# Equities philosophy and process documentation

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# Summary

*Our beliefs about markets and our investment philosophy*

We believe that there are persistent inefficiencies in equity markets, which we seek to exploit through active management. At the heart of these inefficiencies are the behavioural biases of investors. We do not expect these biases to alter to any great degree as they reflect human nature, and therefore anticipate that market inefficiencies will persist into the future.

## Our investment style

Our beliefs about markets lead us to look for three characteristics when investing in companies – growth, business momentum and consistency. This investment style is applied across all our equity teams and implemented in a bottom up approach to portfolio construction.

## Where we are seeking to add value

We seek to add value through superior stock selection under an investment style that is consistently applied. This approach drives the way we generate ideas, do our research, make buy and sell decisions and construct portfolios.

## Where we believe that we have competitive advantage

When we compare our investment philosophy and process to the larger global asset managers, we believe that we have competitive advantage in the following areas:-

* Unique style that seeks to exploit persistent behavioural biases of other investors.
* Current team has successfully applied the style in the past.
* Commitment to applying the style.
* Awareness of potential behavioural biases in our decision making.
* Commonality of approach within and across research teams enhances the value of our research and the generation of ideas.
* Realism about the limitations of valuation techniques as a driver of buy and sell decisions.
* Use of FIS-defined stock categories gives fuller understanding of portfolio risks.

# Our beliefs and investment style

## How our beliefs about markets link to the style characteristics that we seek

## 

# Growth

Belief - The key long-term driver of a company’s stock price is normally the growth in profit per share.

Style characteristic - We seek to invest in companies that we expect to sustain above average growth in profit per share.

# Business momentum

Belief - As evidence of substantial change in a company’s prospects appears, market participants are generally slow to fully incorporate the new information into their expectations.

Style characteristic - We seek to invest in companies where the outlook for the business is improving.

# Consistency

Belief - Market participants are generally over-optimistic in their profit per share expectations. This over-optimism is normally greater for stocks that show high variability in the progression of profit per share.

Style characteristic - We seek to invest in companies that we expect to show above average consistency in the progression of profit per share.

*The benefits of having a defined style across and within equity teams*

A defined and common style means that there is greater clarity in what is being sought from an investment. It also means that the discussions within the firm on the merits or otherwise of a stock focus more on the genuine issues, rather than simply reflecting the different investment styles of the individuals concerned. In this respect a common style is like sharing the same language. It greatly enhances the scope for high quality discussion, debate and decision making within a team.

Having a defined style also avoids the siren call of style rotation. Style rotation can appear an appealing approach as it offers the possibility of outperformance in all market conditions. We believe that such an approach is unlikely to deliver long term outperformance. Style rotation will tend to lead to an unduly short term focus in the vain search for consistent short term outperformance.

## Why we apply our style

* We believe that our style will deliver outperformance in the future. There is a substantial body of academic evidence and backtesting results (set out in the section 3) to support this.
* Our style seeks to exploit market inefficiencies created by the behavioural biases of investors. We expect that these biases will persist into the future providing long term viability for our style.
* Our style is particularly well suited to the low inflation environment that we believe is likely to continue (see Appendix A).
* The current team has successfully applied the style in the past and we believe that they will continue to do so in the future.

*Does the style evolve?*

We are committed to our style, but that does not mean that the way we apply the style will not evolve. With the help of external consultants/academics, our investment professionals regularly examine how the style is being applied, how we could improve the way we operate and the usefulness of the quantitative measures that may capture our style.

## Would a change in the macroeconomic environment cause us to change our style?

Our style is not founded on a particular set of macroeconomic assumptions. It is based on our beliefs about market inefficiencies and their behavioural drivers. The style would therefore remain the same in a different macroeconomic environment, although the way we applied it would continue to evolve.

## How would the style be expected to perform in a move to a deflationary or inflationary global environment?

In a move to a deflationary environment the style would be expected to perform well as the characteristics of growth and consistency became scarcer. In addition falling bond yields will tend to increase the relative value of (longer duration) growth stocks. Additionally there is scope for the business momentum characteristic to add value if, as we would expect, the market is slow to perceive the effects of the substantial change in the macroeconomic environment at an individual company level.

In a move to a substantially more inflationary environment the reverse is true for the growth and consistency characteristics of the style, which are likely to underperform. However there is still the opportunity for the business momentum characteristic to add value if, as we would expect, the market is slow to perceive the effects of the substantial change in the macroeconomic environment at an individual company level.

## Where we believe that we have competitive advantage

* Unique style that seeks to exploit persistent behavioural biases of other investors.
* Current team has successfully applied the style in the past.
* Commitment to applying the style.
* Commonality of approach across and within research teams.

# The evidence that supports our style

# Growth

***Belief: The key long-term driver of a company’s stock price is normally the growth in profit per share.***

Finance theory and informed intuition suggest that a stock's value is directly linked to the stream of its future profits. Thus, growth in profits is the key factor to stock price performance and return on investment. In the words of Bernstein (1995), "the product bought and sold within the equity market is profits growth."

*The empirical evidence that supports this fundamental view.*

Ball and Brown (1968), in a seminal paper, document the relation between earnings and stock prices. They show that the average firm with increased (decreased) earnings also has increased (decreased) stock prices during the year, relative to the market as a whole. They also show that stock prices move in anticipation of the earnings report. The essence of these results has been confirmed and extended by a wide range of other studies.

Niederhoffer and Regan (1972) strongly suggest that stock price movements are associated with earnings changes, and that differences between the actual and predicted changes lead to substantial price adjustments. Furthermore, Elton, Gruber and Gultekin (1978) found that stocks that have the highest growth in earnings over a period provide the highest returns over that period, and vice-versa. The contemporary relation between aggregated earnings and stock prices grows stronger over longer intervals (Easton, Harris and Ohlson 1992).

*The backtesting of ‘growth’ in the academic literature*

In academic analyses of stock performance, ‘growth’ stocks are generally defined as those stocks with high P/E or P/B ratios. Numerous studies have investiaged the historic relationship between returns, and P/E ratios (eg Jaffe, Keim & Westerfield (1989), and P/B ratios (eg Fama & French (1992)). They have generally found that, on average, stocks with high P/E or P/B ratios have underperformed.

We believe that the idea that one can split up a universe of stocks by a valuation variable, and assume that some part contains the stocks that are ‘growth’ is highly unrealistic. For example:

* The P/E measure of growth can be problematic. For example, what if earnings have been ‘depressed’, giving rise to a high P/E ratio? This would indicate a ‘growth’ stock, regardless of the actual future growth prospects of the company.
* The P/B definition has similar problems to the P/E measure. While book value is far less volatile than historical earnings, it does have it own set of problems. For example, it will generally not include ‘intangibles’ such as intellectual capital (which we contend has become more important over recent times). Also, it is subject to arbitrary accounting conventions, such as goodwill write-offs.

Most importantly such measures do not attempt to capture profits growth – which lies at the heart of growth investing.

### A better definition of growth for backtesting

We acknowledge that it is difficult to find a measurable for variable that captures ‘growth’. However we believe that a good variable for backtesting is one that attempts to capture forward-looking growth, and to look through what is essentially cyclical or recovery growth.

Our starting point for finding a better backtesting variable for growth is the 2-year forward consensus forecast EPS growth rate. This captures forward looking profits growth, but suffers from the drawback that this growth will often be cyclical on recovery in nature. We therefore use an EPS growth rate that also incorporates the 4 previous years, where this 6 year growth rate is lower. This variable is set out below:-

The lower of   
  
a) the 2-year forward consensus forecast EPS growth rate and

1. the EPS growth rate formed by cumulating 4-year historic and 2-year consensus forecast EPS growth.

### The backtesting results for this ‘growth’ variable.

The results are set out below for the US and UK. The charts show the cumulative relative performance of the top two quintiles (by growth rate) and of the bottom two quintiles. The full methodology is set out in Appendix B.

*Behavioural drivers*

Behavioural finance theory has provided insights into why growth investing may work.

A characteristic commonly shared by stocks currently regarded as having good growth prospects is that of prior share price outperformance. Similarly, stocks currently viewed as having poor growth prospects are more likely to have experienced weak share price performance.

Shefrin and Statman (1985) suggest that people generally sell their winners too early and hold their losses too long. The idea that people are loss averse has strong intuitive appeal – realising a loss is a psychologically painful act. Loss aversion is one of the primary predictions of prospect theory (a theory which describes decision making under uncertainty). The existence of loss aversion was confirmed by Odean (1998). He found that investors realise gains more frequently than they realise losses. Moreover, they tend to realise small losses far more readily than big losses. They tend to sell stocks that have outperformed the market in the two years prior to the transaction. Thus, the early sales of winners may have a temporary depressing effect on prices. This gives the scope for future outperformance.

# Business momentum

***Belief: As evidence of substantial change in a company’s prospects appears, market participants are generally slow to fully incorporate the new information into their expectations.***

*The evidence from earnings revisions and surprises*

The slow stock price response to earnings upgrades is probably one of the best established regularities in the finance literature. Bernard (1993) in his survey of the relevant literature presents evidence indicating that “post-announcement drift” arises because stock prices fail to reflect fully what current earnings imply, on average, about earnings in subsequent quarters. As a result, when the subsequent quarters' earnings are announced, stock prices appear to reflect some surprise to earnings changes that should have been predictable in advance.

Bernard and Thomas (1990) argue that the market does not understand the serial correlation of quarterly earnings. Thus, part of the price response to this quarter’s earnings announcement is predictable from previous quarter’s earnings. Peters’ (1993) analysis supported the notion that earnings surprises are to some extent predictable and exhibit serial correlation. That is, positive/negative earnings announcements tend to be followed by other positive/negative earnings announcements. The failure of stock prices to fully capture the time-series properties of the earnings generating process has given rise to the ‘cockroach theory’ of earnings surprises: good/bad news earnings reports precede other good/bad news earnings reports. Like cockroaches, you never find just one of them!

Givoly and Lakonishok (1979) report similar sluggishness in the response of prices to revisions in analysts' forecasts of earnings. Thus, market reaction to the disclosure of analysts’ forecasts is relatively slow and gives rise to potential abnormal returns to investors who act upon this type of publicly available information, that is prices continue to drift in the direction of the revision for about six months after the revision. Both Benesh and Peterson (1986) and Lys and Sohn (1990) came to the conclusion that consensus forecasts of earnings were serially correlated. That is, an earnings upgrade tends to be followed by another upgrade and vice versa for downgrades. This information could be exploited to generate abnormal returns. Similarly, Hawkins et al (1984) came to the conclusion that information regarding large revisions of consensus forecasts could predict future changes in stock prices. Revisions could therefore be used to achieve returns over the market’s return, even after risk adjustment and transaction costs.

*Behavioural drivers*

The behavioural literature offers a number of explanations for these effects.

Daniel, Hirshleifer and Subrahmanyan (1998), for example, argue that analysts and individual investors suffer from a combination of overconfidence and self-attribution bias. Overconfidence is perhaps the most robust finding in the psychology of judgement. Edwards (1968) suggests that individuals underweight new information in updating their prior beliefs. One manifestation of this phenomenon is that people overestimate the reliability of their knowledge. Self-attribution occurs when people attribute successful outcomes to their own skill but blame unsuccessful outcomes on bad luck. Accordingly this combination of biases leads investors to underreact to information obtained from public sources and overreact to either information or analysis they arrive at on their own.

The observed evidence from estimate revisions and surprises can also be a symptom of underreaction, - i.e. prices adjust too slowly to news. According to Barberis, Shleifer and Vishny (1998), investors have difficulty interpreting information about earnings. They suffer from a conservatism bias and do not update their beliefs when new public information emerges. Therefore, when a permanent positive change in the earnings picture takes place for a company, analysts fail to recognise it. The first positive surprise will tend to be followed by a few more.

The tendency of investors to not respond fully to change has been ascribed to their inclination to anchor new forecasts too heavily to their previous forecasts. In the words of Olsen (1998),

“[Analysts] often forecast by establishing an anchor value, and the adjustment they make to the anchor based on specific information is usually insufficient”.

In short, Shefrin (1999) concludes that a combination of these factors leads investors and analysts to adapt insufficiently to the arrival of new information. The result is conservatism. Permanent changes in circumstances are mistaken for temporary ones.

1. **Consistency**

***Belief: Market participants are generally over-optimistic in their profit per share expectations. This over-optimism is normally greater for stocks that show high variability in the progression of profit per share.***

*The empirical evidence*

Many studies of analysts' earnings forecasts provide evidence that analysts normally produce upwardly biased forecasts. Not only they do not use all available information but they do not even exploit all the information in past forecasts - i.e. there is positive serial correlation on average in forecast errors. (Fried and Givoly 1982, O'Brien 1988, Butler and Lang 1991, Brous 1992, Ali, Klein and Rosenfeld 1992, Brous and Kini 1993, Dreman and Berry 1995, Clayman and Schwartz 1994 and Olsen 1996).

Moreover, this overestimation bias does not appear to be uniform one across stocks. Huberts and Fuller (1995) found that,

“Analysts estimates of earnings [are] excessively optimistic for companies whose earnings have been hard to predict in the past”.

Furthermore, they found that the market does not fully adjust for this excessive optimism:

“The stocks of companies whose earnings have been previously hard to predict underperform the stocks of companies whose earnings have been relatively easy to predict”.

This effect held after adjusting for industry factors, systematic risk, size and ‘value’ factors.

Further supporting evidence comes from Weary (1998), who demonstrates that U.S. companies with a relatively stable earnings progression tend to outperform those with more unstable earnings, after controlling for industry factors.

## Behavioural and institutional drivers

It has been argued that this overestimation bias is due to the understandable tendency of sell-side analysts to attempt to generate commission revenue. It is generally easier to get clients to buy stocks than to sell them, and it is easier to get clients to buy stocks on which one is optimistic.

The greater over-optimism for stocks with high earnings variability can also be explained in these terms. In the words of Huberts and Fuller,

“Clearly, buy recommendations are more marketable to portfolio managers when presented with relatively favourable earnings forecasts. Such forecasts are more credible if a story can be told that challenges the imagination of a portfolio manager in a favourable way. Stories (forecasts) of much higher earnings may be more imaginable if recent earnings have proven unpredictable. Thus, for low-predictability companies, analysts might introduce some unwarranted optimism at small risk of losing credibility with investors”.

Investor overconfidence may lead them to continually ignore the previous volatility in the earnings of a stock, and base investment decisions on current over-optimistic earnings forecasts, only to be undone by subsequent downgrades and negative earnings surprises.

1. **Ideas generation**

The generation of new ideas is the starting point for further research that may drive a buy or a sell decision. The main sources of new ideas are discussion within each research team and across research teams, database analysis and news flow.

*Discussion within the research team and across research teams*

Ideas from this source are particularly likely to be generated on themes that are affecting one sector and that apply across other sectors or into other regions.

These are regular discussions within the research teams that aim to pick up on such themes.

We have a global equity managers meeting on a monthly basis which focuses on such global themes across the research teams. This is in addition to the informal discussions that occur between analysts across research teams, which is aided by the networking of our research documentation.

*Database analysis*

Database analysis is used to highlight where a stock has the style characteristics that we are looking for. It is especially useful where the outlook for a company may be changing substantially but where there is little direct news flow. It can prove a useful catalyst for discussion and debate – giving information with which to challenge the individual analyst as to whether there may be substantial change occurring in the prospects of one of the companies that they cover.

The major variable used is earnings estimate revisions, which is a potential indicator of changing business momentum. The main source of this currently is IBES.

Earnings surprise and relative price performance may also be used as potential indicators of changes in business momentum. Prospective eps growth and historic eps consistency may also be used as potential indicators of the growth and consistency characteristics of our style. Again IBES is the main data source.

# *News flow*

This is likely to generate further research where it was of an important nature that indicated the possibility of substantial change in the outlook for a company. Sources include the companies themselves, news services and market contacts.

# *Where we believe we have competitive advantage*

* Common style means that database analysis is an effective catalyst for discussion and debate within the research teams.
* Common style increases the scope for transferring ideas within research teams and across research teams.

1. **Research**

*What we are trying to achieve through research*

Our research is focussed on considering, debating and communicating the answers to two questions:

1. How well does the stock fit our investment style?
2. What is our assessment of the balance of risks to market expectations?

*What we are not trying to achieve*

We do not believe that significant value can be added in certain areas of the research process. We identify the following as areas where we do not seek to gain competitive advantage.

* We are not attempting to do a greater quantity of primary research.
* We are not seeking to research a larger number of companies.
* We are not attempting to build more elaborate financial models.
* We are not trying to produce a bigger paper mountain of internal research documentation.

*Who does the research*

We believe that it is more effective to combine the roles of fund manager and analyst. All managers with portfolio responsibilities also have some direct research responsibility.   
  
Research responsibilities are allocated on a sector basis (except in the Asia where it is done on a country basis). It is the specialist for each stock that does the initial analysis, which is presented to the rest of the team for discussion and debate.

*The main sources of information we use*

1. Meeting the company. This provides us with important insights into the development of their business and the quality of the management. We find that having a defined investment style enhances the benefits we derive for meeting companies by providing a clearer focus to the discussion.
2. Company report, accounts, website and other company published material.
3. Sell side. The main use of the sell side is in providing written research, access to their analysts, financial models and bespoke work that we request. We use the First Call service to network sell side research.
4. Financial information and analysis systems (e.g. IBES, Datastream).
5. Other media sources including the financial press, specialist publications and company news services.

# *How we assess the style fit*

This involves looking at each of the growth, business momentum and consistency characteristics of the stock compared to the research universe as a whole. The style fit is then assessed into one of five levels and this feeds into the stock rating.

## Growth

We are looking primarily at the expected ‘long term’ growth rate of the appropriate measure of profit per share. The long term growth rate is a prospective one (typically looking 5 years forward) and seeks to look through any cyclical influences or recovery element.

An assessment of the long term growth prospects will generally include considering the factors below.

* Competitive position within industry
* Long term growth prospects for the industry
* Management’s ability to deliver future growth
* Historic record of generating profits growth and shareholder value
* Expected organic sales growth
* Scope for margin expansion

## Business momentum

# We are looking at whether recent developments indicate a sustainable improvement or deterioration in the company’s prospects. Although the focus is on developments over a relatively short time period (typically the last six months), it is the relevance of these developments to the company’s longer term prospects that is key.

# An assessment of the business momentum will generally include the factors below.

# Changes in competitive position

# Changes in industry prospects

* Recent results
* Estimate revisions
* Effect of changes in the macroeconomic environment
* Change in return on invested capital

# *Consistency*

# We are looking at how stable the future profits progression is likely to be, typically looking forward over at the next 5 years. Although the assessment is a forward looking one, consideration is given to the variability of profits in the past, seen in the light of the changes that may have taken place in the business.

# An assessment of the consistency of the stock will generally include the factors below.

* Economic sensitivity
* Level of pricing power
* Scope for major changes in competitive position
* Earnings visibility
* Free cash flow generation
* Interest cover
* Balance sheet strength
* Historic earnings stability

# *How we assess the balance of risks to market expectations*

This involves judging whether the balance of risks to market expectations for the stock is on the upside (positive outcomes) or on the downside. This focuses primarily in the risks to market expectations for both the short term (next 12 months) and long term (looking out at least 5 years) profit progression.

At this point in the process that the scope for the individual analyst to add value is significant. Assessing the balance of risks to market expectations is inevitably one that relies heavily on individual judgement. However there is still a clear structure in place for making this judgement.

The main source for understanding the market’s short term expectations are IBES and market contacts. For understanding the market’s long term expectations valuation data is the main source.

Where a stock has improving business momentum the assessment of the balance of risks to short term market expectations is more likely to be on the upside than on the downside. This aligns with our belief that market participants are generally slow to

fully incorporate evidence of change into their expectations.

The checklist of questions that the analyst considers when forming their judgement is set out in Appendix C. The assessment of balance of risks to market expectations is made on one of five levels and feeds into the stock rating.

# *The ‘ balance of risks’ approach compared to the ‘own valuation’ approach*

We believe that our approach of assessing the balance of risks to long term market expectations is a more effective than what we label as the ‘own valuation’ approach. The two approaches are characterised below:-

The ‘own valuation’ approach

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Understand the company and its prospects |  | Use own assumptions to model future profits progression |  | | Use own assumptions to value the stock |  | | View on attractiveness  of the stock |
| The ‘balance of risks’ approach | | |  |  | | |
| Understand the company and its prospects |  | Understand market expectations for future profits progression |  | | Assess balance of risks to market expectations |  | | View on attractiveness  of the stock |

The ‘own valuation’ approach may appear on the surface to be an appealing one, as it makes the assumptions used explicit. However we believe that it suffers from a critical flaw.

We believe that there is a strong tendency to ‘anchor’ the assumptions too heavily under the ‘own valuation’ approach. The behavioural drivers of this tendency are reviewed in Section 3. The tendency to anchor makes it less likely that this approach will deal effectively with change. We believe that this approach will tend to lead to an understatement of the attractiveness of stocks where the underlying business is improving, and an overstatement of the attractiveness where the underlying business is deteriorating.

We believe that our approach of assessing the balance of risks to market expectations substantially reduces the likelihood of anchoring, and therefore allows us to deal more effectively with change.

# *The role macroeconomic factors play in forming our stock views*

As ‘a bottom up’ house, macroeconomic factors are not the main drivers of our stock views. The points below indicate where a macroeconomic input might be incorporated in forming the analyst’s view.

* We do not seek to drive individual stock views off any differences we may have from consensus in our view of the outlook for major macroeconomic variables.
* Evidence of substantial changes in the macroeconomic environment may affect the style fit, especially for business momentum.
* Judging the balance of risks to market expectations may involve an assessment of whether the stock price has been slow to adjust to any major changes in the macroeconomic environment.

## Stock ratings

The analyst’s assessments of the style fit and the balance of risks to market expectations are fed into the stock ratings. This is done via the matrix set out in Appendix C. The stock ratings represent a quantification of how attractive the stock is to us.

We have recently set up a process for measuring each of the following variables, style fit, balance of risks and stock rating. We are looking for this to give us additional information on the drivers of our performance.

*Documenting our research*

The main form of documentation is the FIS one page research note (see Appendix E for the format). This is not an attempt at a comprehensive research piece but rather seeks to document how well the stock fits our style and the basis of the analyst’s view of the balance of risks to market expectations.

The FIS one page notes are stored on the “CoRes” system and networked globally across the FIS research teams. Whilst the format of the FIS one page research note is a fixed one, where the individual analyst considers that a detailed or free format note is appropriate this can be done additionally and stored on the CoRes system. Notes covering key points from meetings with companies are also stored on the CoRes system.

## Where we believe we have competitive advantage

* Common style enhances the value of each analyst’s research within the research teams.
* Common style and global networking of standard research documentation enhances value of research across research teams.
* Defined style enhances the benefit obtained from meeting companies.
* Balance of risks approach reduces the likelihood of anchoring assumptions too heavily.

1. **Buy and sell decisions**

This section focuses on the drivers of individual buy or sell decisions, excluding those that are driven by cashflow or portfolio risk control considerations.

## The main drivers of our buy and sell decisions

Buy or sell decisions are driven by change. For us that change is in our assessment of how well the stock fits our style and/or our assessment of the balance of risks to market expectations.

## Changes in style fit

These are driven by changes in the growth, business momentum and consistency characteristics of a stock. These occur when new information indicates a significant change in the expected future profit progression for a company.

## Changes in our assessment of the balance of risks to market expectations

These also may be driven by a significant change in the expected future profit progression. We believe that market participants are generally slow to fully incorporate new information into their expectations. We are therefore more likely to judge the balance of risks to market expectations to be on the upside when there is a positive change in the expected future profit progression and vice versa.

Changes in valuation can also drive a change in our assessment of the balance of risks to market expectations. A stock’s valuation is an important indicator of the market’s long term expectations for the profit progression of the company.

## How our use of valuation is different to most other investors

We believe that we are more aware than most other investors of the limitations of applying a static valuation framework in a world where the pace of change in corporate prospects is a rapid one. We believe that investors tend to underestimate the scope for companies to change, and to overestimate the extent to which valuations revert to mean.

For these reasons we do not set valuation based price targets, and would expect that changes in valuation are less likely to be drivers of buy or sell decisions for us than for most other investors.

## The role of judgement

We do not believe that a rigid framework of buy and sell disciplines is appropriate. Instead we rely on individual judgement, particularly as to whether new information indicates a sustained change in the outlook for the business. Again the use of common style is helpful here, because it enhances the transparency of individual judgements and therefore the scope for constructive discussion and debate.

*Buy decisions*

* These are normally driven by new information that indicates to us that the outlook for the expected future profit progression is improving significantly.
* Where a stock has a good fit to our investment style, and its relative price and valuation is falling due to factors we believe to be temporary, we may consider purchasing (more of) the stock. However we would check that we were not overlooking a genuine deterioration in business momentum.

## Sell decisions

* There are normally driven by new information (particularly negative profit surprises) that indicates to us that the outlook for the expected future profit progression is deteriorating significantly.
* A rising relative price and valuation in an otherwise attractive stock could trigger a sale where the valuation became so demanding that we believed that the balance of risks to market expectations was on the downside. However where the company had positive business momentum, we would check that we were not underestimating the rate of improvement of the company’s prospects.

*Where we believe we have competitive advantage*

* Common style enhances the scope for constructive discussion and debate on stock decisions
* Realism about the limitations of valuation techniques as a driver of buy and sell decisions

**Portfolio construction and monitoring**

## Key features

* Our approach to portfolio construction is a bottom up one, seeking to find the best combination of our views on individual stocks.
* There is a strong emphasis on understanding the nature of portfolio risk.
* There is substantial use of model portfolios.
* We seek to combine full debate on the composition of the model portfolio with clear responsibility for the final decision.
* Actual portfolios have very high overlaps to the relevant model portfolio.

## Model portfolios

These are specified at stock level, with the stock weights adjusting to changes in market prices as is the case in an actual portfolio. The main discussion within the portfolio construction teams monthly focuses on the model portfolio(s), which the actual portfolios then follow (subject to specific nature of each mandate).

## Monitoring on existing model portfolio

The ongoing monitoring process focuses on a variety of portfolio exposures. This reflects our belief that no one measure can fully capture the complex nature of portfolio risk. The main elements of the monitoring process are:

* Overall portfolio risk. Is this consistent with our aims for this model portfolio? Barra tracking error is the quantitative measure we use to summarise risk to a single number. We use it as a guide, not a rigid target. We take great care to understand better the inevitable limitations of the Barra risk model. Our experience is that – much like investors – risk models are particularly likely to struggle to deal with a world that is changing rapidly.
* Stock load differences. Are they appropriate given the relative attractiveness of each stock?
* Sector load differences. Is there an aggregate exposure that we are uncomfortable with?
* FIS stock categories (see below). Is there an aggregate exposure that we are uncomfortable with?
* Barra risk index exposures. Is the portfolio ‘footprint’ in line with what we would normally expect under our style? Are there any other risk index exposures that we are uncomfortable with?
* Are there any other aggregate exposures on the portfolio that we feel uncomfortable with (e.g. to a particular region, currency or theme).
* Barra optimiser. An optimisation exercise is done using the stock ratings from the research process. This will normally include an allowance for the transaction costs of changing from the current model portfolio. This is used to ask questions as to whether we could represent our stock views more effectively for a given level of risk. It is not used to provide ‘the answer’.

Where the above analysis, or a change in stock views, leads to a revised model portfolio, resultant exposures can be rechecked, and if necessary further adjustments made.

## FIS stock categories

We use 4 stock categories, which are compiled by our research teams on a stock by stock basis. The categorisation is done based on the expected growth and consistency characteristics of each stock, using both data and judgement.

|  |  |  |
| --- | --- | --- |
| **FIS Stock Category** | **Growth Characteristics** | **Consistency Characteristics** |
| Growth | Above average | Above average |
| Cyclical/Volatile Growth | Above average | Average or below average |
| Defensive | Average or below average | Above average |
| Other | Average or below average | Average or below average |

We recognise that, as with all methods of trying to quantify risk, these categories are far from perfect, and that there is a significant subjective element to their compilation. Nevertheless our experience is that stocks in each category often show similar performance characteristics as market conditions change. This means that the FIS stock categories help give us a fuller understanding of the risks in the portfolios.

## How we would construct a portfolio from scratch

The process set out below is based on the assumptions that there are no comparable existing portfolios, that there is a clear benchmark and that the client has specified a target level for risk in terms of expected tracking error.

1. The first step is to use our judgement to construct a portfolio that reflects our views on the individual stocks and the required level of tracking error.
2. We would then use our judgement to look at the resultant exposures, and adjust the stock weights where we believed that the portfolio did not accurately reflect our views, or was missing an important aggregate exposure. The main exposures we would consider are set out above in ‘Monitoring an existing portfolio’.
3. The next step is to compare the resultant portfolio with an ‘optimised’ portfolio using Barra. This would take as inputs the stock ratings from the research process. Again, this process is used to ask questions, rather than provide definitive answers.
4. We would then progress with the iterative process of looking at the revised portfolio to test whether we were happy with the resultant exposures and risk profile, and if necessary making further adjustments.

*Debating and owning the model portfolio decisions*

Decisions are debated amongst the team of fund managers whose portfolios are driven off the particular model portfolio. Others join the discussion where they have an input eg as sector specialist.

In debating model portfolio decisions, we find that the existence of a common style and approach helps to clarify any genuine areas of disagreement and improve the quality of the discussion.

There is frequently broad agreement on decisions. However there are also times where no consensus can be reached. In the latter case it is the senior manager designated as the ‘owner’ of the model portfolio who makes the final decision.

## Managing the actual portfolios

Where the mandate gives scope to follow one of the model portfolios, the actual portfolio will seek to run a very high level of overlap to that model. Minimum required levels of overlap are typically 90%, but with the aim of the overlap being significantly higher than this.

The part of the portfolio that does not overlap to the model will generally reflect legacy positions, or the timing of cashflows or a specific feature of the individual mandate. It is not there to give the individual fund manager scope to take stock positions that do not align with the house view.

Where the mandate is such that a model portfolio cannot be followed, the portfolio construction seeks to find the best combination of our stock views, balanced to reflect the specific requirements of the individual client.

*Formal controls on portfolios*

We see risk as having many facets, not all of which lend themselves to formal controls. However we do apply formal controls in key areas and an example of the current portfolio controls for the pan European team is set out in Appendix F. These are not necessarily fixed over time, and are reviewed if necessary (e.g. on substantial change in the structure of the benchmark).

## Review groups

There is a regular quarterly cycle of formal ‘Review Group’ meetings. This is used to monitor all the portfolios that we manage. These meetings are attended by members of the portfolio team in question, the CIO and other senior members of the fund management team. The meetings are open to all members of the investment team. This structure ensures that all the portfolios are subject to review by a wide group of managers.

## Performance monitoring

Performance figures are typically calculated and distributed monthly, and quarterly figures are formally monitored at the Review Groups. Whilst we look at the shorter term numbers, our main focus is on how they affect the 3 and 5 year performance figures.

In addition to conventional performance analysis, we use the BARRA performance software to help us understand better the source of our relative performance, in particular the question of how well we have performed within our investment style.

## Where we believe that we have competitive advantage

* Common style enhances the quality of debate on portfolio construction
* Use of FIS stock categories gives fuller understanding of portfolio risks
* Very high level of commonality between comparable portfolios.

**Appendix A – Is low inflation sustainable?**

# *Historical background*

The charts below show the paths of the price levels in the US since 1890 and the UK since 1700 respectively. Two things stand out. Firstly, although prices sometimes moved sharply in the short-run, long-run price stability prevailed until the last third of this century. Indeed, the price level in the UK increased only seven-fold from 1700 to 1967, an average inflation rate of well under 1%.



Secondly, there has been a sharp pick-up in the price level in both countries over the past generation. Similar profiles are observed in other developed economies. Over the last thirty years the US price level has increased more than four-fold, an average annual inflation rate of 5%. While the UK price level has increased nine-fold, giving an average annual inflation rate of almost 8%. At these rates of price increase, charts of the price level are not very illuminating. It makes more sense to plot inflation. During the 1970s US inflation averaged 7% a year, with a peak of over 12% in November 1974. During the 1980s inflation averaged 5.6% a year, and it has fallen to 3% during the 1990s. Similar profiles are observed internationally, with inflation peaking in the 1970s and relatively benign in the 1990s.



# *So is low inflation sustainable?*

The view that low inflation is sustainable sees the period of high inflation from the mid 1960s to early 1990s as the exception to the historical norm of price stability. Inflation took-off because policy makers temporarily lost monetary discipline when confronted with dilemmas arising from oil price hikes. And policy makers succumbed to the temptation of thinking that they could engineer lower unemployment on a lasting basis by allowing higher inflation.

The counter view disputes that price stability is the historical norm for the relatively modern era of ‘paper money’, which is not convertible into gold. The gold standard had one big benefit and one large drawback. By tying the domestic money supply closely to the stock of gold, it effectively ruled out persistently high inflation rates. However, since the major mechanism by which full employment could be restored was a fall in domestic prices and wages, which might take many years to adjust fully to a large fall in aggregate demand, the period of the gold standard was a period in which individual economies were vulnerable to long and deep recessions.

With two interruptions, Britain was on the gold standard from early in the eighteenth century until 1931. The two periods of suspension of the gold standard (1797-1819 and 1914-25) were both related to war, and both saw considerable inflation, followed by deflation after resumption of the gold standard at the original parity. So, while long-run price stability reigned in the gold standard period, the British record for paper money years is rather mixed.

# *What does economic theory have to say on the matter?*

Since the end of the Second World War, inflation has followed a fairly predictable course in relation to the business cycle. Typically, inflation rises during an economic expansion. It reaches its maximum slightly after the end of the boom, declines during the recession, and starts to increase again when the economy has been in recovery for a year or two. It appears, however, that the US economy has recently departed from this pattern. Over the period since the end of the last recession, there has been a prolonged expansion, unemployment has fallen, but inflation has not increased.

The Phillips curve, the traditional model used by economists to study the link between inflation and unemployment, worked well in the past. But it has difficulty explaining the recent behaviour of US unemployment and inflation. The basic Phillips curve embodies a negative relationship between inflation and unemployment in excess of the natural rate. But, over the period since 1990, there has been a positive correlation between the inflation rate and the unemployment rate in the US at a time when both have been falling. Suggesting that more than the basic Phillips curve relationship is at work.

The first potential explanation for this is that the NAIRU (Non Accelerating Inflation Rate of Unemployment) has fallen sufficiently to enabling inflation to fall even with unemployment at a historically low level. The alternative explanation is that NAIRU has not fallen but that the United States has been fortunate in recent years to have been hit by some positive supply shocks that have overwhelmed inflationary pressures caused by unemployment being below its natural level.

## These alternative explanations have dramatically different implications

If the NAIRU has truly fallen, it is very good news for the US economy. A fall in the NAIRU implies that there has been a change in the structure of the economy that would tend to keep unemployment low in the long run without the danger of rising inflation.

If, however, it is true that recent good inflation performance of the US economy is the result of temporary shocks, then there has been no permanent change in the structure of the economy. Inflationary pressures will re-assert themselves once the temporary supply shocks have ceased.

# *Which alternative does recent economic research support?*

* Vincent Hogan in his September 1998 IMF working paper finds that the NAIRU may have fallen slightly, but that this, on its own, is not enough to explain the recent history of inflation. Hogan finds the main explanation for the recent benign performance of US inflation appears to be that there have been unexpected declines in some cost variables. In particular, the cost of imports has fallen in recent years due to the appreciation of the dollar, a decline in commodity prices, and the Asian crisis.
* Paul Krugman of MIT believes that there is no evidence that the US economy has become less inflation-prone. He thinks that since 1996 the strength of the dollar and the economic woes of Asia have pushed down import prices, helping keep inflation low. But for these special and necessarily temporary factors inflation would probably already have started to show clear signs of returning. Nonetheless, in Krugman’s opinion, it is likely though not certain that the sustainable unemployment rate has fallen due to weaker unions, worker reluctance to demand wage increases in an era of downsizing, reluctance of employers to grant such increases in an era of greater competition, and a more flexible labour market owing to the growth of temporary work.
* Joseph Gagnon, an economist at the Fed, believes that recent inflation rates may provide a good forecast of future inflation if the current US monetary policy regime survives, but they may not provide a good forecast if the current regime is replaced. To factor in the effect of a potential new regime, agents may base their forecasts on their experience of past monetary regimes over a long horizon. In his conclusion, Gagnon comments that even if one discounts the possibility of a return to double-digit inflation, it is harder to justify ignoring the possibility of a return to moderate inflation rates of around 5% or so.
* Charles Pygott and Hans Christiansen of the OECD find that there have been significant changes in inflation expectations and monetary policy frameworks world wide, that ultimately should have favourable effects on inflation transmission mechanisms. These improvements should raise the effectiveness of monetary policy in maintaining the present low inflation environment. Despite the improvements that have been made, the present low inflation environment should not be taken for granted. The experiences of the 1980s suggest that the possibility of significant policy mistakes from time to time cannot be excluded. To contain inflation, policy will have to continue to be forward looking, responding to prospective inflation pressures before they are allowed to accumulate.

## Globalisation and the Internet

Globalisation has two main effects on the way inflationary pressures develop. Firstly, in a more integrated global economy, it is the world output gap that matters for many prices, not domestic supply capacity. If there is spare world capacity in goods and services that can be transmitted either actually or virtually across borders, then their prices will remain low or even fall. Secondly, aside from capacity and business cycle considerations, the faster spread of best-practice management techniques and cost-reducing technologies through Foreign Direct Investment means that efficiency inside firms and productivity at the economy-wide level should also increase.

The current wave of innovation in information and communications technology, particularly the Internet, is improving the speed, quality and accessibility of information flows at negligible marginal cost. Shoppers can now compare the prices of standard goods and services online and either bypass the middleman and buy them directly or use that information to extract discounts from their local supplier. As both consumer and Internet search engines become more sophisticated, competitive pressure on prices and distribution margins will intensify and a wider range of goods and services will be affected. But the biggest impact of e-commerce will probably come through its effect on the ability of firms to reduce costs through outsourcing and more efficient supplier relationships.

# *Conclusion*

The present low inflation environment appears to us to represent a return to normality after a brief interlude, in historical terms, in which governments and central banks followed permissive monetary and fiscal policies. Currently the central banks of the largest economies have official or unofficial inflation targets in the region of 2-2½%. Although, inevitably, there will be deviations around trend to reflect the stage of the economic cycle, our belief is that these inflation targets should serve as reasonable proxies for expected inflation.

**Appendix C – Checklist for assessing balance of risks to market expectations**

Short term profit expectations (next 12 months)

* How important do you consider that results over the next year to be for the stock price performance?
* Has the stock surprised on the upside or downside in its recent history? If so, do you believe that the market is underestimating the chances of another surprise in the same direction?
* Do you think that the published short term forecasts reflect genuine market expectations?
* Do you consider that the market is failing to fully take on board the effect of recent changes on the company short term profitability?
* Do you consider that the market is failing to fully discount the relevance for this company of changes in other related companies or in the macroeconomic environment?
* Is there a specific aspect of the company’s performance where you believe that short term market expectations are out of line?

Long term expectations for the profit progression (looking out at least 5 years)

* Do you believe that the market is underestimating or overestimating the long term growth potential for this stock?
* Do you consider that the market is failing to fully take on board the long term impact on the outlook for the company of recent changes?
* Do you consider the valuation to be clearly out of line with the long term prospects for the business? If so, why (eg technical position, excessive focus on the short term, irrational exuberance)?
* Do you believe that other investors are focussing on inappropriate valuation methodologies, or overestimating the likelihood of reversion to mean for this stock’s valuation?
* Where there is little visibility or predictability to the future profit progression, do you consider that market expectations are being pushed artificially high by the sell side?
* Is there a specific aspect of the company’s prospects where you believe that long term market expectations are out of line?

**Appendix D – Stock rating matrix**

# Stocks are rated on a scale from 1 (extremely attractive) to 10 (extremely unattractive). The matrix for setting the ratings is shown below:-

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Balance of risks** | | | | |
|  |  | Substantially on the upside | Slightly on  the upside | Neutral | Slightly on  the downside | Substantially on  the downside |
|  | Very good | 1 | 2 | 3 | 4 | 5 or 6 |
|  | Good | 2 | 3 | 4 | 5 or 6 | 7 |
| **Style Fit** | Average | 3 | 4 | 5 or 6 | 7 | 8 |
|  | Poor | 4 | 5 or 6 | 7 | 8 | 9 |
|  | Very poor | 5 or 6 | 7 | 8 | 9 | 10 |

**Appendix E – The FIS one page research note**

|  |  |  |  |
| --- | --- | --- | --- |
| COMPANY |  | Date |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Analyst’s Assessment | | | Style fit |  | | | Balance of Risks | |  |
|  | | | | | | | | | |
| Analyst |  | Current rating | | |  | Previous rating | |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| Sector |  | Country |  |
| FIS Category |  | Last seen |  |
| Business |  | | |
| Year End |  | Price |  |
| Next Event /Catalyst |  | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | FY - 1 | FY - 0 | FY + 1 | FY + 2 | FY + 3 |
| EPS (See 9) |  |  |  |  |  |
| Change (%) |  |  |  |  |  |
| P/E |  |  |  |  |  |

\* FIS forecast

|  |
| --- |
| Assessment of Key Drivers |
| GROWTH |
| BUSINESS MOMENTUM |
| CONSISTENCY |

|  |  |
| --- | --- |
| Main Analyst Contacts | Company Contacts |
|  |  |

# Appendix F – Formal controls for pan European equity portfolios

The stock, sector and tracking error limits are set out below for the portfolios managed by pan European larger companies team

1. The limits apply to portfolios that:-

* hold more than 40 stocks
* are invested in predominantly larger companies
* do not have a non-standard constraint in client mandate (eg an ethical one)

1. The limits apply to load differences relative to the index benchmark. For peer group benchmarked funds the load differences are taken relative to the most comparable index, these are currently:-   
     
   UK FT All Share (currently 39 sectors)  
   Continental Europe FT S&P Europe ex UK (currently 39 sectors)  
   Pan-Europe FT S&P Europe (currently 39 sectors)

Stock limits for the model portfolios

* Any transactions that increase the load difference to over 2% require the prior approval of the Head of pan European equities.
* Transactions that increase the load difference to over 4% should only occur in exceptional circumstances. The prior approval of the CIO is required.
* Where changes in market prices have led to these limits being breached, approval from the Head of pan-European equities/CIO must then be sought to maintain the position.

1. Sector limits for the model portfolios

* Any transactions that increase the load difference to over 5% require the prior approval of the Head of pan European equities.
* Transactions that increase the load difference to over 10% should only occur in exceptional circumstances. The prior approval of the CIO is required.
* Where changes in market prices have led to these limits being breached, approval from the Head of pan European equities/CIO must then be sought to maintain the position.

1. Stock and sector limits for actual portfolios  
     
   The limits and requirements are the same as for model portfolios. However where the fund position is within 0.5% (stock) or 1% (sector) of the model portfolio position, no additional approvals are required.
2. Tracking error limits for the model portfolios

* The long term target ranges for tracking error (as measured by the appropriate BARRA risk model) are as follows:  
    
  UK diversified 2.0 - 2.5  
  UK focussed 2.75 - 3.25  
  Continental European 2.75 - 3.25  
  Pan European 2.75 - 3.25  
    
  These target ranges are for the levels of tracking error that we would expect the model portfolios to average over the longer term.
* Where the tracking error is more than 0.25% outside these ranges, the aggregate effect of transactions done in a calendar month period must not increase the expected tracking error on the portfolios, unless prior approval is given by the head of pan European equities.
* Where the tracking error is more than 1% outside these ranges, the difference must be targeted to fall below the 1% limit by the end of the following calendar month, unless prior approval to maintain the level of tracking error is given by the CIO.

1. Tracking error limits for actual portfolios  
     
   For those funds that are running off one of the above model portfolios, the same limits and requirements apply. However where the tracking error to the index on the actual portfolio is within 0.25% of the model portfolio’s tracking error to the index, no additional approvals we required.