you are right and the price then goes to 390p, the shares have appreciated by 19p above your betting price (assuming one unit) and the proceeds are therefore £190. That sounds good until you consider that if the shares had instead dropped to 340p, your losses would be £210. Conversely, if you think the shares will fall, you 'sell' at 361p and the same mathematics applies the other way. If the price remains within the 361 to 371p range nobody wins.

#### Contract for difference

This is a contract that mirrors precisely dealing in an asset, without any of it actually changing hands. If the price has risen by the end of the stated period the seller pays the buyer the difference in price, and if the price has fallen the buyer pays the seller the difference. CFDs are available in unlisted or listed markets in the United Kingdom, the Netherlands, Germany, Switzerland, Italy, Singapore, South Africa, Australia, Canada, New Zealand, Sweden, France, Ireland, Japan and Spain, but not the United States where they are banned, but they do have margin trading. The asset can be shares, index, commodity, currency, gold, bonds, etc.

The trades do not confer ownership of the underlying asset but involve taking a punt on the price movement, so the contracts offer all the benefits of trading shares without having to own them. Being risky, the contracts are available only to non-private, intermediate customers as defined by the Financial Conduct Authority.

Investors in CFDs are required to maintain a margin as defined by the brokerage or market-maker, usually from 1 to 30 per cent of the notional value of leading equities. That means investors need only a small proportion of the value of a position to trade and hence they offer exposure to the markets at a small percentage of the cost of owning the actual share. It offers opportunities for large gearing up – 1:100 when trading an index. It allows taking long or short positions, and unlike futures contracts a contract for difference has no fixed expiry date, standardized contract or contract size. As in the underlying market, taking a long position produces a profit if the contract value increases, and a short position benefits if the value falls.

There is a daily financing charge for the long side of the contracts, at an agreed rate linked to LIBOR (see Glossary) or other interest rate, so a delay in closing can be expensive. Traditionally, CFDs are subject to a commission charge on equities that is a percentage of the size of the position for each trade. Alternatively, an investor can opt to trade with a market-maker, forgoing commissions at the expense of a larger bid/offer spread on the instrument. The contracts can hedge against short-term corrective moves, but do not incur the costs and taxes associated with the premature sale of an equity position. As no equities change hands, the contracts are exempt from stamp duty.

Like all highly geared deals, exposure is not limited to the initial investment. The risk can be mitigated through 'stop orders' (guaranteed stop-loss orders cost an additional one-point premium on the position and/or an inflated commission on the trade). A stop-loss can be set to trigger an exit, eg buy at 300p with a stop-loss at 260p. Once the stop-loss is triggered, the CFD provider sells.

The device is convenient if used under around 10 weeks – the point where financing exceeds the financing charge for stocks – while futures are preferred by professionals for indexes and interest rates trading. It is also fairly well hidden – a group of hedge funds linked to BAE Systems acquired more than 15 per cent of Alvis through CFDs without having to warn the regulator.

Acquiring 1,000 Bloggins & Snooks plc shares at 350p each would need £3,500. Using contracts for difference, trading on a 5 per cent

margin, you would need only an initial deposit of £175. If you had £175 to invest, and wanted to buy Bloggins & Snooks plc at 350p and sell at 370p, a standard trade would be:

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buy: 50 \times 350p = £175
sell: 50 \times 370p = £185
profit = £10 or 5.7 per cent
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Using gearing:

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buy: 1,000 \times 350p =
£175 (5 per cent deposit) + £3,325 (95 per cent borrowed funds)
sell: 1,000 \times 370p = £3,700
profit = £200 or 114 per cent
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Although the profit after gearing was far greater, losses are comparably magnified.

#### **Options**

Options give the right, but not the obligation, to buy (in the case of a 'call option') or sell (in the case of a 'put option') an asset. That is how they differ from futures, which have an obligation to trade. The price at which the trade takes place, known as the 'strike price', is specified at the start. In European options, the owner has the right to require the sale to take place on (but not before) the maturity date; in US options, the owner can require the sale to take place at any time up to the maturity date.

If, during the time a put option is in force the share price falls significantly, the investor can make a handsome profit by buying the cheaper shares in the market and exercising the option by selling them at the agreed price. Similarly, in reverse, a call option is handy if you think they will rise substantially in the interim. Come the contracted day, however, and the price has moved the wrong way, one can just walk away and opt not to exercise the option. All that has been lost is the margin of option money, which is a lot less painful than if the underlying security had been bought and sold.

This is another way of hedging one's position. Say somebody knows that for some reason they will have to sell a parcel of shares in eight months' time – to fund the down-payment on a house, for instance. But

there is a worry the market may slump in the meantime: buying a put option at roughly today's price provides a way of buying protection. If it is one of the 70 or so companies with options traded in the market, there is also the chance to sell the option before expiry since, like most derivatives, options can be traded before maturity.

A company languishing in a troubled sector may look to an astute observer to be about to turn itself round, become a recovery stock, and astonish everyone. But if the observer is also astute enough to have misgivings about such uniquely prescient insight, and worries about committing too much money to the hunch, there is a cheap way in. One simply buys an option to buy.

So if Bathplug & Harbottle shares are standing at 75p, it can cost, say, 6p to establish the right to buy shares at that price at any time over the next three months. If in that time the shares do in fact fulfil the forecast and jump to 120p, the astute investor can buy and immediately sell them at a profit of 39p a share. If the misgivings prove justified and the shares fail to respond or even slump further, only 6p instead of 75p has been lost.

The whole thing works the other way as well, so the suspicion but not total certainty that a company is about to be seriously hammered by the market could prompt someone to buy a put option. That is the right to sell the shares at a specified price, within an agreed set of dates.

These rights have a value as well, related to how the underlying share is performing and how long they have to run, so they can be traded, mostly on the London International Financial Futures and Options Exchange (generally abbreviated to Liffe, pronounced 'life' rather than like the river flowing through Dublin). The traded options market deals in parcels of options for 1,000 shares and at several expiry dates, with some above and some below the prevailing market price for about 70 of the largest companies.

When one buys a security or direct investment, for example 100 shares of South Seas at £5 each, the capital result is linear. So if the price appreciates to £7.50, we have made £250, but if the price depreciates to £2.50 we have lost £250. Buying a one-month call option on South Seas with a strike price of £5 would give the right but not the obligation to buy South Seas at £5 in one month's time. Instead of immediately paying £500 and receiving the stock, it might cost £70 today for this right. If South Seas goes to £7.50 in one month's time, exercising the option by buying the shares at the strike price and selling them would produce a net profit of £180. If the share price had gone to £2.50, the loss would have been

restricted to the £70 premium. If during the period of the option the shares soar to £10 the option can be sold for £430. An option provides flexibility.

#### **Warrants**

In normal usage a 'warrant' is a sort of guarantee, but in the stock market it is a piece of paper entitling one to buy a specified company's shares at a fixed price. These are equivalents of share options – though generally with the longer life of between three and 10 years – and can therefore be traded. In effect it is a call option issued by a company on its own stock. The company specifies the exercise price and maturity date. The price will be set by a combination of the conversion price and the prevailing price of the actual shares already being traded.

A 'covered warrant' is different, and the 'covered' bit has long been abandoned. It conveys the right to buy or sell an asset (generally a share) at a fixed price (called the 'exercise price') up to a specified date (called the 'expiry date'). It can also be based on a wide variety of other financial assets such as an index like the FTSE100, a basket of shares, a commodity such as gold, silver, currency or oil, or even the UK housing market. As with other derivatives, investors can use it to gear up their speculation or use it as a way of hedging against a market fall or even for tax planning. Unlike 'corporate warrants', which are issued by a company to raise money, a covered warrant is issued by a bank or other financial institution as a pure trading instrument. Covered warrants can either be US warrants (exercised any time before expiry) or European (exercised only on the date specified) but most are simply bought and then sold back to the issuer before expiry. If a warrant is held to expiry, it is bought back for cash automatically, with the issuer paying the difference between the exercise price and the price of the underlying security.

There are a number of issuers offering over 500 warrants and certificates on single shares and indices in the United Kingdom and around the world. They tend to be major global investment banks that have 'bid' (buy) and 'offer' (sell) prices for their warrants during normal market hours in exactly the same way as shares. Investors trade in them through a stockbroker, bank or financial adviser, just as with ordinary shares. Launched in 2002 there are now more than 70 brokers trading. Germany launched its covered warrants market three years earlier in 1989.

A covered warrant costs less than the underlying security; this provides an element of 'gearing' so when the price of the underlying asset moves, the warrant's price moves proportionately further. It is therefore riskier than buying the underlying asset. A relatively small outlay can produce a large economic exposure, which makes warrants volatile, and that means they can produce a large return or lose the complete cost of the warrant price (confusingly called the 'premium') if the underlying security falls below the purchase price (it is 'out of the money'). In addition, warrants have limited lives and their value tends to erode as the expiry date approaches.

Covered warrants can be used to make both upwards and downwards bets on an underlying asset. Buying a 'call' is a bet on an upward movement. Buying a 'put' is a bet on a downward movement. With both kinds of bet the most an investor can lose is the cost of the warrant. Covered warrants are like options but are freely traded and listed on a stock exchange – they are securitized. As a result, they are easy for ordinary private investors to buy and sell through their usual stockbroker.

#### **Swaps**

Swaps are contracts to exchange cash flows on or before a specified future date based on the underlying value of currencies/exchange rates, bonds/ interest rates, commodities, stocks or other assets. Interest-rate swaps account for the majority of banks' swap activity, with the fixed-for-floating-rate being most common. In that deal one side agrees to make fixed-rate interest payments in return for floating-rate interest payments from the other, with the interest-rate payment calculations based on a hypothetical amount of principal called the 'notional amount'. Swaps, forward rate agreements and exotic options are almost always agreed privately, unlike exchange-traded derivatives.

As revered investor Warren Buffett warned in his Berkshire Hathaway 2002 annual report, 'We view them as time bombs both for the parties that deal in them and the economic system... In our view... derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.'

The original purpose of inventing most of them was to reduce some-body's risk – a sort of hedging device. It works in commodities, for instance when a farmer tries to find protection from the potential hazard of a huge harvest (of wheat, oranges, coffee and so on) with the consequent plummeting prices, by agreeing a price earlier and before the size of the harvest is known. If the crop turns out to have been meagre a huge profit may have been forfeited from a big price hike, but the farmer was protected from penury if it had gone the other way.

# Chapter Four Foreign shares

Substantial number of foreign companies are quoted on the London Stock Exchange, especially from Europe (eg Volkswagen, Bank of Ireland, Bayer and Ericsson). In addition there are US companies (eg General Electric and Abbott Laboratories), Chinese (Air China), Japanese (Honda, Kawasaki and Mitsubishi), Taiwanese (Acer), South African (SAB Miller), Chilean (Antofagasta) and Russian (Gazprom). Most of them trade in Britain as well so it is possible to get some idea of the business and see stockbroker analysis of the management and figures. Trading in these is pretty much like investing in a major UK company.

The mergers of European stock markets make it easier to get access to markets in other major countries and their shares, especially as there is a large number of rather good internet-based stockbrokers in Germany, France and Holland.

It is theoretically possible to buy overseas shares through a UK broker – in practice only some offer this service so check in advance whether the broker you want does. However, global markets and differential economic performances are producing more opportunities, and the internet and online brokers make it easy. But despite the growth of European traders most of the readily available trade in overseas shares is for US stocks. That looks to change as an ever-growing number of cutprice dealers from Germany and France set up net services in Britain.

As with all such investments, a degree of research and homework is essential. The trouble is that there are added levels of risk in overseas shares. The first is the state of the overseas economy. An investor needs to know whether interest rates are on the verge of change in that

country because that might have an immediate effect on share prices, or whether the economy as a whole is about to soar away or is heading for a precipice.

Second, a wise investor gets to know something about the state of a particular sector: one needs to know which is about to be affected by a trade agreement, a reorganization, a spate of mergers and so on.

Third, it is a little harder to keep track of the companies – British newspapers tend not to write about them, stockbrokers do not analyse their figures and one cannot keep an eye on their products and services in the marketplace. There are also local peculiarities, for instance Swiss shares, which are commonly £5,000 each, with some at over £20,000 for a single share. That makes it harder for a small investor to get a range of these stocks – though to be fair there are ways of buying part of a share.

On top of that there is the exchange rate risk: a comfortable profit from trading in the shares might be completely wiped out by the relative movement of sterling. Finally, there are risks in the way the market itself operates. Regulation in major countries like Australia and the United States is pretty comparable with Britain, but 'emerging' markets can range from the haphazard to the corrupt. As part of that there may also be erratic recording of deals, ownership records may be variable, and controls wayward.

There are people who can cope with all those dangers, and have done very well from US shares, and even from investing in the budding markets of smaller countries. Mostly they know what they are getting into and know something of the circumstances to manage the risk.

For a novice to the stock markets or someone with a relatively small amount of money to play with, it is probably wiser to buy investment or unit trusts with the sort of overseas profile you fancy. There is such a variety on offer, you can decide whether to opt for Japan, the United States or Germany; for the Pacific Rim, western Europe, or developing countries; and even whether to pick specific industrial sectors within these regions. That not only hands over the decision to professionals on which are the good shares, but also spreads the risk. Another choice is to buy the shares of a UK company that does a lot of trade in the favoured area. Those choices also eliminate the foreign exchange consideration since the dealings are in sterling.

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